

Journals of Two  
Expeditions of Discovery  
in North-West and Western Australia

---

Sir George Grey

Illustrated by B. Waterhouse Hawkins

**D O D O**  **P R E S S**

JOURNALS  
OF  
TWO EXPEDITIONS OF DISCOVERY  
IN  
NORTH-WEST AND WESTERN  
AUSTRALIA,  
DURING THE YEARS 1837, 1838, AND 1839,  
Under the Authority of Her Majesty's Government.

DESCRIBING  
MANY NEWLY DISCOVERED, IMPORTANT, AND FERTILE  
DISTRICTS,  
WITH  
OBSERVATIONS ON THE MORAL AND PHYSICAL CONDITION  
OF THE ABORIGINAL INHABITANTS, ETC.

BY GEORGE GREY, ESQUIRE.  
GOVERNOR OF SOUTH AUSTRALIA;  
Late Captain of the Eighty-third Regiment.

IN TWO VOLUMES.

DEDICATION.  
TO  
THE LORD GLENELG,  
UNDER WHOSE AUSPICES,  
AS PRINCIPAL SECRETARY OF STATE FOR THE COLONIES,  
THE EXPEDITIONS  
RECORDED IN THE FOLLOWING PAGES  
WERE UNDERTAKEN,  
THESE VOLUMES ARE RESPECTFULLY INSCRIBED,  
IN GRATEFUL REMEMBRANCE  
OF HIS ASSISTANCE, HIS COUNSELS, AND HIS KINDNESS,  
IN HIS HIGH PUBLIC STATION,  
AND  
WITH A PROFOUND RESPECT  
FOR  
HIS PERSONAL AND DOMESTIC VIRTUES.

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D. A List of the Birds of the Western coast, furnished by Mr. Gould.

E. A Catalogue of the Species of Reptiles and Amphibia hitherto described as inhabiting Australia, with a description of some New Species from Western Australia, and some remarks on their geographical distribution, by John Edward Gray, F.R.S., etc. etc., in a note to the author.

F. Notes on some Insects from King George's Sound, collected and presented to the British Museum, by Captain George Grey, by Adam White, Esquire, British Museum, addressed in a letter to the author.



Drawn on Stone by Geo Barnard from a Sketch by Capt G Grey

M.S. Henhart Lith. Printers 64 Charlotte St. Rathbone Fl

SANDSTONE CAVE WITH PAINTINGS NEAR GLENELG RIVER.

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3. *Diphya*, Sp. (*Acalepha*.)
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12. Three rows of notches made by people on the Gouty-Stem Tree.
13. Gigantic Ants' Nest and Gouty-Stem Tree. Drawn on stone by George Barnard from a sketch by Captain George Grey. M. and N. Hanhart, Lithographic Printers, 64 Charlotte Street, Rathbone Place.
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15. Head cut in Sandstone Rock. Captain Grey, delt. G. Foggo, Lithographer. M. and N. Hanhart, Lithographic Printers.
16. Figure drawn on roof of Cave, discovered March 29th.
17. Supposed Native Tombs. Discovered on the North-Western Coast of New Holland, 7 April 1838. Published by T. & W. Boone, London.
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Drawn on stone by George Barnard from a sketch by G. Hamilton,  
Esquire.

M. and N. Hanhart, Lithographic Printers, 64 Charlotte Street,  
Rathbone Place.

9. Basaltic Rocks, Campaspi River, near Port Phillip.  
Drawn on stone by George Barnard from a sketch by G. Hamilton,  
Esquire.

M. and N. Hanhart, Lithographic Printers, 64 Charlotte Street,  
Rathbone Place.

Published by T. & W. Boone, London.

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10.3. *Delma fraseri* (Gray).

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16.2. *Hyla adelaidensis* (Gray).

17.1. *Breviceps gouldii* (Gray).

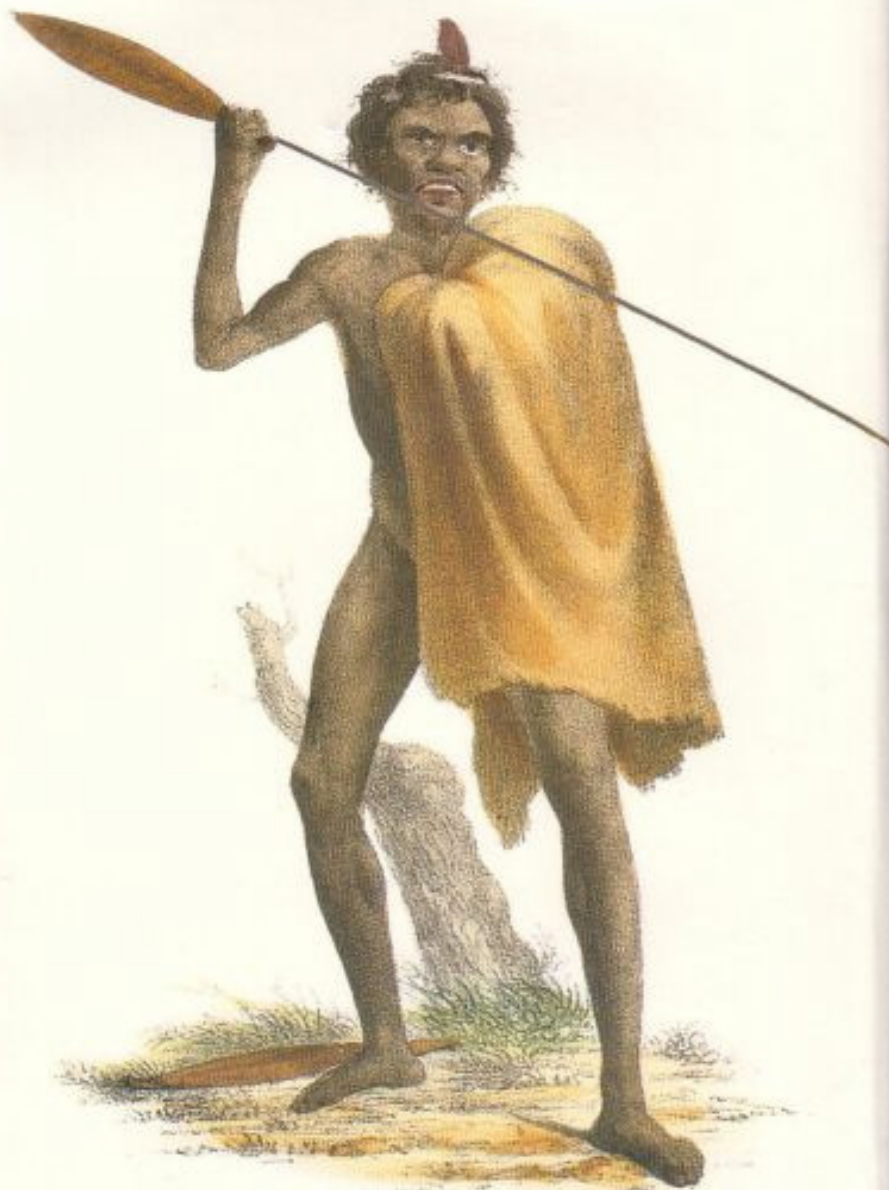
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- 19.2. INSECTS 2. *Biphyllocera fabriciana*.
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21. INSECTS 4. *Bardistus cibarius*.
22. INSECTS 5. *Tympanophora pellucida*.
23. INSECTS 6. *Choerocydnus foveolatus*.
24. INSECTS 7. *Hesperia sophia*.
25. INSECTS 8.1.a. *Hecatesia thyridion* female.
25. INSECTS 8.1.b. *Hecatesia thyridion* male upper side.
25. INSECTS 8.1.c. *Hecatesia thyridion* under.
25. INSECTS 8.1.d. *Hecatesia thyridion* fenestra in wing of male.
25. INSECTS 8.2. *Hecatesia fenestrata* male.
26. INSECTS 9. *Cossodes lyonetii*.
27. INSECTS 10. *Trichetra isabella* male.
28. INSECTS 11. *Trichetra isabella* female.



Capt. Grey coll. - G. Fogg del.

M. S. Hazbani, lith. Proctor

NATIVE OF WESTERN AUSTRALIA

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## PREFACE.

The following pages contain the results of the author's travels and residence in the western parts of Australia, between the years 1837 and 1840, during which period he traversed extensive regions unknown to the European traveller, and probably never before trodden by the foot of civilized man.

It is not alone with gratification of enlightened curiosity that the countries now first brought to notice are likely to be objects of interest. A knowledge of the districts lying between Swan River and Shark Bay cannot but be of importance to future colonists, whilst the intertropical provinces of the north-west coasts, distinguished as they are by important peculiarities both of character and position, are equally calculated to draw the attention of the literary and enterprising enquirer.

It only remains to state in a few words the circumstances under which this work is given to the public.

The author arrived in England in September, 1840, and was engaged in preparing his notes for publication when he was unexpectedly honoured with an appointment which re-called him to Australia in the month of December following.

Avocations both of a public and private nature arising out of that appointment prevented him from carrying his work through the press during the short period of his residence in this country, and consequently the final arrangement of the impression and the duties of typographical revision devolved on others.

Although no pains have been spared to render these volumes worthy of the public eye, the circumstances under which they appear will naturally occasion them to be marked by defects which, doubtless, would not have escaped the author's notice and correction had he been present.

It would be an act of injustice not to express here the obligations the author is under to Mr. J.E. Gray of the British Museum for his valuable assistance in whatever relates to natural history in the body of the work, as well as for the contributions in the same branch of science which will be found in the Appendix; nor are his thanks less due to Mr. Adam White for an interesting paper on the Entomology

of Australia; and to Mr. Gould, who has lately visited that country,  
for his list of the Birds of the Western Coast.

## Journals of Two Expeditions of Discovery

### CHAPTER 1. COMMENCEMENT OF THE EXPEDITION. TENERIFE.

#### GENERAL PLAN AND OBJECTS.

The Expeditions of which the results are narrated in the following pages took their origin from a proposition made to Government by myself, in conjunction with Lieutenant Lushington,<sup>1</sup> in the latter part of the year 1836.

At that time a large portion of the western coast and interior of the great Australian continent had remained unvisited and unknown; whilst the opinions of the celebrated navigators Captains Dampier and King, connected with other circumstances, led to the inference, or at least the hope, that a great river, or water inlet, might be found to open out at some point on its western or north-western side; which had then been only partially surveyed from seaward.

#### DESIGN OF THE EXPEDITION.

Anxious to solve this interesting geographical problem, we addressed a letter to Lord Glenelg, the Secretary of State for the Colonies, wherein we offered our services to conduct an exploration from the Swan River to the northward, having regard to the direction of the coast, so as to intersect any considerable body of water connecting it with the interior; and, in the event of such being discovered, to extend our examination of it as far as circumstances might admit.

The letter containing this offer also enumerated several secondary objects, to which we proposed to direct our attention, and which were ultimately comprehended in our instructions.

The offer and suggestions were favourably entertained by Lord Glenelg, and further communications invited; and, the project having been favoured by the support of the Royal Geographical Society, our services were finally accepted by the Government.

#### INSTRUCTIONS.

More mature consideration however led to a material alteration in the first plan; for whilst our principal object, namely, the search for a great river or interior inlet, remained the same, it was considered, for

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several reasons, more advisable that the exploration should commence from the vicinity of Prince Regent's River, on the north-west coast, and be directed towards the Swan. I shall pass over the various points of detail which occupied our time and attention until the moment of departure, as they offer no matters of general interest. It will be sufficient to say that everything suggested as likely to be conducive to the success and utility of the expedition was most liberally granted and supplied; and, when all was prepared, a letter of instructions dated the 16th June 1837 was addressed by Lord Glenelg to myself and Lieutenant Lushington conjointly; which embraced the following points:

1. We were to embark in H.M. sloop of war the *Beagle*, then fitting out for a survey of the coasts and seas of Australia, under the command of Captain Wickham, R.N.; and to proceed in that vessel either to the Cape of Good Hope or to Swan River, as might ultimately appear best suited to forward the objects of the expedition.
2. On our arrival at either of the foregoing places, we were directed to procure a small vessel to convey the party and stores to the most convenient point in the vicinity of Prince Regent's River.
3. After due examination of the country about Prince Regent's River we were instructed to take such a course as would lead us in the direction of the great opening behind Dampier's Land. From the moment of our arrival at this point our subsequent proceedings were left more discretionary; but the instructions continued: "You will use the utmost exertions to penetrate from thence to the Swan River; as, by adopting this course, you will proceed in a direction parallel to the unknown coast, and must necessarily cross every large river that flows from the interior towards that side of the continent."
4. That we might have an opportunity, in the event of any unforeseen difficulties occurring, of falling back upon the vessel conveying the party, she was not to quit the place where she might have been left by it until such a time had elapsed, from the departure of the expedition for the interior, as should be agreed upon; and, to ensure the observance of this condition, we were instructed to act by the advice of the local authorities of the colony where she might be engaged in drawing up the agreement, as well as in procuring guarantees for its fulfilment.

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5. The main objects of the expedition were then specified to be: To gain information as to the real state of North-Western Australia, its resources, and the course and direction of its rivers and mountain ranges; to familiarize the natives with the British name and character; to search for and record all information regarding the natural productions of the country, and all details that might bear upon its capabilities for colonization or the reverse; and to collect specimens of its natural history.

6. It was directed that strict discipline should be observed, and the regulations by which our intercourse with the natives was to be governed were laid down; after which the instructions concluded with the following paragraphs:

No further detail has been given you in these instructions, for, as you have been made aware of the motives which have induced his Majesty's Government to send out the expedition, it is supposed each individual will do his utmost in his situation to carry these objects out, either by obtaining all possible information or by such other means as may be in his power.

Although the instructions regarding the expedition are addressed to you conjointly as conductors of it, it is necessary that the principal authority and direction should be vested in one individual, on whom the chief responsibility would rest.

It is to be understood that Lieutenant Grey, the senior military officer, is considered as commanding the party and the person by whose orders and instructions all individuals composing the party will be guided and conform.

\* \* \* \* \*

1837.

All our preparations being completed, there embarked in the Beagle, besides myself and Mr. Lushington, Mr. Walker, a surgeon and naturalist, and Corporals Coles and Auger, Royal Sappers and Miners, who had volunteered their services; and we sailed from Plymouth on the 5th July 1837.

TENERIFE. AQUEDUCT AT SANTA CRUZ.

## Journals of Two Expeditions of Discovery

The usual incidents of a sea voyage brought us to Santa Cruz in Tenerife, where I landed on Wednesday 19th July 1837, about 2 o'clock in the afternoon. There was a sort of table d'hôte at 3 o'clock at an hotel kept by an Englishman, at which I dined, and was fortunate in so doing as I met there a German and several English merchants who were principally engaged in the trade of the country. There was also a gentleman who had been from his earliest years in the African trade for gums, etc.; and he gave me many interesting particulars of the wild life the individuals so occupied are compelled to lead. In the afternoon I made a set of magnetic observations and then walked out to see the aqueduct; which at about three-quarters of a mile to the north-east of the town approaches it by a passage cut through a mountain. The execution of this work must have been attended with immense labour, for, although the design is grand and noble, the actual plan upon which it has been completed was by no means well conceived. The average depth of this cut is at least one hundred and twenty feet, its length is about one hundred and eighty, whilst its breadth in many parts is not more than four.

Previously to the construction of this aqueduct the town of Santa Cruz was very badly supplied with water, indeed so much so that the inhabitants were, at some periods of the year, compelled to send upwards of three miles for it; but no want of this nature has ever been experienced since its completion. The expenses of its construction as also of keeping it in repair are principally defrayed by a tax upon all wine and spirits actually consumed in the town.

The scenery of the country I walked through was bold and romantic but by no means rich; fig-trees grew wild about the mountains, and it seemed singular that, whenever I approached one, the peasants on the adjacent hills shouted out in loud tones. As far as I could understand the guide, this was done to deter us from eating the fruits now just ripe, and, upon my return to the town and making further enquiries, I found that such was their custom.

### EXCURSION TO ORATAVA.

July 20th.

I started at six o'clock with Mr. Lushington for Oratava, distant about 30 miles from Santa Cruz. We were mounted on small ponies, admirably adapted to the wretched roads of the country, and accompanied by two guides who carried our carpet bags.

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### CAMELS, MATANZAS, THE GUANCHES.

The first town we came to was Laguna, which appeared to be of some importance; it is distant about four miles from Santa Cruz. On this road we passed many camels laden with heavy burdens; a circumstance which rather surprised me for I had always imagined that, owing to the peculiar formation of its foot, the camel was only fitted for travelling over sandy ground, whilst the way from Santa Cruz to Laguna is one continued mass of sharp rocks, utterly unworthy of the name of a road; yet these animals appeared to move over it without the least inconvenience.

After leaving Laguna the country for some miles bore a very uninteresting appearance; for, although apparently fertile, it was quite parched up by the extreme heat of the sun; our guides, who were on foot carrying our carpet bags, kept up with us by running, and, occasionally when tired, catching hold of the horses' tails to assist themselves along.

We halted for breakfast at Matanzas (or the place of slaughter) so called from a dreadful slaughter of the Spaniards which was here made by the Guanches, the aborigines of the island. I examined the spot where this occurred; it is a narrow defile, formed by a precipice on one hand, and perpendicular rocks on the other, and lies on the only route by which you can pass across the island from east to west; it was therefore well adapted for the purposes of savage warfare, and the Guanches here made the Spaniards pay dearly for the cruelties practised on themselves.

All traces of this interesting people, who were eventually extirpated by the Spaniards, have long since vanished, and, although I spared no pains, I could glean but little information about them, but to this subject I will advert again.

Before breakfast I made a set of magnetic observations, and then, swallowing a hasty meal, prepared to start. A difficulty however arose here, for neither Mr. Lushington nor myself spoke a word of Spanish, although we understood tolerably well what others said to us; the paying our bill became therefore rather a matter of embarrassment. One of the guides saw our distress and made signs that he would arrange matters for us; we accordingly gave him a dollar. With this he paid the bill and I saw him receive some change, which he coolly pocketed; I afterwards asked him for it, but he

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pretended with the utmost nonchalance not to understand me; so we saw no more of it.

### SCENERY NEAR ORATAVA.

In the ride from Matanzas to Oratava the road is wretched but the scenery compensates for this. Upon arriving at the brow of the hill above Oratava, a beautiful prospect bursts upon the sight; directly in front rises the lordly Peak, whilst in the foreground are vineyards, cottages, and palm-trees; in the centre stands La Villa, the upper town of Oratava, encircled with gardens; on the right lies a rich slope running down to the sea which bounds the prospect on that side; and on the left rise rocky mountains, for the greater part clothed with wood.

We now spurred our horses on and, leaving the guides behind, soon reached La Villa, accompanied by a countryman who had joined us upon a pony; but, on getting into the town, the melancholy truth rushed upon my recollection that we could not speak Spanish: had we remained with our guides this would not much have signified, for they had been told at Santa Cruz to take us to a hotel.

### EMBARRASMENTS ON ARRIVAL THERE.

Nothing remained now but to do our best to open a communication; we accordingly accosted a variety of individuals in English, French, Italian, German—but in vain. Spanish alone was understood or spoken here; our friend, the countryman, stuck to us most nobly, he understood us not a bit better than the rest but saw that we were in distress and would not desert us.

We at last deliberately halted under a house where we could get a little shade, for the sun was intensely hot and, a crowd having soon collected, we harangued them alternately and received long answers in reply; but, although able to make out a great deal of what they said, we could not get them to understand a single word on our part. At length kind fate sent the guides to our rescue and they led us off direct to the hotel.

This however brought only partial relief to our wants; we opened our mouths, and pointed down our throats. So much was understood and a chicken instantly killed. We laid our heads upon a table, feigning sleep, and were shown to a wretched room; but here



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all converse terminated. Mr. Lushington desired to ascend the Peak therefore it became necessary that we should hit upon some means of making them comprehend this; but all efforts were in vain. At length they proposed to send for an interpreter, which was accordingly done; but he was at dinner, and could not then come.

At last the interpreter arrived, a Spanish Don who had been for some years resident in a mercantile house in New York; he was very dirty, but good-natured, and soon made the necessary arrangements for Mr. Lushington; who for eight dollars was to be provided with a pony, a sumpter mule, provisions and guides, taken safely to the top of the Peak and brought back again; which I thought reasonable enough.

After these arrangements I managed to scrape some acquaintance with this Spanish gentleman, who told me to my great edification that I was in a notorious gambling house. I had been informed at Santa Cruz that the inhabitants of those islands were dreadfully addicted to that vice, and I now, from personal observation, found this was too true.

After dinner I started to walk to the Port of Oratava, distant about three miles; there was beautiful scenery the whole way, and a tolerable road for the island. I called on Mr. Carpenter, the British Consul, to whom I had a letter, and he made arrangements for my being admitted to the botanical gardens at six o'clock the next morning.

On my return to La Villa all the roués of the town were assembled at our hotel to eat ices and gamble: I joined them in the former but not in the latter amusement.

### SPANISH INTERPRETER. MANNERS.

The gentleman who had acted as interpreter for us was also there, but I could gain very little further information from him. He told me that they had just heard George the Eighth, the King of England, was dead (William the Fourth had just died) and his knowledge of the other European countries was much upon the same scale. I found that gambling was here carried on to an extent which was really deplorable.

July 21.

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I started at half-past five for the botanic gardens, diligently inspected them, and afterwards made a set of magnetic observations; this occupied a large portion of the morning. I however still had time to geologise for about three hours, and then rode back to Santa Cruz, where I did not arrive till late at night.

### STATISTICS OF THE CANARY ISLANDS. TABLES.

July 22.

In the morning I renewed my magnetic observations and, having dined at the table d'hote, I passed the afternoon in calling upon several persons, and collecting such information regarding the group of islands as I could pick up. Two statistical tables then given to me I have here inserted.

The first shows the extent of the seven larger islands and the average number of inhabitants in each. On these numbers I think dependence may be placed, as they nearly agree, in the total, with that given by Tarrente in the Geografia Universal (1828) who makes it 196,517, being about 12,000 above the number given by Humboldt for the gross population at the end of the last century.

Islas. (Islands.)	Leguas. (Leagues.)				Latitud.				Longitud.†				Conventos. (Convents.)				Habitantes.	
	De Largo. (In Length.)	De Ancho. (In Breadth.)	De Circunferencia (In Circumference.)	De Superficie. (In Superficies.)	G.	M.	G.	M.	Parroquias. (Parishes.)	Ermitas. (Hermitages.)	De Frailes. (of Monks.)		De Monjas. (of Nuns.)		Catedrales. (Cathedrals.)	Hospitales. (Hospitals.)		Quercios. (Chapels.)
											De Frailes.	De Monjas.	De Frailes.	De Monjas.				
Tenerife . . .	17	9	48	83,400	28	28	1	45	37	140	25	10	1	9	20	71,000		
Canaria . . .	12	11	48	68,400	28	00	2	35	17	67	7	3	1	4	17	63,000		
Palma . . .	10	9	27	32,100	28	42	0	15	13	31	3	2	..	1	11	29,000		
Gomera . . .	8	6	22	9,400	28	7	0	52	6	20	2	..	..	..	4	9,000		
Hierro* . . .	7	5	24	6,400	27	45	0	00	1	6	1	..	..	..	..	4,000		
Lanzarote . . .	10	5	24	34,800	29	00	4	33	7	22	2	..	..	..	4	11,000		
Fuerteventura . .	26	7	57	60,800	28	15	4	8	7	24	1	..	..	..	4	13,000		
Totales . . .	90	52	250	295	..	..	..	..	88	310	41	15	2	14	60	200,000		

\* Ferro.

† From Ferro.

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The second table gives the quantity of the most important products raised annually in each island.

Productos principales un ano con otro.—(Principal productions one year with another.)	Teneriffe.	Canaria.	Palma.	Gomera.	Hierro.	Lanzarote.	Fuerteventura.	Total.
Vino (Wine) . . pipas	25,000	9,000	8,000	4,000	3,000	4,000	200	53,200
Friego (Wheat) . fans	90,000	60,000	20,000	10,000	500	80,000	100,000	360,500
Millo (Millet) . . id.	35,000	140,000	8,000	5,000	400	20,000	4,000	212,400
Cébeda (Barley) . id.	25,000	55,000	18,000	10,000	6,000	140,000	100,000	354,000
Centeno (Rye) . . id.	10,000	5,000	12,000	2,000	1,000	10,000	1,000	41,000
Legumbres . . . id.	18,000	12,000	8,000	4,000	500	6,000	2,000	50,000
Papas (Potatoes) qqs.†	400,000	200,000	80,000	20,000	10,000	60,000	12,000	782,000
Barrilla . . . . id	30,000	.....	.....	.....	.....	100,000	200,000	330,000
Orchilla . . . . id.	500	300	200	200	200	200	300	1,900

\* Fanega—about a bushel.

† Quintal—a hundred weight.

To these I have added a short table showing the mean heat of every month at Tenerife, as deduced from a continued series of daily observations by Dr. Savignon and Mr. Richardson, at Laguna between the years 1811 and 1818, to which is annexed another of the quantity of rain which fell during some months of the years 1812 and 1813.

The two gentlemen who had made these observations having since died, I was not able to obtain any of the actual thermometrical observations, but to the son of Mr. Richardson I am obliged for having allowed me to copy the results contained in these tables.

### SUMMARY OF OBSERVATIONS MADE BY DR. SAVIGNON<sup>2</sup> AND MR. RICHARDSON, AT LAGUNA.

La temperatura media de la Laguna puede considerarse de 63 de Fahrenheit, dentro las casas del centro de la Ciudad, en sombra y al ayre libre; segun resulta de 8 Anos de observaciones, no interrumpidas ni un solo dia desde 1811 a 1818.<sup>3</sup>

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POR MESES COMO SIGUE.					
		°	a	°	
Emero,	. .	55	a	55½	} 62¾, media De lo 8 Años.
Febrero,	. .	56	a	56	
Marzo,	. .	58	a	58¼	
Abril,	. .	59	a	59¼	
Mayo,	. .	62	a	62	
Junio,	. .	65	a	65	
Julio,	. .	69	a	68¾	
Agosto,	. .	71	a	71¼	
Septiembre,	. .	70	a	70¼	
Octubre,	. .	66	a	66¾	
Noviembre,	. .	62	a	62	
Diciembre,	. .	58	a	58	

Rain which fell in two years, 1812 and 1813, in inches :—

	1812.	1813.
Emero,	- - 10.79	3.34
Febrero,	- - 2.22	2.46
Marzo,	- - 0.15	4.17
Abril,	- - 0.09	2.39
Mayo,	- - —	—
Junio,	- - —	—
Julio,	- - —	—
Agosto,	- - —	—
Septiembre,	- - —	0.15
Octubre,	- - 1.76	7.34
Noviembre,	- - 2.12	4.24
Diciembre,	- - 2.20	1.13
	<u>19.33</u>	<u>25.22</u>

In twenty-four hours in January, fell 5.24 in.

A few observations taken on board the Beagle during the five days it lay at Santa Cruz seemed to give a mean heat of about 76 degrees;

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but it must be remembered that these observations were made in a vessel lying only about a quarter of a mile from the shore and exposed to the constant rays of the sun during six days of a season considered by the inhabitants to be a very warm one. I do not therefore think that the observations of Dr. Savignon and Mr. Richardson, taken under such very different circumstances at Laguna, which Von Buch estimates at 264 toises above the sea, could be far from the truth.

The annual mean temperature of Santa Cruz according to Von Buch is 71 degrees 8' Fahrenheit, or 21 degrees 8' of the centigrade scale.

### OCCASIONAL VIOLENT STORMS.

From Mr. Cochrane, a very intelligent English merchant whom I met there, I obtained much information on various points, and he brought to my notice the violent storms of wind and rain which occur on the island occasionally during the rainy season, and cause great destruction and damage.

### DAMAGE BY STORM OF 1826.

One had passed over in the month of March of the year I was there (1837) and I was fortunate enough to obtain an official account of the damage occasioned by another in November 1826, which is here annexed. A similar one was experienced, as will be seen by the table, in January 1812, when 5.24 inches of rain fell in twenty-four hours.

En la noche del 7 al 8 de Noviembre 1826, se experimento un temporal de Viento y Agua, que causo on todas les Yslas muchos estragos. En 8 pueblos de la de Tenerife, se sufrion las des-gracias que manifiesta el siguiente Estado.

[In the night between the 7th and 8th of November 1826 was experienced a storm of wind and rain which caused great ravages in all the islands. In 8 districts of Tenerife were sustained the losses enumerated below.]

COLUMN 1: PUEBLOS. Towns.

COLUMN 2: PERSONAS. Persons.

COLUMN 3: CUSAE DESTRUIDAS. Houses Destroyed.

COLUMN 4: ANIMALES. Animals.

COLUMN 5: CASAS ARRUINADAS. Houses Ruined.

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Villa de la Oratava 104 144 591 75.

Puerto de la Cruz 32 31 23 6.

Realejo de Arriba 25 41 - -.

Realejo de Abajo 14 9 - 2.

Guancha 52 72 344 31.

Rambla 10 14 13 -.

Ycod 5 - - -.

Santa Ursula 1 - 38 -.

### VOCABULARY OF THE CANARIAN DIALECTS.

Sunday July 23.

I procured a few words of the original languages of the Guanches from in old government manuscript, and as from this circumstance no doubt can exist as to its authenticity, I have inserted them.

Several of these will be found already published in the History of the Canary Islands by Glas (page 174) with occasional slight differences of spelling, whilst the rest, though few in number, are, as far as I am aware, now first given.

### VOCABULARY OF TENERIFE, OF CANARY AND PALMA.

Such scanty vocabularies and some mummies from Tenerife, scattered through the cabinets of the curious in various parts of Europe, are the only existing records of the race which held possession of these islands on the descent of John de Betancourt, about the year 1400, and who were nearly exterminated within little more than a century after.

### ALGUNAS DICCIONES DE LA LENGUA GUANCHINESA O DE TENERIFE.

(Some words of the language of the Guanches, or of Tenerife.)

COLUMN 1: GUANCHEAN.

COLUMN 2: SPANISH.

COLUMN 3: ENGLISH.

Achamam : Dios : God.

Achano : Ano : A year.

Achicaxna (Achicarna, Glas.) : Villano : A peasant.

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Achimencey : Hidalgo : A nobleman.  
Ataman : - : Heaven.  
Axa (Ara, Glas.) : Cabra : A Goat.  
Banot : Vara Endurecida : A Pole hardened (by fire).  
Cancha : Perro : A Dog.  
Achicuca : Hijo : A son.  
Cichiquizo : Escudero : A Squire.  
Guan (Coran, Glas.) : Hombre : A man.  
Guanigo : Cazuela de Barro : An Earthen vessel.  
Hara (Ana, Glas.) : Oveja : A Sheep.  
Mencey : El Rey : The King.  
Oche (Ahico, Glas.) : Mantera : A mantle.  
Sigone : Capitan : A Captain.  
Tano : Cebada : Barley.  
Xerios : Zapatos : Shoes.

### ALGUNAS DICCIONES DE LA LENGUA DE CANARIA.

(Some words of the language of Canary.)

COLUMN 1: CANARY.  
COLUMN 2: SPANISH.  
COLUMN 3: ENGLISH.

Ahorac : Dios : God.  
Almogaron : Adoratorio : A Temple or place of worship.  
Amodagas : Varos-tostados : Poles hardened (by fire).  
Aramotanoque : Cebada : Barley.  
Aridaman : Cabra : A Goat.  
Carianas : Espuerta : A Rush or Palm-basket.  
Doramas : Narices : Nostrils.  
Gofio : Farina de cebada tostada : Flour of baked Barley.  
Guanarteme : El Rey : The King.  
Guaire : El Consejero : The Councillor.  
Magado : Garrote de Guerra : Poles or sticks used as weapons.  
Tahagan (Taharan, Glas.) : Oveja : A Sheep.  
Tamaranona : Carne Frita : Roasted or broiled meat.  
Tamarco : Camisa de pieles : A Garment or shirt of hides or skins.

### ALGUNAS DICCIONES DE LA LENGUA PALMESA.

(Some words of the language of Palma.)

COLUMN 1: PALMA.

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COLUMN 2: SPANISH.  
COLUMN 3: ENGLISH.

Abora : Deos : God.  
Adijirja : Arroyo : A Rivulet.  
Asero : Lugar Fuerte : A Stronghold.  
Atinariva : Puerco : A Hog.  
Aguayan : Perro : A Dog.  
Mayantigo : Pedazo de Cielo : Heavenly.  
Tidote : Monte : A Hill.  
Tiguevite : Cabra : A Goat.  
Tigotan : Cielos : The Heavens.  
Yruene : El Diablo : The Devil.

OF THE OTHER ISLANDS.

ALGUNAS DICCIONES DE LA LENGUA DE FUERTEVENTURA Y LANZEROTA.

(Some words of the language of Fortaventura and Lanzerota.)

COLUMN 1: FUERTEVENTURA AND LANZEROTA.  
COLUMN 2: SPANISH.  
COLUMN 3: ENGLISH.

Aho : Leche : Milk.  
Attaha : Hombre de Valor : A Valiant Man.  
Elecuenes : Adoratorio : A Place of devotion.  
Guanigo : Cazuela de Barro : An earthen vessel.  
Guapil : Sombrero : A Hat.  
Horbuy : Cuero : A Skin or Hide.  
Maxo (Ma, Glas.) : Zapatos : Shoes.  
Tabite : Tarro pequeno : A small earthen pan.  
Tamocen : Cebada : Barley.  
Tezezes : Varas de Acebucha : Poles of the wild olive tree.

ALGUNAS DICCIONES DE LA LENGUA DEL HIERRO Y GOMERA.

(Some words of the language of Ferro and Gomera.)

COLUMN 1: FERRO AND GOMERA.  
COLUMN 2: SPANISH.  
COLUMN 3: ENGLISH.



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Aculan : Manteca : Butter.  
Achemen : Leche : Milk.  
Aemon : Agua : Water.  
Banot : Garrote de Guerra : War Clubs.  
Ganigo : Cazuela de Barro : An earthen vessel.  
Haran : Helocho : Furze.  
Fubaque : Reses gordas : Fat cattle.  
Guatativoa : Un convita : A gathering to a Banquet.  
Tahuyan : Bas quinas : A Petticoat of Skins.  
Tamasagues : Veras largas : Long Poles.

### GUANCHE BONE CAVE. AND REMARKS. MARINE BLOWING STONE.

It was in the course of my enquiries for words of the Guanche language that I accidentally heard yesterday, from an old inhabitant, of the existence of a cave in the rocks, about 3 miles to the north-east of Santa Cruz, which it was impossible to enter, but which, when examined from the sea, could be observed to be full of bones. This cave, he said, was known to the old inhabitants by the name of La Cueva de los Guanches; and according to traditionary report it had been the burying-place of the original inhabitants of this island. Several English merchants of whom I made enquiries knew nothing of it, even by report, but the master of the hotel was aware of its existence and promised to procure me guides to it. Although this day was Sunday, yet, as I was to sail in the afternoon, the inducement was too strong to resist, and I started in a boat at 6 o'clock with Mr. Walker our surgeon, taking my geological hammer as I intended to return overland.

When we had proceeded about a mile and a half from Santa Cruz I was astonished to hear, from the rocks on the shore, a loud roaring noise, and to see large clouds apparently of ascending smoke. I landed to ascertain the cause of this, and found it arose from one of those hollow rocks which are sometimes seen on our own coast and are known by various names, such as blowing stones, boiling kettles, etc. etc. I had however never seen one at all to be compared to this in size. It was formed by a hole in the rocks through which the water is first poured as the waves rush in; and then is partly driven out with a loud noise through a hole far up, and partly returns, in the form of spray, by the opening through which it was at first impelled. By assuming a proper position with regard to the sun a most beautiful rainbow is seen in this spray as it is dashed high into the air, and the

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whole is well worthy of a visit. Having collected some shells and geological specimens we again embarked for the cave.

On reaching the spot we distinctly observed, from the shore, the mouths of two caves full of bones. As the Guanches were in the habit of embalming their dead I entertained hopes of obtaining from them a mummy, of which there are several preserved in the Canary Islands. Upon landing however I found that they were utterly inaccessible, being situated in a perpendicular rock about 150 feet above the level of high water mark, and a considerable distance beneath the summit of the cliff. I had indulged a hope of being able to swing into one of the caves by means of a rope suspended from the top, but, owing to a large rock which projects from above quite over their mouths, this would be very difficult. Several bones had been blown out of the apertures, which I collected and found them to have belonged to man, but otherwise displaying nothing remarkable.

I can scarcely entertain a doubt but these caves really were the burying-places of the ancient Guanches, yet how they were approached I cannot conceive; probably there might have been an entrance to them from the interior of the country. I searched but my time was short and I could find no traces of such. An interesting question here remains to be solved and I trust some future traveller may be induced to attempt it.

There is only one other supposition I could frame on this subject, and to this I am led from the fact of the bones lying so immediately in the caves' mouths. Could a party of the Guanches, when so oppressed and so cruelly treated by the Spaniards, have taken refuge by some means in these caverns, and afterwards, from their retreat being cut off, have found themselves unable to escape and have here perished miserably; looking out of the cavern to the last for that assistance they were never doomed to receive? If they had managed to enter these caves by a narrow pathway running along the face of the cliffs, which the Spaniards afterwards destroyed, such an occurrence might readily have taken place.

Having completed my examination I dismissed the boat and walked back to Santa Cruz, from whence we sailed at five o'clock this evening.

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### CHAPTER 2. TO BAHIA AND THE CAPE OF GOOD HOPE.

#### ATMOSPHERICAL PHENOMENON AT SEA.

Nothing important occurred during the voyage from Tenerife to Bahia; but one atmospherical phenomenon I think is worthy at a future day of further enquiry.

I remarked constantly, just at sunset, in these latitudes, that the eastern horizon was brilliantly illuminated with a kind of mock sunset. This in a short time disappeared, to be soon succeeded by another similar in character, but more faint. I observed at the same time, in the western horizon, the regular sunset, and then two appearances, like those seen in the east; perhaps this may be fully accounted for by a triple reflection, as in the common theory of the rainbow.

#### LAND AT BAHIA.

August 17.

We came in sight of the coast of South America about noon, and dropped anchor in the harbour of Bahia at four P.M.; and about half an hour after I went on shore with Mr. Lushington, a person of the name of Wilson taking us in his boat: there was a slave in the boat, and, not knowing that he understood English, I asked Mr. Wilson several questions about slaves in general, and he gave me a good deal of information on this subject, mentioning among other things that the price of a good slave here varied from 90 to 100 pounds, he happened to state that the slaves were wretched in their own country, and that frequently large numbers were sacrificed to their gods. I never saw so fine a burst of natural indignation as the slave in the boat evinced at this statement; his lip curled up with scorn, his dark eye grew vividly bright, and his frame quivered as he made an impassioned reply in Portuguese; I could not understand all that he said, but caught enough to know the tenor of it, that "this was not the case; Englishmen or foreigners never visited his country, so how could they know." It was not so much what he said but the scornful bitterness of his manner that made an impression on me, not easily to be effaced.

#### NIGHT WALK.

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I took a night walk in the country this evening and experienced those wild and undescribable feelings which accompany the first entrance into a rich tropical country. I had arrived just towards the close of the rainy season, when everything was in full verdure, and new to me. The luxuriant foliage expanding in magnificent variety, the brightness of the stars above, the dazzling brilliancy of the fireflies around me, the breeze laden with balmy smells, and the busy hum of insect life making the deep woods vocal, at first oppress the senses with a feeling of novelty and strangeness till the mind appears to hover between the realms of truth and falsehood.

### THE TOWN OF BAHIA.

The town of Bahia looks very beautiful from the sea; but on entering you find it dreadfully filthy. The stench of the lower town is horrible. Even the President's palace is a dirty and wretched-looking building: his salary, I understand, is 600 pounds a year. By the last returns the population of the town was 120,000, 100,000 of whom were blacks. All the burdens here are carried by slaves as there are no carts and the breed of horses is small, being perfect ponies.

The exports are cotton and sugar—the cotton chiefly to Liverpool, the sugar to all European countries but England. Their imports are English cotton goods and hardware, also various manufactured goods from Germany. The nuns are famed for the manufacture of artificial feathers and flowers.

The fruit here is excellent, the oranges are particularly fine.

The merchants in the town are principally English and German. There is no American house. Several have started but all who made the attempt have failed.

You cannot penetrate any great distance into the interior as there are no roads but only little pathways through the woods. The Indians are frequently seen very near the town.

### STATE OF SOCIETY.

This part of Brazil offered the curious spectacle of a great evil, which has been long suffered to exist and is now advancing, gradually yet surely, to that state which must entail inevitable destruction on the existing Government of the country. I allude to the immense slave

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population which, owing to a short-sighted policy, has been allowed to increase so rapidly from the frequent and numerous importations that at the present moment they are in the ratio of 10 to 1 to the white population, to whom they are also, individually, immensely superior in physical strength; the Brazilians being the most insignificant and feeble race of men I have ever yet seen.

### DANGERS FROM SLAVE POPULATION.

The blacks are perfectly aware of their own power, and about two years ago had arranged a plan for seizing the town and murdering all the whites with the exception of foreigners; which miscarried only by the affair being discovered a few hours before it broke out. This plan was however so wisely and boldly conceived, both as a whole and in detail, that it alone affords the most conclusive evidence that the slave population in this country are by no means deficient either in mental powers or personal courage.

The Brazilians themselves are aware of the danger which threatens them, and yet evince an extraordinary degree of supineness with regard to it. They have indeed framed certain regulations as to the slaves being all within their houses at an early hour of the evening, etc. etc., and these they deem sufficient for their protection; yet to an unprejudiced observer it would appear that, unless some much more effective measures are adopted, within a few years from the present time the whole of this fine country will be in the hands of the blacks: and indeed I think one would be justified in concluding that the moment which produces a person sufficiently intriguing again to stir up the slaves, and endowed with the firmness and talent necessary to conduct an emeute of this nature, will be the last of the Brazilian Empire.

### POLITICAL CONDITION OF THE STATE.

It is evident from what I have before stated that the only hope the white population can reasonably entertain of retaining their present position must be in the most perfect union and concord amongst themselves, and that, when a unity of design and action ceases to exist between the different provinces, their fate is sealed. Yet this circumstance never appears to enter into their calculations; and at this instant each state is plotting its separation from the Empire. The inhabitants here openly state their intention of revolting and

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declaring their independence, and Sunday next is even mentioned as the day for the commencement of the rising.<sup>4</sup>

It is really strange to one who stands by, a calm unconcerned spectator, to observe men hurried on by the violence of faction to their own certain destruction, and to behold them so entirely blinded by party spirit as not to see that danger which stares them so openly in the face, that a child could scarcely fail to detect it.

The Slave Trade, though nominally abolished, is actively pursued here, eighty-three slaves having been landed just before my arrival, and another cargo during my stay.

The slaves are not only a very superior race of men in point of physical powers, but, as far as my experience of their habits went, I found them very moral and honest. Their notions of religion were however curious. Several were Christians nominally, but their Christianity consisted in wearing a string of beads round the neck; and they seriously assured me that those who wore beads went up to heaven after death, and that those who did not went down under the waters.

I talked to many of them about their own land. None had forgotten it, but they all expressed the most ardent desire to see it again. They call themselves captives, not slaves, and are very punctilious upon this point. They labour very hard here, generally in the town, paying their masters eighteen-pence a day, and keeping the rest of their earnings for themselves. The rate of labour must therefore be high; but they wear scarcely any clothes, and their subsistence, which is jerked beef and beans, costs but little. The slaves in the country are however all obliged to work on their owners' plantations.

All the principal people in the town are concerned in the slave trade, and their chief wealth consists in the number of slaves they possess; therefore there is little chance of the trade being, for many years, totally abolished.

With regard to the execution of the laws this country is much in the same state as certain parts of Ireland. Homicide, and attempts at homicide, by shooting, are frequent; but it is difficult, if not impossible, to convict the offenders, for he who renders himself conspicuous in prosecuting parties concerned in a murder assuredly gets shot at in his turn.

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### IMPRESSIONS AND OBSERVATIONS AT SEA. REMARKS ON VOYAGE FROM BAHIA TO THE CAPE.

August 25.

Re-embarked in the Beagle and sailed for the Cape of Good Hope.

September 10.

We had yesterday and all last night a gale of wind, succeeded this day by a heavy fall of rain. The wind had raised a very high sea, but when the rain began to fall I heard the captain and several of the officers remark that the rain would lay the sea; for the result of their experience was, "that a fall of rain always beats the sea down." What they had stated would occur took place in this instance within two or three hours. This shows forcibly what great results a slight force, continued for a long time, will produce.

September 15.

Whilst standing on the deck of the Beagle this evening we remarked large luminous spots in the water. They appeared to be about 12 inches in circumference, were very numerous, and perfectly stationary. The light they emitted was phosphorescent, but far brighter than I had ever before witnessed; it was so vivid as to be distinctly visible for nearly a quarter of a mile.

September 16.

We saw this morning an immense number of fin-backed whales, some of which were quite close to the vessel. In the course of half an hour I counted thirty of them. Could they have been feeding on the phosphorescent animals we saw last night?

We are today about 600 miles from the Cape, and there is a strange discordance amongst the elements. From the south-west comes a long and heavy swell; a strong breeze is blowing from the east, and threatening clouds spring upwards from the north. These omens have a meaning. Down to the southward, somewhere off Cape Horn, there blows a furious gale. The wind will draw round shortly to the northward. That is the interpretation and the reading.

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A swell like this one can only witness off the Cape of Good Hope. It was to me a novel and magnificent sight. Uniform and lofty ridges of waves advancing in rapid succession, and yet with so regular and undisturbed a motion that one might easily fancy these great walls of water to be stationary: yet onward they moved in uniform and martial order; whilst as the ship rose upon their crests she seemed to hover for a moment over the ocean in mid air. And now the wind drew round to the northward and it blew almost a gale. The vessel felt its power and bent before it. It was beautiful to watch the process of hand-reefing topsails and making the vessel snug—the ready obedience to the word of command and the noiseless discipline with which each duty was fulfilled. First had the men clustered on the rigging like bees; then at the word to lay out they fearlessly extended themselves along the yard-arm, and whilst they took in the reefs the ship pitched and rolled so heavily that one felt anxious for their safety: but there they swung securely between high heaven and the sea.

### SEA-BIRDS.

The sea-birds held their holiday in the stormy gale. The lordly and graceful Albatross, whose motion is a very melody, swept screaming by upon the blast. The smaller Cape pigeons followed us fast, passing and repassing across the vessel's track. At last one of them spies a fragment on the waters, which has been thrown overboard: a moment it hovers above, then plunges down. But the other birds have seen it too; and all, pouncing on the spot, move their wings confusedly and seem to run along the waters with a rapid and eager motion. Now is there discord wild amongst them. A screaming and diving, swimming and running, mingled with a chattering noise. No sooner does one gain the morsel than another tears it from him. Who will be the victor here? The Albatross; for he sweeps triumphantly over all, swoops down, and with a scream scares off the timid little multitude; whilst high above his head he holds his arching wings; and now in pride and beauty he sits upon the waters and, drifting fast astern, gradually fades in the twilight.

What wonder that a sailor is superstitious! Separated in early youth from his home ere he has forgotten the ghost stories of childhood, and whilst the young and simple heart still loves to dwell upon the marvellous, he is placed in such scenes as these: in the dark night, amidst the din of waves and storms, he hears wild shrieks upon the air, and by him float huge forms, dim and mysterious, from which



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fancy is prone to build strange phantoms; and oft from aged sailors he gathers legends and wondrous tales suited to his calling; whilst the narrator's mysterious tone and earnest voice and manner attest how firmly he himself believes the story.

### ARRIVAL AT THE CAPE. HIRE THE LYNHER.

September 21.

We came in sight of land yesterday evening, and spent the greater part of the day in beating up False Bay to Simonstown, where we arrived about half-past six P.M. I instantly landed in a shore-boat with Lieutenant Lushington and Mr. Walker; and, having first hurried to Admiral Sir P. Campbell with some letters I had to him, we forthwith started to ride to Cape Town. Finding that a vessel for our expedition could be procured here more readily and economically than at Swan River I determined on making this my point of departure, and after diligent enquiry I finally hired the Lynher, a schooner of about 140 tons, Henry Browse master, and subsequently found every reason to be satisfied, both with the little vessel and her commander.

### EQUIPMENT AND PLANS. SAIL FOR HANOVER BAY.

My time was now wholly occupied in completing the preparations for our future proceedings. I increased my party by a few additional hands of good character, and thought myself fortunate in engaging amongst them Thomas Ruston, a seaman who had already served on the Australian coast under Captain King. On the 12th October I with great difficulty got my affairs at Cape Town so arranged as to be able to embark in the evening, and on the morning of the 13th we hove anchor and made sail.

The party now embarked consisted of:

Lieutenant Grey.

Lieutenant Lushington.

Mr. Walker, our Surgeon.

Mr. Powell, Surgeon.

Corporal R. Auger, Corporal John Coles, and Private Mustard of the Corps of Sappers and Miners.

J.C. Cox, a Stock-Keeper.

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Thomas Ruston, a Sailor who had been on the coast of Australia in the Mermaid with Captain King.

Evan Edwards, a Sailor.

Henry Williams and R. Inglesby, Shoemakers.

There were besides on board a captain, a mate, seven men, and a boy.

The livestock I took from the Cape consisted altogether of thirty-one sheep, nineteen goats, and six dogs. The dogs were as follows: one greyhound; one dog bred between a greyhound and a foxhound; one between a greyhound and a sheepdog; a bull-terrier; a Cape wolf-dog; and a useful nondescript mongrel.

### RE-EMBARKATION FOR HANOVER BAY.

The plan that I had finally resolved on adopting was:

To proceed in the first instance to Hanover Bay, there to select a good spot on which to form a temporary encampment; and, having landed the stock, to despatch Lieutenant Lushington with Cox and Williams in the vessel to Timor for ponies.

### PLANS ON LANDING.

I selected Cox and Williams for this service because the former was used to the management of horses on board vessels, and the latter understanding Dutch was well calculated to act as interpreter at Timor. During their absence I intended to practise the party in making short explorations in different directions.

Upon the return of the vessel I intended to move the whole party to some convenient spot to be chosen during their absence, then to advance, attended only by Coles, and to fix upon the next spot on our route which I designed to halt at. This plan I intended to adhere to as much as possible throughout the whole expedition, namely, never to move the party from one place of halt until I had chosen the next one. We bore with us tools and instruments of every description; so that we not only were fully capable of maintaining ourselves but could literally, if occasion had required it, have founded the nucleus of a colony.

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Great then was my joy when all my preparations were completed and I felt the vessel gliding swiftly from Table Bay into that vast ocean at the other extremity of which lay the land I so longed to see, and to which I was now bound with the ardent hope of opening the way for the conversion of a barren wilderness into a fertile garden.

Part of my plan was not only to introduce all useful animals that I possibly could into this part of Australia, but also the most valuable plants of every description. For this purpose, a collection had been made at Tenerife by Mr. Walker, under my direction, and another in South America,<sup>5</sup> including the seeds of the cotton plant. From the Cape and from England I had also procured other useful plants, and had planned that the vessel, on quitting Timor with the horses, should be filled in every vacant space with young cocoa-nut trees and other fruits, together with useful animals such as goats and sheep, in addition to the stock we conveyed from the Cape.

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### CHAPTER 3. FROM THE CAPE OF GOOD HOPE TO HANOVER BAY.

#### NATURAL HISTORY.

##### FORSTER'S PACHYPTILA (*Pachyptila vittata*.)

October 16.

I shot a female petrel; it had a nail planted in the heel, but no thumb; the bill was hooked at the end, the extremity of which seemed to consist of a distinct piece, articulated with the remainder; the nostrils were united, and formed a tube laid on the back of the upper mandible, hence it belonged to the family of Petrels (*Procellariae*.)

Its temperature was 94 degrees.

Length from tip to tip of wing, 2 feet 3 inches.

Length from tip of beak to tip of tail, 1 foot 2.4 inches.

Length from root to tip of tail, 4 inches.

Length of beak, 1.45 inches.

Length of foot, 1.55 inches.

Breadth across body, 2.3 inches.

Colour of beak and legs black; body white underneath; general colour above, a light bluish slate, which grows darker in the head and wing covers; tail tipped with black; the four first wing feathers tinged with black.

#### CAPE PIGEONS.

I also shot this afternoon three Cape pigeons (*Procellaria capensis*) white underneath, spotted black and white above.

##### FIRST SPECIMEN—Female.

Temperature, 98 1/2 degrees.

Length from tip to tip of wing, 2 feet 11.3 inches.

Length from tip of tail to tip of beak, 1 foot 6 inches.

Length from tip of beak, 1.5 inches.

Length from root to tip of tail, 4.1 inches.

Length of foot, 2.3 inches.

Breadth across body, 3.2 inches.

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### SECOND SPECIMEN.

Length from tip to tip of wing, 2 feet 5 inches.  
Length from tip of tail to tip of beak, 1 foot 5 inches.  
Length from tip of beak, 1.5 inches.  
Length from root to tip of tail, 4 inches.  
Length of foot, 2.3 inches.  
Breadth across body, 3 inches.

### THIRD SPECIMEN—Female.

Length from tip to tip of wing, 2 feet 5.5 inches.  
Length from tip of tail to tip of beak, 1 foot 4.6 inches.  
Length from tip of beak, 1.3 inches.  
Length from root to tip of tail, 4.6 inches.  
Length of foot, 2.2 inches.  
Breadth across body, 3.4 inches.

Two species of insects were found in these Cape pigeons.

The only difference I have been able to observe between the male and female of these birds is, that the male has the black spots of rather a deeper hue.

October 21. Latitude 38 degrees 15 south; longitude 35 degrees 53 minutes east.

From a variety of observations I am able to bear testimony to the correctness of a fact that has been before noticed, namely, that the Medusae invariably live in families. This single circumstance is remarkable in connection with other points of natural history since it will tend to explain the reason of certain classes of Petrels (Procellariae) only visiting particular parts of the ocean.

Sunday October 22. Latitude 37 degrees 44 minutes south; longitude 38 degrees 00 east.

Caught two small animals, one closely resembling a small shrimp (Penaeus) but having the head covered with a most beautiful purple shield. I kept this alive in a jug. The other in size and appearance exactly like a purple grape (Hyalea) with a greenish tinge at one extremity surrounding an aperture, and a distinct aperture at the other extremity. It was 0.4 inches in diameter, and had the power of

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emitting a phosphorescent light. I have since this period found several varieties of this animal; which, when it expands itself, closely resembles an insect, and has little wings. Further on will be found a sketch of these animals in their expanded state. (See illustration *Hyalea* figure 1.)

THE ALBATROSS (*Diomedea exulans*).

We caught four of these birds yesterday, from which I made the following measurements:

FIRST SPECIMEN. Weight, 19 1/2 pounds.

Length from tip of wing to tip of wing, 10 feet 2 inches.

Length from tip of beak to tip of tail, 4 feet 0.5 inches.

Length of beak, 6.8 inches.

Length from root to tip of tail, 10.0 inches.

Length of foot, 7.6 inches.

Length of wing, 4 feet 8 inches.

Height from ground, 2 feet 10 inches.

Temperature 98 degrees, the thermometer placed under the tongue during life. These measurements were all made during the lifetime of the bird.

SECOND SPECIMEN. Weight, 15 1/2 pounds.

Length from tip of wing to tip of wing, 10 feet.

Length from tip of beak to tip of tail, 3 feet 11 inches.

Length of beak, 6.6 inches.

Height from ground to top of head, 2 feet 4 inches.

Temperature 98 degrees.

THIRD SPECIMEN. The largest bird of the kind I have hitherto seen.

Length from tip of wing to tip of wing, 10 feet 8 inches.

Length from tip of beak to tip of tail, 4 feet 6 inches.

Breadth across the body, 8 inches.

Length of bill, 6.7 inches.

Length of foot, 7.5 inches.

FOURTH SPECIMEN. The same size as the second.

Length of beak, 6.3 inches.

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Length of foot, 6.9 inches.

The beak of each of these birds during lifetime was of a beautiful light rose colour; their voice was something like that of a goose, but rather louder, deeper, and hoarser. If during life the beak was pressed with the finger it became quite white, and it was not until the pressure had for some time been removed that the colour returned. The specimens I have described above (all males) were quite white underneath; the white above being speckled with black spots and streaks, sometimes changing to a brownish hue; the wings were black. We obtained also a female bird with the following measurements, which has been described as a distinct species:

Length from tip to tip of wing, 7 feet 2 inches.

Length from tip of tail to tip of beak, 3 feet 5.5 inches.

Length from root to tip of tail, 9 inches.

Length of beak, 4.5 inches.

Length of foot, 5 inches.

Legs pale flesh colour; beak, black, with a brown-coloured streak on each side of the lower mandible; the whole body of a dirty black colour, acquiring a lighter tinge underneath.

October 30.

I shot two male specimens of this last bird: the only distinction between them and the female was that they were rather smaller, and had a white streak instead of a light brown one on each side of the lower mandible.

FIRST SPECIMEN—Male. Weight, 5 1/2 pounds.

Length from tip of wing to tip of wing 6 feet 6 inches.

Length from tip of beak to tip of tail, 2 feet 6 inches.

Length from root to tip of tail, 11 inches.

Length from root to tip of beak, 4 inches.

Length from root to tip of foot, 5 inches.

Length from root to tip of wing, 2 feet 10 inches.

SECOND SPECIMEN—Male. Weight 7 pounds.

Length from tip to tip of wing, 6 feet 9 inches.

Length from tip of beak to tip of tail, 2 feet 10 inches.

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Length of tail, 10.6 inches.

Length of beak, 4.7 inches.

Length of foot, 5 inches.

Length of wing, 3 feet.

All the three specimens of this species had a distinct although minute claw, representing a thumb, upon one leg, thus apparently forming a link between the genus *Procellaria* and the genus *Diomedea*.

### PACHYPTILA VITTATA.

Ash-grey above; white in the under parts; quills, tail-feathers at the tip, and band on the wings when expanded, brownish-black.

Length from tip to tip of wing, 2 feet.

Length from tip of beak to tip of tail, 10 inches.

Length from root to tip of tail, 4.3 inches.

Length of beak, 1 inch.

Length of foot, 1.5 inches.

Length of wing, 10.5 inches.

This bird is of the same species as the one I procured on the 16th of October. I shot it about nine A.M. They are very numerous in these latitudes; their flight resembles much that of a snipe. The name by which they are known to the sailors is the whale-bird; they appear to take their food upon the wing, for I have never yet seen them sit upon the waters even for a single second, although I have observed them frequently, and at all hours; but night and day they hurry on with the same restless, rapid flight, sometimes going in large flocks; and I have never upon shore seen so many birds assembled upon a few square miles as I have sometimes here observed in the open ocean. I never heard them utter any cry or sound.

I saw but few Cape pigeons (*Procellaria capensis*) after passing the 40th degree of longitude, and neither Cape pigeons nor albatrosses after passing the 95th degree of longitude, and 32nd parallel of latitude. I have never seen a petrel or bird of the family *Longipennes* discharge its oily fluid at anyone who worried or attacked it; but have almost invariably seen it involuntarily eject it, when hurt or frightened.

### THE ALBATROSS.



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November 9.

I caught four albatrosses with a fishing-line; one of them was a female, the first I had seen. I observed no marked difference between her and males of the same species, for I have found them vary much in the dark shades upon their feathers.

I have yet found no bird of this family whose foot was not longer than its beak.

DIOMEDEA EXULANS—Female.

Length from tip of wing to tip of wing, 10 feet 10 inches.

Length from tip of wing, 4 feet 10 inches.

From tip of beak to tip of tail, 4 feet 9 inches.

Length of beak, 7.2 inches.

Length of tail, 9 inches.

Length of foot, 7.5 inches.

The black and brown marks on this bird were darker than the corresponding ones on the males.

I am inclined to think that the chief characteristic that distinguishes the females from the males in the family Longipennes is their greater size: my opinion is grounded upon the following tables, drawn up from careful measurements, made by myself.

In each of these three instances the female is larger than the males; they are the only ones I am able to adduce which bear upon this point.

November 11. South latitude 30 degrees 47 minutes; east longitude 100 degrees 21 minutes 15 seconds.

Being a calm, I gave the men leave to bathe this afternoon, and was one of the first overboard myself. Within an hour and a half after we had done bathing, a cry of a shark was raised, and in truth there was the monster (the first we had seen). I mention this fact as tending to support what I have often heard stated, namely, that a shark's sense of smell is so keen that, if men ever bathe in seas where they are found, a shark is almost sure to appear directly afterwards. This really occurred in the present instance.

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We repeatedly caught many little animals which I believe are the VELELLA of Lamarck. They consist of a flat oval cartilage, on which they float; there is a mouth in the inferior surface of this surrounded with many tentacula; on its superior surface is a crest which remains above water, and the wind blowing against it turns the animal round; they thus swim with a rotatory motion; the crest is placed obliquely to the length of the oval cartilage, and this position of it perhaps assists in producing the motion; the crest is perfectly transparent, but marked with little striae; the oval cartilage is marked with concentric striae, which indicate the lines of its growth; in some this cartilage is transparent, in others quite blue.

November 12. South latitude 30 degrees 11; east longitude 100 degrees 31 minutes 30 seconds.

We caught several beautiful animals this day, of the Medusae kind (Diphya).

Figure 1 represents a section through one of them, the size of life: the bag (1) is of a delicate bright amber colour. The long tentacula issuing out are upwards of a foot in length and of a bright flesh colour.

Figure 2 is a section across the animal.

Figure 3 represents the mouth of the large opening at c, d, as if one was looking down into it.

Figure 4 upper part; Figure 5 lower; and Figure 6 the perfect animal.

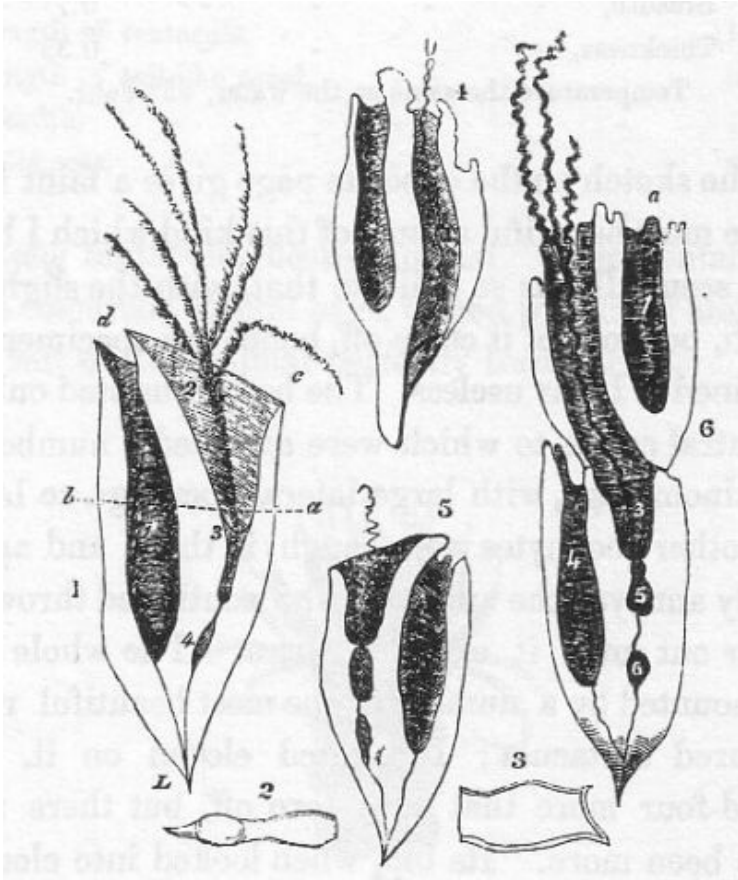
Between c d apparently lay the entrance to its mouth; in the little bag marked (3) its long tentacula were concealed, and below these lay a little gut marked (4) which communicated with the point (L) by a small canal: (1) was its swimming apparatus, and by alternate contractions and expansions of this, it took in and expelled water, and thus acquired a rapid motion, the pointed end (L) moving forwards.

Its length was 1.7 inches.

Breadth, 0.7 inches.

Thickness, 0.35 inches.

Temperature the same as the water, 65 degrees Fahrenheit.



The sketch Illustration 4 *Diphya*, Sp. gives a faint idea of the most beautiful animal of this kind which I have ever seen. It was so delicate that, with the slightest touch, portions of it came off, hence the specimen we obtained is I fear useless. The body consisted only of a central canal, to which were attached a number of gelatinous bags, with large lateral openings, so large that other zoophytes were caught in them, and apparently annoyed the animal; who continued throwing water out until it expelled them. The whole was surmounted by a number of the most beautiful rose-coloured tentacula: I counted eleven on it, and found four more that were torn off, but there may have been more. Its top, when looked into closely, resembled some of the sea anemones; and inside of the large bright orange-coloured tentacula were placed circular rows of smaller ones. Its body was quite transparent, with the exception of the central

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canal, which was of a milk-white colour, and terminated in a small sac of the same hue.

It moved in a direction opposite to the tentacula, by taking in water at the lateral openings of the bags, in the position in which it is represented; then bending these towards the tentacula, and expelling it with great violence.

Temperature the same as the water, 65 degrees Fahrenheit.

Length of body (to tentacula from root of tail-like canal) 1.8 inches.

Length of tentacula, 1.2 inches.

Length of tail-like canal, 0.45 inches.

Breadth, 1.1 inches.

Thickness, 0.8 inches.

Long tentacula, flesh-coloured; large tentacula, rose-coloured; lateral bags, tinged with clear amber; the rest of the animal perfectly transparent.

We this evening caught several curious little animals (Clio ?) which when taken out of the water appeared like small balls of the same matter as that of which a slug is composed. Presently a little head peered out, then the body expanded itself, and finally two little things like wings were spread forth, formed of a fine membrane; they moved these very rapidly, and swam with great velocity.

We caught several small crabs, and two kinds of shells, of a beautiful purple colour. (*Janthina exigua*.) These were very small; I have preserved several of them.

Figures 1, 2, and 3 represent different views of an animal (*Salpa*) slightly electrical, that we caught this evening. Figure 1 is its appearance, one side being up; Figure 2 when the other side is turned up; Figure 3 is the side view of it.

I have never before seen one of the kind electrical. Temperature the same as the water, 65 degrees Fahrenheit.

Length, 1.5 inches.

Breadth, 0.6 inches.

Thickness, 0.3 inches.

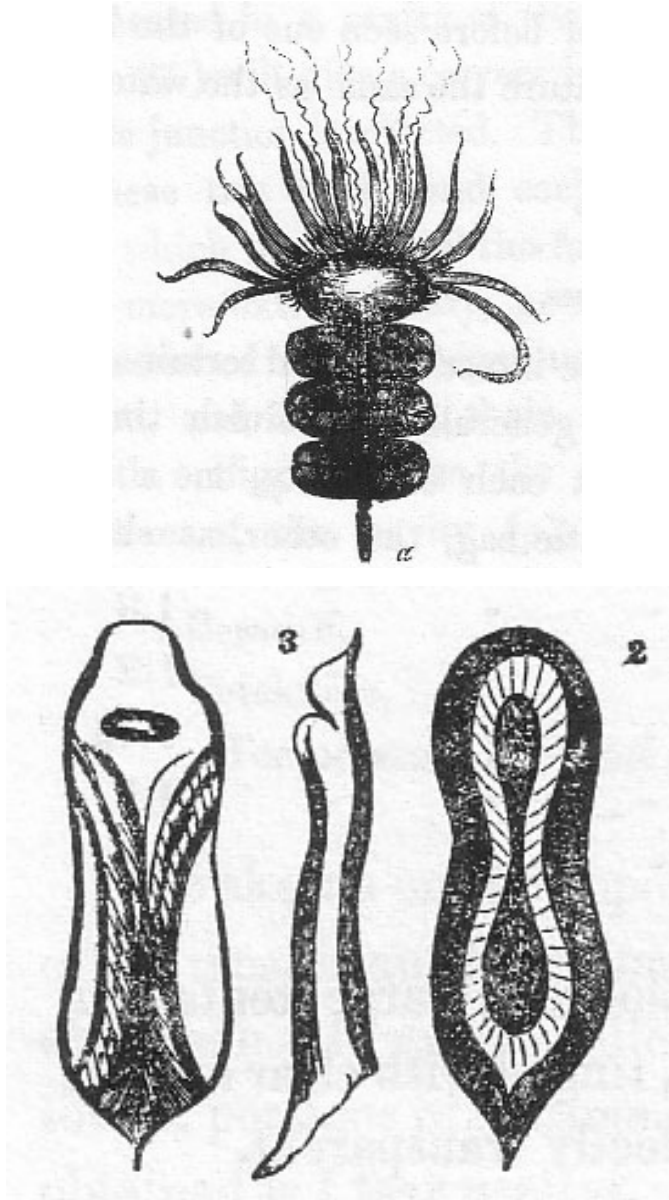


Figure 1. The intestinal canal terminates in a little coloured bag, generally of a bluish tinge; there is an opening at each extremity, one a little to the left of the little bag, the other, as shown in Figures 3 and 1.

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November 13. Latitude 30 degrees 7 minutes south; longitude 100 degrees 50 minutes 10 seconds east.

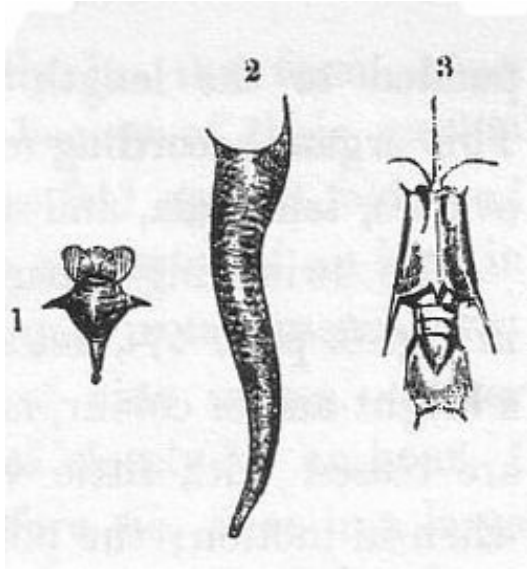


Figure 1. Represents a little shell (Hyalea) which was caught this day.

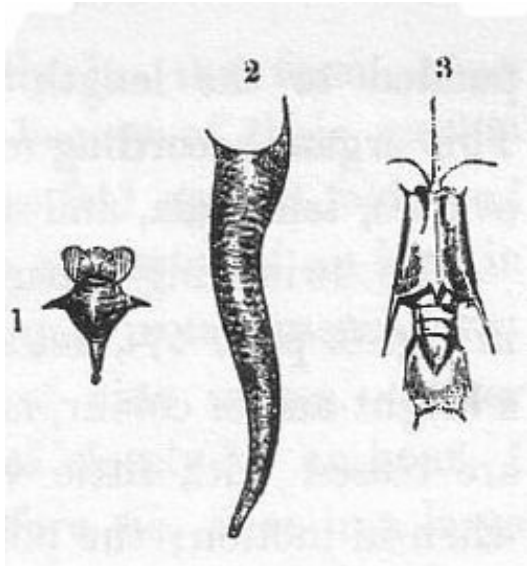


Figure 2. One of the tentacula of the animal I imagine to be the *Physosiphora rosacea*. The point which is seen obtruding at the base resembles a little nerve; it runs the whole way down the tentacula.

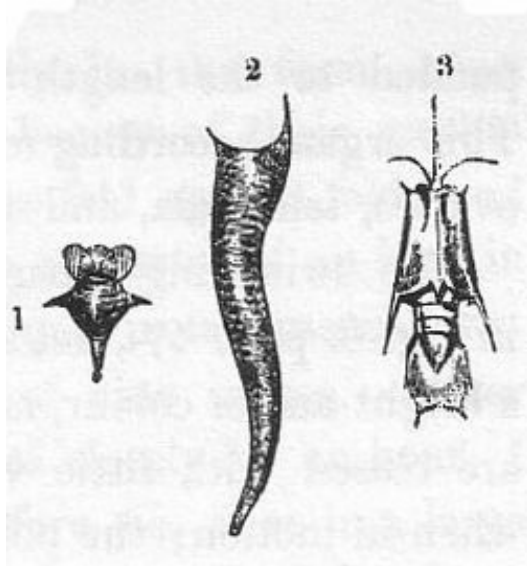


Figure 3. A little shrimp-like animal (*Erichthus vitreus*) caught on the 14th November, latitude 29 degrees 26 minutes south; longitude 101 degrees 32 minutes east. Its head was protected by a shield, such as is shown in the figure.

We caught this day several other *Acalepha*, two of which were of the wonderful genus *DIPHYA*. I yesterday drew a coloured figure of the lower part of one of these animals.

This animal in its perfect state (such as we found it in today) consists of two individuals, the part of one being encased in a cavity of the other. Figures 4 and 5 Illustration 4 will give a correct idea of the way in which this junction is effected. The least motion separates these two parts, and each forms a perfect animal, which performs all the functions of life. This is the more extraordinary, as the containing animal is furnished with an organ not possessed by the contained, and which in their united state is used by both. Figure 5. From the little bag (f) at the bottom of the cavity (g) the receiver produces a chaplet, which traverses the canal in the receiver marked (2) in Figure 6, and which is here drawn the size of life, was sometimes

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expanded to the length of one foot eight inches. This organ, according to M. Cuvier, is composed of ovaries, tentacula, and suckers.

The swimming apparatus, marked (1) and (4) in Figure 6, act simultaneously; they are of a bright amber colour, and their mouth (a) and (h) are closed with little valves, nearly invisible even when in motion; the points round their upper aperture seem to form the hinges for these. In twenty seconds I counted seventy expansions and dilatations of this apparatus. The chaplet and the bag that holds it are flesh-coloured; the rest of the body is gelatinous and diaphanous. They live in families, and swim with great rapidity in the same manner as the other *Acalepha*.

Caught also shells and crabs of the same kind as yesterday.

November 14. Latitude 29 degrees 26 minutes south; longitude 101 degrees 2 minutes east.

*Physosopora rosacea*, Cuvier, see below. We caught another animal of the same kind as the one taken on the 12th of November, and figured in Illustration 7. It was so delicate that I did not measure it for fear of its falling to pieces, but it appeared to be exactly the same size as the former one.

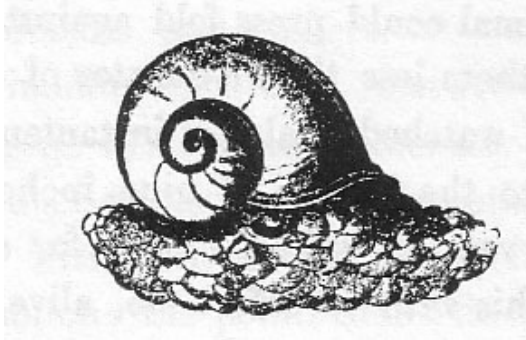
Its circle of large tentacula were of a bright pink, and were fifteen in number; inside this circle was a smaller one of the same number of shorter tentacula, which were not quite so bright a pink colour; in the centre of these were placed organs of a very extraordinary nature, apparently quite round, and not thicker than the very finest silk; they were arranged exactly in the form of a corkscrew, and from the beauty of their mechanism, the animal could press fold against fold, and thus render them less than a quarter of an inch in length, and I watched it almost instantaneously expand them to the length of nine inches. After having observed the animal closely for an hour I am writing this with it before me, alive in a large glass bottle of salt water, and measuring what I put down. The manner in which it expands these organs is by first uncoiling those folds nearest the body, and afterwards those most remote; so that when folded up it looks like a corkscrew with the folds pressed close together, and when expanded, like a long straight thin bit of flesh-coloured silk, with a little corkscrew of the same material at the end. The larger tentacula are shaped like the trunk of an elephant, and their



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extremity is furnished with a very delicate organ with which they can catch anything, and, if touched, they instantly turn some of these tentacula, which they have the power of moving in any direction, to the point so touched. They are not electrical: the lateral bags have a slight tinge of a bright amber colour. These animals sustain themselves in the water by means of the little bag marked (a) in the figure, which floats on the surface full of air, they there swim in the manner before described. I afterwards observed very minute globules, or lumps, in the long silk-like tentacula. When expanded these were very distinct.

Latitude 29 degrees 26 minutes south; longitude 101 degrees 32 minutes east.



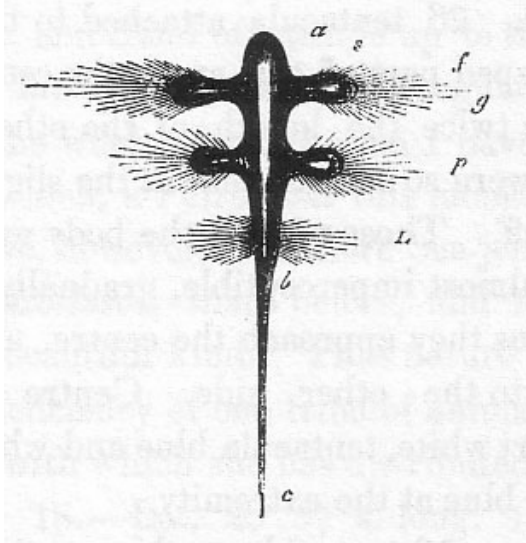
We caught several small shells (*Janthina exigua*) this afternoon: Illustration 9 represents one of them, with the string of air bubbles attached, by means of which they swim on the water. They appear not to be able to free themselves from this mass of bubbles: every shell I have yet found floating in the Indian Ocean possesses these bubbles in a greater or less degree; they were of a purple colour. I have seen the common garden snail in England emit a nearly similar consistency: they also emit a blue or purple liquid, which colours anything it touches.

The animals of the barnacles (*Pentalasmis*) attached to these shells assume their purple colours, while the shell remains nearly pure white.

This afternoon we caught an animal (*Glaucus*, Illustration 10) I had not before seen. It seemed to represent the order reptilia in the Mollusca, being sluggish in movement, its eyes distinct, sensitive to the touch, its head much resembling a lizard in appearance, and

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having a very strong unpleasant smell when taken out of the water. During the hour I observed it in a bucket it remained sluggishly floating on the top, and occasionally swimming by moving its arms slowly along the surface. The first three that I saw pass the vessel I imagined to be feathers floating on the water.



Its description is as follows:

Length from head to tail, a c 1.8 inches.

Length from head to root of tail, a b 0.85 inches.

Length from head to first arm 0.2 inches.

Length from head to second arm 0.45 inches.

Length from head to third arm 0.7 inches.

1st arm.

From centre of back to end of round part, d e 0.3 inches.

From e to the end of short tentacula, e f 0.3 inches.

Ditto to long ditto, e g 0.75 inches.

Diameter of round part and attached tentacula 0.4 inches.

2nd arm.

From centre of back to end of tentacula. 0.4 inches.

3rd arm, do. do. 0.25 inches.

Breadth of body between the two first arms 0.13 inches.

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Thickness 0.25 inches.

General colour of body, indigo blue, of a darkish tinge; down the centre of the back a white streak, terminating at the root of the tail; sides blue, tail blue, quite white underneath, its belly altogether resembling that of a frog; tail tapering to a point.

1st arm. 26 tentacula attached to the rounded paddle-shaped part of this arm, the centre tentacle more than twice the length of the others. These tentacula were so delicate that at the slightest touch they fell off. Those nearest the body were so small as to be almost imperceptible, gradually increasing in length as they approach the centre, and then decreasing to the other side. Centre of paddle-shaped part white, tentacula blue and white, fringed with dark blue at the extremity.

2nd arm. 18 tentacula to this, centre ones the largest. Same colour as first arm.

3rd arm. 12 tentacula, not forming such a regular circle as on the two first arms, and apparently issuing directly from a very short limb attached to the body.

The general appearance of the skin was that of a frog. It had the power of contracting itself considerably.

Caught a slug-like animal (Holothuria) this evening, or rather more closely resembling a caterpillar.

Length from head to root of tail 0.7 inches. Length of tail (or rather gelatinous protuberance) 0.25 inches. Breadth (broadest part at root of tail) 0.22 inches. Narrowest part (near head) 0.15 inches. Length of head 0.12 inches.

Head of light red colour, mouth apparent, motion of head like a caterpillar's when touched, shape cylindrical, body gelatinous, intestines apparent and full.

November 16. Longitude 102 degrees 40 minutes east; latitude 28 degrees 5 to 6 minutes south.

Since we have passed the 95th parallel of longitude, and 32nd of latitude up to the present moment we have been out of the region of

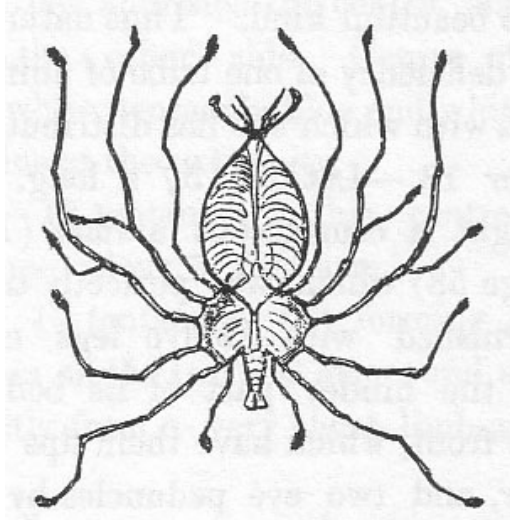
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birds, for during the whole of this period I have seen but two, one of which, a Petrel, has this moment visited us. We have however seen more Sea-jellies, Acalepha and Mollusca than before, and those of a much more beautiful kind. Thus nature has made up for the deficiency of one tribe of animals by the profuseness with which she has distributed another.

November 18. Latitude 26 degrees 57 minutes south; longitude 105 degrees 22 minutes east.

We caught a crustaceous animal (*Phyllosoma*, see Illustration 11) which was perfectly transparent; it was furnished with twelve legs on what I considered the hinder part of its body, and four antennae in front, which have their tips of a bright pink colour, and two eye peduncles by their side, which terminate in little bags containing some blue matter (their eyes). It was furnished also with two legs underneath. These are just shown in the figure near the centre of the body, and between those underneath the insect there was a slight projection, with two little lumps on each side. In this projecting part there appeared to be an opening. When it was taken out of the water it stood upright on its legs and crawled a little like a large beetle, but soon died. In the water it swam with the legs, and the last joint appeared to be feathered. It will be seen that there is a great irregularity in the position of the legs of this insect. The specimen appeared to me to be in some respects imperfect; but I figured it exactly as it was, without blindly guessing at its perfect state. It was not thicker than the thinnest wafer. The back was marked with curved lines, exactly in the manner I have represented. It shrank instantly when touched. The two last joints of the long legs were furnished with thorn-like spikes.

Length of tail 0.37 inches.  
of the body 0.2 inches.  
of the thorax and head 0.3 inches.  
of the entire animal 1.4 inches.  
Breadth of body 0.62 inches.  
Ditto of thorax 0.51 inches.  
Length of third leg 1.9 inches.  
Length of second leg 1.7 inches.  
Length of hindermost leg 0.6 inches.  
Length of eyes, peduncles 0.4 inches.



We caught a second animal of exactly the same size as the one figured, but apparently much more perfect. Each of its tentacula terminates in a small feathering tip when it is in the water, like the little figures at the side, and by the help of which they swim; these have a horny feel to the touch, are destitute of smell, and look like a transparent scale when they lie in your hand.

We also caught this day some little transparent shells (*Cuvieria*) of a cylindrical form, and blunt at the end; they put out two little fins with which they swam.

I was unfortunately too unwell this day to describe all the other specimens we caught, which were numerous. The sea was full of small *acalepha*, and in the midst of a shoal of these a whale was seen.

November 19. Latitude 25 degrees 50 minutes south; longitude 106 degrees 22 minutes east.

Birds first re-appeared again. I saw a large flock of two kinds, but was not near enough to ascertain what they were. I have before noted the fact that almost at the exact point where the southern birds of the family *Longipennes* disappeared those sea-jellies (*acalepha*) which have the power of stinging, began to show themselves; previously to our passing this point I had not seen one: I saw several however today at no great distance from this flock of birds.

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We saw float by this afternoon one of the acalepha, apparently about two feet long and shaped generally like a water snake; its tail had fins like that of an eel, of a purplish tinge; I could distinctly see its head and various vessels in its interior for it was quite transparent. We had no net ready but threw a stick with a piece of string attached to it, the string passed under it but in pulling up cut through it as though it had been jelly.

Caught an animal (Cymothoa) shaped exactly like a woodlouse:

Length 0.4 inches.

Length of antennae 0.15 inches.

Breadth of body 0.12 inches.

It had six legs, and a tail-like fin behind on each side, and nine rings on its back so that it could roll itself almost into a ball, these rings extended no farther than from its head to within 0.12 inches of its hinder extremity; colour very pale blue down the back, bright prussian blue on each side; it crawled about when taken out of the water, and lived for some time; its fins, or fin-like legs, when it thus crawled about, were folded under its tail; eyes distinct.

### MOLLUSCA.

November 20. Latitude 25 degrees 14 minutes south; longitude 106 degrees 49 minutes east.



A shell, *Janthina exigua*, was caught this evening, 8 hours 30 minutes P.M.; when brought directly out of the water into a room the temperature of the animal was 80 degrees 5'; of room 76 degrees; colour, dark violet purple over half the opening and lower part of the shell, so that it gives the animal the appearance of having been

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upon a purple-coloured place; this colour then dies gradually away, and in the smallest whorl of the shell becomes almost white. They had the power of emitting drops of a violet colour, and when put into spirits a great quantity of this issued from the mouth of the shells. We had one evening before caught a pair of shells of the same species, but much smaller, at exactly the same hour; in both instances each pair were caught at the same haul of the net.

November 23. Latitude 21 degrees 43 minutes south; longitude 109 degrees 43 east. 8 1/2 P.M.

### FLYING FISH.

A flying-fish (*Exocetus*) flew on board. Its temperature was 74 degrees. The colour of its iris was black.

Length from mouth to end of curve between forks of tail 10 inches.

From mouth to commencement of wing-like fin 2.7 inches.

Length of wing fin 6.7 inches.

of dorsal fin 2.0 inches.

of pectoral fin 2.2 inches.

of anal fin 1.3 inches.

of upper fork of tail 2.2 inches.

of lower ditto 3.2 inches.

Length from mouth to end of gill 2.2 inches.

Breadth of wing fin 6 inches.

13 spines in each of these wings.

Breadth between eyes 0.11 inches.

Depth of fish 1.6 inches.

Breadth of thickness 1.6 inches.

Diameter of the eye 0.65 inches.

Under-jaw projecting; sides, pale green; back, blackish-green; belly, white; five first spines in wing fin, greenish; others white; wing-fin dark green with a transparent band running nearly up the centre from the back; pectoral fin, transparent, with a dark green spot, nearly an inch square, about the centre of its lowest extremity; tail, dark green, edges light.

November 26. Latitude 16 degrees 32 south; longitude 117 degrees east.

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After crossing about the 22nd parallel of south latitude we fairly entered into the region of flying fish, and dolphins as they are commonly called; tropic birds were now also frequently seen, which had not up to this moment been the case; we often also met hereabouts with a dark-coloured bird with bronzed wings, having a cry precisely like a Snipe. I know not the name of this bird. The more beautiful and largest Sea-jellies (acalepha) had now disappeared, although the more minute ones were as numerous as ever.

### REMARKS.

It therefore appears to me that we have, in coming from the southward to this point, passed through three great regions, or zones, of animal life, one extending from as far to the southward as I have yet been, namely 36 degrees south latitude to 31 degrees south latitude; this zone was inhabited by numerous Sea-jellies (acalepha) of the smaller kind, by porpoises and whales, as well as by immense varieties of the Petrels or Procellariae.

The second zone extending from 31 degrees south to 22 degrees south latitude was inhabited by immense numbers of the larger and more beautiful kind of Sea-jellies (acalepha) particularly by those that have the power of stinging. Within this zone I saw but one whale, one shoal of porpoises, and not a single one of the long-winged water birds or Petrels; in fact I but once in the whole of this distance saw any birds; there were also here a great variety and numbers of Sea-jellies (acalepha) of the smaller kinds. Do then the larger acalepha in this zone perform the office of the birds in the more southern one, and prey upon the smaller species of their own kind?

The third zone is the one with which I have commenced the journal of this day.

### WATER SNAKES.

November 29. Latitude 15 degrees 26 minutes 32 seconds south; longitude 122 degrees 3 minutes east.

We saw six or seven water snakes (Hydrus) this day, all about three feet long, of a dirty yellow colour, with black stripes, the head black, they were furnished with fins like an eel, were of a very graceful form, and moved on the water exactly like a snake, with the head a



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little elevated; when they dived they turned up on their backs before they sank: we caught one of these snakes, also a moth and butterfly. A large bat (*Pteropus* ?) flew about the vessel this evening and pitched several times on the boat astern. I once struck it as it passed me, it appeared much fatigued; we were 150 miles from the main and thirty from the nearest small sandy island.

### SHARKS.

We caught two sharks today; the sailors said that they saw fourteen or fifteen little sharks swimming round one of these, and that when the bait was thrown into the water and made a noise some of these swam into her mouth: directly after they had told me this the shark was caught. I had it opened and four young ones were found inside, two had never left the uterus, for they were attached to it at the time, the other two were not so attached, and were larger than the former, and swam well and strongly when put into the water: whether or not they had ever left the mother I cannot of course say. I have preserved two in spirits, one that was attached and one that was not; two intestinal worms were found in the stomach of one of the sharks.

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### CHAPTER 4. HANOVER BAY.

#### NEW AND DANGEROUS SHOAL.

November 29.

This morning at twenty minutes after nine, when in latitude 15 degrees 26 minutes 32 seconds and longitude 121 degrees 55 east, we suddenly made the very unpleasant discovery that we were in the midst of shoals, owing to some negligence in our lookout. This was not found out until we were hemmed in between two, one lying not more than fifty fathoms from our larboard quarter, and the other about three times the distance on the starboard beam. I went up to the mast-head, and distinctly saw the rocks, not more than two or three feet under water on the larboard side. We fortunately passed through this danger without accident; and, directly we cleared it, found bottom at twenty-five fathoms, coarse sand and shells.

#### RED ISLAND.

December 2.

I was called at four A.M. to keep my watch, and, as soon as I had ascertained that the men composing it were all present and at their stations, I went up aloft, and as I anticipated a speck of land soon appeared above the horizon. This was Red Island. Other points shortly rose behind it: hill after hill came up into view, at a distance looking like islands, which indeed many of them were; but, on a nearer approach, the parts connecting the others became visible, and the mainland of this vast insular continent gradually revealed itself to our anxious eyes.

#### MAKING THE LAND.

We stood on until eleven A.M.; but in making land there always rests a certain degree of anxiety upon the mind of the seaman and traveller, more especially when that land is imperfectly known. As there appeared to be every chance of our losing the sea-horizon, and consequently our noon observation, if we stood on and the breeze continued, our course was changed to the other tack until that hour; and then having correctly ascertained our position, Red Island bearing south-east by east, distance 8 miles, we once more stood in for the land.

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Red Island is small, rocky, and of no great elevation; its colour is a very dark red; the sides are precipitous, and in its centre is a clump of trees which cannot be seen until you have run by the island, as it falls gradually from the south-west to the north-east, so that the north-east side is the least elevated. We sounded when about seven miles to the north-west of it, and found bottom at twenty-five fathoms, of green sandy mud.

The sandbank laid down on the Admiralty charts to the north-east of Red Island is small and barren; it is very low, and at some distance looks like a white rock in the water; being apparently an island formed of the same rock as the former, and topped with quartz or white sand. In entering Hanover Bay, or Port George the Fourth, a good course is to run nearly midway between this and Red Island. At sunset we anchored off Entrance Island (Port George the Fourth) in twenty-five fathoms water.

### ARRIVAL OFF THE COAST OF AUSTRALIA. ASPECT OF THE COUNTRY FROM SHIP-BOARD.

At the first streak of dawn I leant over the vessel's side to gaze upon those shores I had so longed to see. I had not anticipated that they would present any appearance of inviting fertility; but I was not altogether prepared to behold so arid and barren a surface as that which now met my view. In front of me stood a line of lofty cliffs, occasionally broken by sandy beaches; on the summits of these cliffs and behind the beaches rose rocky sandstone hills, very thinly wooded. Whilst I mused on this prospect, all hands were busied in getting the vessel under weigh, which was soon accomplished; but there was little or no wind, and the ship lay almost motionless upon the waters.

### LAND AT HIGH BLUFF POINT. WALK TO HANOVER BAY.

By ten o'clock however we were abreast of High Bluff Point and, as there appeared to be little chance of our having even a gentle breeze for some time, I determined to land with a party at the Point, and to walk from thence to Hanover Bay, where on our arrival we could make a signal to the vessel for a boat to reconvey us on board. By the adoption of this course I hoped to be able at once to select a spot affording water and forage, in the neighbourhood of which the sheep and stores might be landed; the vessel could then proceed without delay to the Island of Timor to procure the requisite number

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of ponies for our expedition, and, if she made a quick passage there and back, I trusted, notwithstanding the numerous unforeseen delays that had arisen, we might yet be able to start for the interior before the rainy season set in.

### LANDING AND DISTRESS FOR WANT OF WATER ON THE ROUTE.

The necessary orders were soon given: the boat was lowered and, whilst the party prepared themselves, I went below to arrange with the master the precise spot at which the vessel was to anchor in order that no mistake might occur upon so vital a point. This done, I returned once more on deck, and found all ready for departure.

The party to land consisted of Mr. Lushington, Mr. Walker, and three men who were selected to accompany us. I also brought away three of the dogs, to whom I was anxious to give a run after their long confinement on board.

The shore for which we pulled was not more than half a mile distant, and we soon gained the edge of a sandy beach, on which I sprang, eagerly followed by the rest; every eye beaming with delight and hope, unconscious as we were how soon our trials were to commence.

### DISTRESSING MARCH.

I soon found that we had landed under very unfavourable circumstances. The sun was intensely hot. The long and close confinement on board a small vessel had unfitted us all for taking any violent or continued exercise without some previous training, and the country in which we had landed was of a more rocky and precipitous character than any I had ever before seen; indeed I could not more accurately describe the hills than by saying that they appeared to be the ruins of hills; composed as they were of huge blocks of red sandstone, confusedly piled together in loose disorder, and so overgrown with spinifex and scrub that the interstices were completely hidden, and into these one or other of the party was continually slipping and falling.

The trees were small, and their foliage so scant and slight that they afforded no shelter whatever from the burning rays of the sun; which appeared to strike up again from the sandstone with

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redoubled heat, so that it was really painful to touch or to stand upon a bare rock: we therefore kept moving onwards in the hope of meeting with some spot favourable for a halting place; but the difficult nature of the ground which we had to cross rendered our progress slow and oppressively laborious.

A feeling of thirst and lassitude such as I had never before experienced soon began to overcome all of us; for such a state of things we had unfortunately landed quite unprepared, having only two pints of water with us, a portion of which it was necessary to give to the dogs; who apparently suffered from the heat in an equal degree with ourselves. These distressing symptoms I can only ascribe to the extreme heat of the sun reflected from the sandstone rocks, and our previous long confinement on board.

### LOSS OF OUR THREE DOGS.

Our small supply of water, although but sparingly used, was soon exhausted; and the symptoms of lassitude, before so excessive, now became far worse. As usual, the endurance of the animals gave way before that of the men. We had not completed more than a mile of our route (although it was far more if the ascents and descents were taken into account) when Ranger, a very fine young dog, dropped behind some rocks, and although we turned back to look for him directly he was missed he could not be found.

The next to give way was Ringhalz, a fine Cape buck-hound; he fell amongst the rocks, and died almost instantly. The only dog now left was a greyhound, who manifested his extreme distress by constantly lying down. For some time we dragged him along, but he was at last from necessity abandoned. The cry of water was at length raised by one of the party, and immediately afterwards we found ourselves on the edge of a deep ravine, the precipitous sides of which were composed of nearly horizontal layers of red sandstone. Down these some of us contrived to scramble, although not without difficulty; but on reaching the bottom we had the mortification to find the water salt; and as it would have been very laborious to follow its course along the bottom of the ravine over the mud, mangroves, and rocks which filled it, we had the pleasure of scrambling up again as we best could.

For some short time we remained seated on the edge of the cliffs above the ravine; but as there was no shelter here from the sun's

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rays, and the pangs of thirst were pressing, I roused the men at last, and moved on again, following the course of the ravine upwards. We had not walked more than half a mile when the salt water inlet terminated and the bed of the ravine became thickly wooded. At the moment we gained this point some white cockatoos came soaring upwards from beneath our feet; and, as we knew that this was an infallible sign of the presence of water, we descended again to renew our search for it.

### WATER DISCOVERED.

Our efforts this time were successful: in a few minutes we found a pool of brackish water which appeared, under the present circumstances, to afford the most delicious draughts, and, having drunk, we lay down by the pool to rest ourselves. Being however doubtful as to which was the best route to lead us out of the ravine we were now in, I walked up its course, accompanied by Corporal Coles, leaving the others to rest themselves, and soon reached its head; when we found ourselves in a small but fertile valley, surrounded on all sides by rocky hills. Here were many tracks of natives, and we came upon one of their regular haunts, where they had arranged a circle of large flat stones round a fireplace occupying the centre; on each of these stones was laid a smaller one, evidently used for the purpose of breaking small shellfish, for the remains of the shells were lying scattered about in all directions;<sup>6</sup> kangaroo bones were also plentifully strewed about, and beside each pair of stones was laid a large shell, probably used as a drinking cup.

### TRACES OF NATIVES. THEIR HUTS.

Natives had been at this spot within the last day or two, and we followed their traces, which were quite recent, across a dry watercourse till they led to a hut built of a framework of logs of wood, and in shape like a beehive, about four feet high and nine in diameter. This hut was of a very superior description to those I found afterwards to be generally in use in South-Western Australia, and differed from them altogether in that its low and narrow entrance rendered access impossible without stooping; and with the exception of this aperture the hut was entirely closed.

### PROGRESS TOWARDS HANOVER BAY. ALARMING INCREASING DEBILITY OF THE MEN. EFFORTS TO REACH THE VESSEL.

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Considering that the best route out of these ravines would be by this valley, I returned with Coles to the party, whom we found much refreshed and, having consulted with Mr. Lushington as to the route we should follow to the vessel after reaching the valley, we once more moved on; but the same symptoms of lassitude and thirst began very soon again to afflict us in an aggravated form; probably from the brackish water we had all swallowed. In less than two hours more these symptoms became so distressing that I could scarcely induce the men to move, and we therefore halted under the shade of some high rocks.

It was now growing late, and the nature of the country was so rocky and difficult that I thought it would be impossible for us to attempt to march in the night-time; whilst on the other hand the men seemed so completely worn out that I feared another day without fresh water would be more than they could bear. I therefore became anxious to make the sea coast before nightfall, considering that we could easily walk along the shore after dark and fire a gun as a signal to the schooner to send a boat for us. With this view therefore I moved on towards the sea, requesting Mr. Lushington, when I fired, to follow my course with the men.

As I walked ahead I found the country very rocky, with lofty bare pinnacles standing up every here and there in the forest, one or two of which I climbed, but could see nothing of the vessel. I now fired a signal shot which, being answered by another from the party, I knew that they were on my traces, and again moved on towards the sea. I presently fired again, as I thought that they might augur favourably from the report, and continued occasionally to do so until I had reached the shore.

The cliffs were so steep that I found some difficulty in descending, but directly I had gained the sea beach I pulled off my clothes and plunged into the water: the quantity of moisture taken into the system by absorption as I lay in the sea soon relieved my burning thirst, and by the time that the first of the party (Corporal Coles) came up I was quite recovered. He followed my example and soon began to revive also. The remainder of the party now arrived with Mr. Lushington, who had found much difficulty in getting them along. Of his exertions under these trying circumstances I cannot speak too highly. But for his persuasion and example I think two of the men were so exhausted that they would before this have given up in despair.

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Corporal Coles being now nearly recovered I left the rest of the party under Mr. Lushington to follow the plan of refreshing themselves by immersion in the sea and, as two men appeared to me to be very ill, I arranged with him that he should keep the whole together and, as soon as he considered them sufficiently recovered, they should follow myself and Coles; whilst we preceded them along the beach for the purpose of sending a boat back from the Lynher to pick them up.

### FURTHER COURSE OBSTRUCTED.

I accordingly started with Coles and had not proceeded more than a mile when we found two huts (one in ruins and the other complete) of exactly the same size and form as that which we had seen in the morning; the recent track of a native along the beach close to these was also visible. In another half mile our progress was arrested by an arm of the sea, about four or five hundred yards across, from which the tide was running out with fearful rapidity; and on the opposite cliffs we observed a native watching our movements.

As night was coming rapidly on it was necessary for me to decide at once what I should do. Coles was unable to swim. If therefore I crossed the stream it must be alone: to do so with natives on the opposite bank, of whose intentions towards us we were entirely ignorant, was not without considerable danger; yet I was very unwilling to leave the men in such a state of suffering from thirst when I was so near the schooner, from whence their wants could be supplied. Whilst I was debating what to do Coles kept firing his gun in hopes that they might hear the report on board and send a boat to our relief; in vain however we strained our ears, the report of Coles's gun was reverberated from cliff to cliff and from hill to hill, but no answering sound came back across the tranquil water.

In the meantime I felt more and more anxious about the portion of the party who were with Mr. Lushington, having left with them certain orders and promised to send a boat up to them; on which promise all their further movements would be regulated. The beach near us afforded no wood wherewith to make a fire as a signal to the schooner; the cliffs hereabouts were too precipitous to climb; and it was evident that but very few of the party could swim so broad a space of water; granting that they ever reached so far as the point where Coles and myself now were.



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### SWIM AN INLET OF THE SEA. DANGER IN THE PASSAGE ACROSS AND AFTER LANDING.

I therefore determined to run all risks, and swim the arm of the sea which stopped our way.

I directed Coles to wait until the others came up and then to remain with them until I returned in a boat. From the rugged nature of the shore I could not have walked a yard without shoes, so I kept them on, as well as my shirt and military cap, and I took a pistol in one hand as a means of defence against the natives, or else to fire it when I reached a spot where it could be seen or heard from the vessel.

I plunged in and very soon found myself caught in a tideway so violent that resistance to its force, so as either to get on or return, appeared at the moment hopeless.<sup>7</sup> My left hand, in which I held the pistol, was called into requisition to save my life; for the stream washed the cap from my head and, the cap then filling with water, and being carried down by the strong current, the chin-strap caught round my neck and nearly throttled me as I dragged it after me through the water; whilst the loose folds of my shirt, being washed out to seawards by the tide, kept getting entangled with my arm. I grew weak and faint but still swam my best, and at last I providentially reached a reef of rocks which projected from the opposite shore, and to which I clung until I had somewhat regained my strength.

### DANGER FROM NATIVES.

I then clambered up on the rocks, and from thence made my way to the beach; but no sooner had I gained it than I heard a native call from the top of the cliffs, and the answering cries of his comrades rang through the wood as they followed me along; my pistol was so thoroughly soaked in my passage across the inlet that it was quite useless except as a club. To attempt to swim back again after the narrow escape I had just had would have been madness; besides which if I had succeeded I should have lost the object for which I had put my life at hazard. Nothing therefore was left but to walk along shore to the schooner, trusting, in my defenceless state, that I might not fall in with any natives. It was now dark and the shore was so broken and rocky that I got terribly cut and bruised, and was, moreover, so weak from my exertions in swimming that when I arrived opposite the vessel I could scarcely hail. Some of those on

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board however heard me (as I found afterwards) and shouted in reply; but their voices never reached my ears, and I imagined they were too far for I could not now see the vessel.

I made one or two more efforts to hail the Lynher, but the noise I made had now attracted the notice of the natives and I heard their cries in several directions round me; this rendered my situation an unpleasant one for I was worn out, naked, and defenceless: at first I thought to return and rejoin my party, and even turned back for a short distance with this intention, but I found myself too weak for such an undertaking and changed my plans; resolving to remain nearly opposite to the vessel until the morning, and resting my chance of safety upon being discovered from it before the natives found me.

### TAKEN UP BY THE LYNHER'S BOAT.

With this intent I returned to the position from which I had lately hailed, and crept into a hole in the rocks whence I could still occasionally hear the calls of the natives; but, being thoroughly worn out, I soon forgot my toils and dangers in a very sound and comfortable sleep. I might have slept for some two hours when I was roused by hearing a voice shout "Mr. Grey;" still however feeling rather distrustful of the truth of my mental impressions, and unwilling to betray my whereabouts to the natives, I returned no answer, but, putting out my head from my secret place of rest, I waited patiently for a solution of my doubts. But again I certainly heard the same voice shout "Mr. Grey," and I moreover now distinctly recognised the noise of oars working in the rowlocks; I therefore hailed "Lynher, ahoy," and all my doubts were completely put at rest by the hearty cheers which greeted my ear as Mr. Smith, the mate of the schooner, called out, "Where shall we pull in, Sir?"

### FORTUNATE DELIVERY AND THE PARTY REGAIN THE LYNHER.

In a few minutes more I was in the boat, and rejoiced to find all the party safely there before me. My next question was, "Have you a little water here?" "Plenty, Sir," answered Corporal Cole as he handed me a little, which I greedily swallowed.

Their adventures were soon related to me. The party under Mr. Lushington, being on an exposed part of the coast, the flash of their

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guns had been seen after dark, and the Captain despatched a boat from the schooner to pull along shore. This boat first of all found Coles near where I had quitted him, and he directed them to the others; the boat, having picked them up, then returned for Coles, and heard from him the intentions with which I had attempted to swim the arm of the sea; but as he had never seen me reach the opposite bank, and the inlet was of very considerable width, they had, up to the moment of finding me, felt very serious misgivings as to my fate.

I did not know till afterwards that the water Corporal Coles had handed to me on entering the boat was all they had on board when he was picked up, and that, although suffering severely from thirst, Coles would not touch a drop as long as he retained any hope that I might be found and be in want of it.

### RETURN OF ALL ON BOARD.

We were now however safe again, and as all had borne themselves well under the difficulties to which they had been exposed, more particularly Mr. Lushington, to whom the credit is due of having, by his personal example and influence, successfully brought on the party to the point of their embarkation, it was now pleasant to revert to the trials we had passed, and to recall to one another's recollection each minute circumstance of our day's adventures; and when we were again on board and had turned in for the night I could not help feeling a deep sense of gratitude to that Providence who, in so brief a space, had preserved me through so many perils.

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### CHAPTER 5. AT HANOVER BAY.

#### PLAGUE OF FLIES.

December 4.

To sleep after sunrise was impossible on account of the number of flies which kept buzzing about the face. To open our mouths was dangerous. In they flew, and mysteriously disappeared, to be rapidly ejected again in a violent fit of coughing; and into the eyes, when unclosed, they soon found their way and, by inserting the proboscis and sucking, speedily made them sore; neither were the nostrils safe from their attacks, which were made simultaneously on all points, and in multitudes. This was a very troublesome annoyance, but I afterwards found it to be a very general one throughout all the unoccupied portions of Australia; although in general the further north you go in this continent the more intolerable does the fly nuisance become.

Sunrise offered a very beautiful spectacle; the water was quite unruffled, but the motion communicated by the tides was so great that, although there was not a breath of air stirring, the sea heaved slowly with a grand and majestic motion. On two sides the view was bounded by lofty cliffs, from three to four hundred feet high, lightly wooded at their summits, and broken by wide openings, into which ran arms of the sea, forming gloomy channels of communication with the interior country; whilst on each side of their entrances the huge cliffs rose, like the pillars of some gigantic portal.

In front of us lay a smooth sandy beach, beyond which rose gradually a high wooded country, and behind us was the sea, studded with numerous islands of every variety of form.

#### ENTRANCE TO PRINCE REGENT'S RIVER.

I was too much tired by the fatigues of the night before to enjoy the scene with the full delight I should otherwise have done; the bruises I had received made me feel so stiff and sore that the slightest movement was painful; the rainy season was however now so near that it would not do to lose a single day of preparation. Directly after breakfast therefore, whilst one boat went off to search for fresh water and a convenient spot to land the stores at, I accompanied the Captain of the vessel in another up Prince Regent's River.

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### EFFECT OF TIDES.

In general the openings to these rivers from the sea are very narrow, forming gorges which terminate in extensive basins, some fifteen or twenty miles inland; the levels of these reservoirs are subject to be raised thirty-seven feet by every tide through their funnel-like entrances, along which the waters consequently pour with a velocity of which it is difficult to form any adequate idea. By such a tide were we swept along as we entered this river by its southern mouth.

On each side of us rose lofty red sandstone cliffs; sometimes quite precipitous, sometimes, from ancient landslips, shelving gradually down to the water, and at these points covered with a dense tropical vegetation.

### GREEN ANTS.

At several such places we landed, but always found the ascent to the interior so covered with large loose rocks that it would have been impossible to have disembarked stores or stock on any. The thickness of the vegetation made it difficult to force a way through, and whenever, in attempting so to do, a tree was shaken, numbers of a large green sort of ant fell from the boughs on the unhappy trespasser and, making the best of their way to the back of his neck, gave warning by a series of most painful bites that he was encroaching on their domain. Yet it was sometimes ludicrous to see one of the party momentarily stamping and roaring with pain, as he cried out to a companion to hasten and assist him in getting rid of an enemy at once so diminutive and so troublesome.

### PARRAKEETS.

We saw a great number of beautiful parakeets, as well as a remarkable hawk of a bright cinnamon colour, with a milk-white head and neck. As there was no apparent probability of our finding hereabouts a spot suited to land our stock and stores at we returned in the afternoon to the schooner, and found that the party in the other boat had been as unsuccessful as ourselves.

### DESCRIPTION OF LANDING-PLACE, AND ENCAMPMENT AT HANOVER BAY.

December 5.

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The long-boat was this morning despatched to the ravine where we had procured water on the first day of our landing to bring a few casks for immediate use, and to examine the country again in that direction; whilst I accompanied the Captain to examine the inlet at which Captain King had watered in his visit to these parts, in 1821.

### WATERING PLACE AT HANOVER BAY.

The approach to this watering-place was through a deep narrow channel, bounded on each side by high cliffs, against which our voices echoed and sounded strangely; whilst from the quantity of light which the cliffs excluded a solemn sombre hue was imparted to the scene. Channels similar to the main one branched off on each side; they were however so narrow that the dense vegetation which grew on their sides nearly met in the centre, giving them an appearance of dark and refreshing coolness; most of these terminated in cascades, now dry, but down which the water in the rainy seasons pours in torrents: at the foot of some of these cascades were deep cavities, or natural basins, worn in the solid rock by the falling of the water, and these were still full of the clearest cool water, in which sported small insects and animals of kinds quite unknown to me.

As we were swept up the main opening by the tide and sea-breeze its width gradually contracted, till at last we came to a small island bearing a single large mangrove tree, which we named One Tree Island. The shores now became thickly wooded with mangroves, from the boughs of which depended in clusters small but well-flavoured oysters, and soon after passing the island we found our farther progress arrested by large rounded blocks of sandstone, from amongst which fresh water came pouring in a hundred little cascades.

### BEAUTIFUL RAVINE.

We here quitted the boat to enter a deep and picturesque ravine, of which the mean breadth was only one hundred and forty-seven feet, bounded on each side by perpendicular cliffs from one hundred and fifty to two hundred feet high; in the centre ran a clear stream, sometimes forming deep and extensive pools, sometimes divided into innumerable little rills which gurgled along through a dense and matted vegetation; and bordered on each side of the main bed by a lofty species of Eucalyptus, with a bark resembling layers of

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coarse white paper, and a foliage pendant and graceful; whilst the great height of these trees for they raised their heads above the cliffs, contrasted strangely with the narrowness of the ravine in which they grew. The space between these trees and the cliffs was filled by a dense forest, principally composed of the Pandanus and wild nutmeg trees. Rich grasses and climbing plants occupied the interval and twined around the trees, whilst parakeets of the most vivid colours filled the wood with their cries. Nothing could be more striking than this singular and novel scene; and we were all delighted as we wound our way up the beautiful ravine.

The same character continued for the next mile or two, whilst occasionally branch valleys of similar character ran off from a main one, giving it at these points a much greater width. The summit of the cliffs was found to be generally a rocky sandy tableland, thinly wooded; and from what I had seen it appeared to me that I was not likely to find a place better adapted for landing the stores than the main ravine.

On embarking to return we could perceive no sign of One Tree Island; and as we swept down towards the sea the leafy top of a tree seen in the clear water under the boat was the only evidence of its existence; though a few hours ago it had formed so prominent an object.

### FATE OF TWO OF THE DOGS.

The long-boat returned to the vessel half an hour after us and brought eighty gallons of water; but the spot whence it was obtained had been found very inconvenient for the purpose. At the waterhole they had met Ranger, the dog we lost the first day; but he appeared quite mad, and without recognising any of them ran wildly away into the woods. The body of poor Ringhalz was also found, who had died on the spot where he fell.

### LABOUR OF DISEMBARKING STORES.

December 6.

A party landed with me soon after dawn at the same point as yesterday, for the purpose of selecting the spot at which to fix our temporary encampment. We traced the valley for about four miles through scenery precisely similar to that which we had found before;

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many branch valleys ran off from the main one and differed from it in no other respect but that they were much narrower. The most favourable spot I could find for our purpose was distant about half a mile from the landing-place and situated at the junction of two valleys, upon a neck of land which ran out from the base of the cliffs. This was the nearest point to the sea at which we should have been safe from any sudden inundation; it combined, moreover, the advantages of affording a good supply of food and water for the stock, of not being within reach of missiles thrown from the cliffs, and at the same time of being situated close to an easy ascent to their summit. I should have preferred pitching the encampment on the tableland at the top, but the labour of carrying the stores up so precipitous an ascent would have been too great for the men, and would have delayed our movements for a longer time than I thought prudent.

### PREPARATIONS FOR ENCAMPING.

Having selected the point for our encampment the next task was to form a pathway to and from the landing-place; and this, on account of the rocky, broken nature of the ground, was one of no slight difficulty. We first set fire to the bush, and being thus enabled to see our way a little we commenced moving the rocks and stones, and continued this operation until near sunset, when we returned on board.

### NATIVES SEEN.

December 7.

We landed again early this morning and went on working at the pathway. The men dined on shore at noon, about which time it was nearly low-water. We had repeatedly seen footmarks of the natives in the mud, and this probably was a favourite fishing resort of theirs, for this day they came upon the cliffs over our heads and shouted at us, as if to try and frighten us away. Finding however that this produced no effect, they threw down some large stones at us and then decamped.

In the course of the night (2 A.M.) we had one of those sudden heavy squalls from off the land which are so common on this coast. I slept on deck and was called to hear a loud roaring on the shore: this was evidently the noise of a rushing wind, which gradually drew nearer



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and nearer and at last reached us, accompanied by lightning, thunder, and heavy rain; it did not however last for more than twenty minutes, and we received no damage from it.

December 8.

Whilst the party continued the pathway I landed on the sandy beach and explored the interior of the country for several miles. We found but very little fresh water and the country was dreadfully burnt up; the heavy rain which had fallen last night however gave signs of the approach of the wet season. We passed several dry watercourses, in many of which we dug for it, but all that we obtained was brackish. We had another squall this afternoon, similar to last night's.

LANDING STOCK. LABOUR IN LANDING STORES.

December 9.

This day we pitched the tents, disembarked the sheep and goats, and some of the stores. It was no slight pleasure to see for the first time those animals landed on a new country, and they appeared themselves to rejoice in their escape from the close confinement on shipboard.

We here first hoisted the British flag, and went through the ceremony of taking possession of the territory in the name of Her Majesty and her heirs for ever.

The next few days were passed in moving the stores from the landing-place to the tent; as it was necessary that before I allowed the schooner to start we should be amply provided with all necessaries so as to be able to maintain ourselves for some time, in the event of anything happening to the vessel: this was very fatiguing work for the whole party but they all exerted themselves with the most strenuous energy, especially Mr. Lushington; and our labours were varied by several amusing novelties which relieved the monotony of the employment.

REMARKABLE FISHES.

Sometimes as we sat at our dinner near the landing-place we watched a strange species of fish (genus *Chironectes*, Cuvier). These little animals are provided with arms, at least with members shaped

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like such as far as the elbow, but the lower part resembles a fin; they are amphibious, living equally well on the mud or in the water; in moving in the mud they walk, as it were, on their elbows, and the lower arm or fin then projects like a great splay foot; but in swimming the whole of this apparatus is used as a fin. They have also the property of being able to bury themselves almost instantaneously in the soft mud when disturbed. The uncouth gambols and leaps of these anomalous creatures were very singular.

Another remarkable fish was a species of mullet which, being left by the retreat of the high tides in the pools beyond the rounded rocks at the head of the landing-place, was obliged to change its element from salt to fresh water, which by a very remarkable habit it appeared to do without suffering any inconvenience. The natural hue of this fish was a very pale red, but when they had been for some time in the fresh water this reddish tinge became much deeper, and when of this colour I have found them in streams a considerable distance from the sea, as if, like our salmon, they had quitted it for the purpose of spawning. Indeed birds, insects, and all things we saw, were so new and singular that our attention was kept constantly excited by the varied objects which passed before us.

December 11.

I went on board in the morning for the purpose of preparing my letters, and about 10 A.M. it was reported to me that a party of natives had come down to one of the sandy beaches and were fishing there. I immediately went upon deck and saw four natives in the sea opposite to the beach, running about and fishing. Captain Browne went on shore at once with me to try and parley with them, but as we approached the land they ran away; we remained for some time on the beach and tried to follow their tracks up into the country, but could see nothing more of them.

This night at 8 P.M. we had another sudden squall from off the land, accompanied with thunder, lightning, and heavy rain; it blew so hard that we were obliged to let go the best bower anchor, but as usual it only lasted twenty minutes.

### PREPARATIONS FOR SENDING THE VESSEL TO TIMOR.

As Mr. Lushington was to accompany the schooner to Timor, and I was anxious to ascertain which would be the best direction for us to

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move off in on his return, I determined to commence my exploring trips as soon as possible. All hands still continued busily engaged in landing the stores and conveying them to the tents; but though the men worked hard our progress was slow. Everything had to be carried on the men's shoulders, for the path, after the great trouble and labour we had bestowed on it, was still so intricate and rocky that it was impossible to use even a hand-barrow. The intense heat of the sun, too, incommoded the men very much at first; but by the 16th of December all the stores were landed, and a considerable supply of water was taken off to the vessel. I determined therefore now to start in my first exploring excursion, leaving to Mr. Lushington the task of seeing the watering of the schooner completed before he left for Timor.

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### CHAPTER 6. HANOVER BAY AND ITS VICINITY.

#### NATIVES SEEN.

Sunday December 17.

This morning directly after breakfast I read prayers to the men, and then commenced my preparations for the excursion on which I intended to start in the evening. Whilst I was occupied in arranging my papers Mr. Lushington observed two natives sitting on the rocks on the top of the cliffs which overlooked the valley, and gazing down intently on us. The instant that he made friendly signs to them they rose from their seats and began to retreat. Some of the party then called to them and one of the natives answered; but they still moved rapidly away. I would not allow them to be followed for fear of increasing their alarm, and in the hope that they would return, but was disappointed. It must have awakened strange feelings in the breast of these two savages, who could never before have seen civilized man, thus to have sat spectators and overlookers of the every action of such incomprehensible beings as we must have appeared; and the relation to their comrades of the wonders they had witnessed could not have been to them a whit less marvellous than the tales of the grey-headed Irish peasant, when he recounts the freaks of the fairies, "whose midnight revels by the forest side or fountain" he has watched intently from some shrub-clad hill.

#### COMMENCEMENT OF FIRST EXCURSION.

I started in the evening, accompanied by Corporal John Coles and Private R. Mustard, both of the corps of Royal Sappers and Miners, and for a short distance by two or three others of the party from the camp. We moved up the ravine in which we were encamped in a nearly due south direction, and after following this course about a mile turned up a branch ravine to the left, bearing 87 degrees from the north.

#### CHARACTER OF THE SCENERY. GEOLOGICAL PHENOMENA.

The romantic scenery of this narrow glen could not be surpassed. Its width at bottom was not more than forty or fifty feet, on each side rose cliffs of sandstone between three and four hundred feet high and nearly perpendicular; lofty paper-bark trees grew here and there, and down the middle ran a beautiful stream of clear, cool

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water, which now gushed along, a murmuring mountain torrent, and anon formed a series of small cascades. As we ascended higher the width contracted; the paper-bark trees disappeared; and the bottom of the valley became thickly wooded with wild nutmeg and other fragrant trees. Cockatoos soared, with hoarse screams, above us, many-coloured parakeets darted away, filling the woods with their playful cries, and the large white pigeons which feed on the wild nutmegs cooed loudly to their mates, and battered the boughs with their wings as they flew away.

The spot I chose to halt at for the night was at the foot of a lofty precipice of rocks, from which a spring gushed forth. Those who had accompanied us from the camp now returned, leaving me and the two soldiers alone and about to penetrate some distance into an utterly unknown country. We were each provided with ten days' provisions and, confident in the steadiness and courage of my men, I had not the slightest anxiety—feeling that as long as we maintained a cool and determined bearing the natives would make no attacks upon us that we could not repel.

We soon erected a little hut of bark, then kindled a fire and cooked our supper, consisting of tea and two white pigeons which we had shot; and by the time our repast was finished it was nearly dark. My companions laid down to sleep: I remained up for a short time to think alone in the wilderness, and then followed their example.

### ASCENT OF A GLEN.

December 18.

At break of day we were again upon our route, which lay up the valley we had slept in; but, as each of us carried ten days' provisions and a day's water, besides our arms, the progress we made in a tropical climate, when thus laden, was necessarily slow and laborious; but the beauty of the landscape and the solicitude we all felt to see more of this unexplored land cheered us on.

### TABLELAND AT THE SUMMIT.

Having at length reached the tableland which this valley drained we found ourselves in the midst of a forest, differing widely from anything we had before seen. The soil beneath our feet was sandy and thickly clothed with spinifex (a prickly grass) which in spite of

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our thick trousers slightly but continually wounded our legs. The trees were lofty and some of them of considerable circumference; but the trunks of all were charred and blackened by constant fires: this circumstance, and their slight and thin, yet strikingly graceful foliage, gave them a most picturesque appearance.

Every here and there in the wood rose lofty and isolated pinnacles of sandstone rock, fantastic in form, and frequently overgrown with graceful creeping and climbing plants which imparted to them a somewhat of mystery and elegance. In other parts rose the gigantic ant-hills so much spoken of by former visitors of these shores; and in the distance we saw occasionally the forms of the timid kangaroos, who stole fearfully away from the unknown disturbers of their solitude.

### ANOTHER VALLEY.

But when we arrived at the extremity of the tableland I felt somewhat disappointed at beholding a deep narrow ravine at my feet, precisely resembling in character the one we had left, and beyond this a second sandstone range, wooded as that on which we stood; in about half an hour we gained the bottom of the ravine and found that a rapid stream ran through it, which, being the first we had discovered, I named the Lushington, after the father of my associate in this expedition, and in accordance with a determination I had made before starting.

Mustard (one of the men with me) being ill, I determined to halt here for breakfast and, having completed this meal, I was sorry to find that he was still too unwell to proceed; such however being the case I was compelled to halt for the day: leaving Coles therefore to take care of him, I strolled off to explore the valley alone. Except in being much larger it differed in no respect from the first in which we encamped, and I found that within about half a mile below the spot where I had left the men it terminated in a salt-water inlet, nearly choked up with mangroves. On returning to them I found Mustard somewhat better; to our annoyance however heavy rain set in, accompanied by thunder and lightning; and as we had no shelter but what some overhanging rocks afforded us we passed a very uncomfortable night.

December 19.

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Mustard was still not quite well; we therefore started late and travelled slowly, keeping nearly in a south-east direction. We thus gradually ascended the second sandstone range, the summit of which was a tableland, at this point about half a mile wide.

### GEOLOGICAL PHENOMENA.

We here remarked a very curious circumstance. Several acres of land on this elevated position were nearly covered with lofty isolated sandstone pillars of the most grotesque and fantastic shapes, from which the imagination might easily have pictured to itself forms equally singular and amusing. In one place was a regular unroofed aisle, with a row of massive pillars on each side; and in another there stood upon a pedestal what appeared to be the legs of an ancient statue, from which the body had been knocked away.

Some of these time-worn columns were covered with sweet-smelling creepers, while their bases were concealed by a dense vegetation, which added much to their very singular appearance. The height of two or three which I measured was upwards of forty feet; and, as the tops of all of them were nearly upon the same level, that of the surrounding country must at one period have been as high as their present summits, probably much higher.

From the top of one of these pillars I surveyed the surrounding country and saw on every side proofs of the same extensive degradation—so extensive, indeed, that I found it very difficult to account for; but the gurgling of water, which I heard beneath me, soon put an end to the state of perplexity in which I was involved, for I ascertained that streams were running in the earth beneath my feet; and, on descending and creeping into a fissure in the rocks, I found beneath the surface a cavern precisely resembling the remains that existed above ground, only that this was roofed, whilst through it ran a small stream which in the rainy season must become a perfect torrent. It was now evident to me that ere many years had elapsed the roof would give way, and what now were the buttresses of dark and gloomy caverns would emerge into day and become columns clad in green, and resplendent in the bright sunshine.

### GRADUAL DEGRADATION OF THE LAND.

In this state they would gradually waste away beneath the ever-during influence of atmospheric causes, and the material being then

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carried down by the streams, through a series of caverns resembling those of which they once formed a portion, would be swept out into the ocean and deposited on sandbanks, to be raised again, at some remote epoch, a new continent, built up with the ruins of an ancient world.

I subsequently, during the season of the heavy rains, remarked the usual character of the mountain streams to be that they rose at the foot of some little elevation which stood upon a lofty tableland composed of sandstone, then flowed in a sandy bed for a short distance and afterwards mysteriously sank in the cracks and crevices made in the rocks from atmospheric influences, and did not again reappear until they had reached the foot of the precipice which terminated the tableland whence they sprang; here they came foaming out in a rapid stream which had undoubtedly worked strange havoc in the porous sandstone rocks among which it held its subterraneous course.

What the amount of sand annually carried down from the north-western portion of Australia into the ocean may be we have no means whatever of ascertaining; that it is sufficient to form beds of sand of very great magnitude is attested by the existence of numerous and extensive sandbanks all along the coast. One single heavy tropical shower of only a few hours' duration washed down, over a plot of ground which was planted with barley, a bed of sand nearly five inches deep, which the succeeding showers again swept off, carrying it further upon its way towards the sea.

The space of ground covered with these columns gradually contracted its dimensions as we proceeded; the columns themselves became nearer and nearer to each other until they at length formed walls of cliffs on each side of us, and we finally reached a point where a single lofty pillar, standing in front of a dry cascade, formed the centre of an amphitheatre of sandstone. There was some water in a little natural basin at the base of the cliffs. I determined therefore to halt here for breakfast and, leaving the men at the foot of the cascade to prepare some tea, I clambered to its summit, and found myself on another tableland similar to that which I had just left, and covered in the same manner with natural columns.

SANDSTONE CAVERNS.



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Some distance from the top of the cascade I discovered a cavern, or rather huge hole in the water-course, into which, thinking it might contain fossil bones, I descended as far as the first ledge, and I then perceived that the water pouring through this cavern in the rainy season was cutting off another rock of sandstone similar to the remarkable pillar in front of the cascade. The water in the basin below must have filtered out from this cavern. On a further examination I found that a precisely similar series of operations was going on throughout the whole amphitheatre of cliffs which bounded the tableland we had been traversing during the morning.

In the rainy season (March 7th) I again passed this spot and found the watercourse full of water, which was also falling abundantly from the cascade. From this circumstance I inferred that the subterraneous outlets for the water were all filled, consequently the large body which these caverns would contain must have been then endeavouring to force its way through the fissures in the porous sandstone rocks.

### CONTINUATION OF ROUTE. HALT IN A VALLEY.

After breakfast we continued on our route through a sandstone country precisely resembling the one which I have now described, and in the course of the day, having completed fifteen miles in a straight line, we halted for the night in a fertile valley affording plenty of fresh water, and so densely wooded with the dwarf pandanus and other prickly trees that we could scarcely make our way through the underwood. In this valley we saw several sorts of cranes, principally *Ardea antigone*, and *Ardea scolopacia*, and I shot one of the former kind and laid it by, intending to eat it in the morning. We could not find any holes in the rocks large enough to protect us from the rain, which fell throughout the night, accompanied by thunder and lightning.

December 20.

Just as we turned out this morning a large kangaroo came close to us to drink at a waterhole; the effect as it stole along through the thick bushes in the morning twilight was very striking. I could not succeed in getting a shot at it; but, as I was determined to have a meat breakfast, I desired Mustard to cook the crane, the rats however had eaten the greater part of it; we therefore at once moved on and, after travelling four miles in a south-east direction over good land, we

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reached a valley, the largest and best I had yet seen, containing trees and birds such as we had not before met with; kangaroos were more plentiful, and, for the first time, we saw the opossum. The valley was more than a mile in width at the point where we first made it, and we had but just time to cross it and to gain the partial shelter of some rocks when heavy rain again set in. We could keep no fire and, being soon wet through, passed a wretched night.

December 21.

We all today began to feel the want of food; since Sunday night we had subsisted on nothing but rice and tea, and only in very small quantities at a time, as the heavy rain had materially interrupted our cooking. As there was plenty of game in this valley I determined to halt for a day previously to my return to the party, for the double purpose of exploring the valley and of shooting game.

### CUCKOO-PHEASANT.

The large bird which was the most abundant here was the *Cuculus phasianus* or pheasant cuckoo. This bird in colour, in length of tail, in its size, and general appearance so closely resembles the hen pheasant of England that, when it is on the wing, it is almost impossible to tell the difference; its habits and food are also identical with that of the English pheasant. The chief point of distinction is that its toes point two before and two behind, in the same manner as those of a parrot; but what is very remarkable about this bird is that, although, like the other Scansores, it delights in climbing and running up trees, it is equally fond of running along the ground in the manner a pheasant does.

### SPORTING.

This day I found plenty of these birds in a cover of long dry grass and bushes about half my height. From this kind of ground I descended to deep lagoons in the bottoms, with rushes, reeds, and dense tropical vegetation around them, amongst which the bamboo and pandanus bore a conspicuous figure; as I beat this cover the pheasants, with their whirring noise, rose on all sides of me, and my Westley Richards was kept in constant operation. I never enjoyed a better day's pheasant shooting in any preserve in England; and I may here remark that North-Western Australia is as good a country for sport in the shooting way as I am acquainted with; whilst for

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every kind of sport except wild-fowl shooting the southern part of Australia is the worst country in the world. My bag being full, and my companions very hungry, I had no excuse for staying longer away from them, and therefore returned, although very loth to leave such beautiful scenery and such excellent sport.

### FERTILE COUNTRY DESCRIBED.

In the interval between the showers, and whilst the men were trying to kindle a fire, I ascended a sandstone range under the shelter of some rocks near the summit of which we were encamped; from this elevated position I saw a far better country to the south of us than any we had yet traversed; and the prospect was so cheering in this direction that I felt assured, when it was once gained with the horses, we should be able to travel on with comparative rapidity and facility.

### NATIVE HAUNTS.

Having emptied my bag I started again to commence the exploration of the valley we were in. It sloped first in a north-easterly and then in a nearly easterly direction; the river that ran through it was in some places almost dry, or was rather a chain of large ponds than a river, several of these ponds being more than a hundred yards across. I followed the valley down for about five miles in the direction of Prince Regent's River and found to my surprise that this part was by no means thinly inhabited by natives; still, as none of the traces I had yet seen were very recent, I trusted that we should not fall in with any considerable body.

### TRACES OF NATIVES.

At length however I came upon a spot which a number of them appeared to have quitted only an hour or two before, and where they had been sitting under a large tree at the edge of one of these ponds; their recent fire had been first slaked with water and sand then thrown over it. I knew therefore that they had been disturbed, and most probably by my gun; but not before they had made a hearty meal of roasted fresh-water mussels (unios) and nuts of a kind which grew on a large shady tree in pods, like a tamarind pod, the kernel being contained in a shell, of which each pod held several, and the fruit tasting exactly like filberts. The spot was admirably suited for their purpose; their bark beds were placed under the

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shelter of this tree and only a few yards distant from the pond, which contained abundance of large unios.

### ATTACK OF NATIVES.

I sat down under the nut tree to consider what was my best plan to adopt. From the signs around us the natives were evidently much more numerous than I had expected: in the event of anything happening to one of the three our return to the main party might be considerably impeded, if not altogether prevented; and although, from the superiority of our weapons over theirs, I entertained but little doubt as to the issue of any contest we might be forced into, the calls of humanity as well as of personal interest warned me to do my utmost to avoid an affray.

### RETURN TOWARDS HANOVER BAY.

I returned therefore to the party and, having made our dinner from pheasant soup and birds which had been first split in two and then nicely roasted on the ashes, we commenced our journey homewards, cautiously and circumspectly, that we might run no risk of being surprised. Until the evening began to close upon us we pursued our route through scenery similar to that we had passed the day before, our course laying several miles to the northward of our former track; and when we halted for the night I carefully chose a good position and, mentioning my apprehensions concerning the natives to the men in such a way as to put them on their guard without exciting their alarm, we bivouacked for the night. Soon after sunset the thunderstorms of the previous evening were renewed, accompanied by tremendous rain. This was unfortunate as it rendered it nearly impossible for us to keep our arms in an efficient state.

December 22.

After passing a wretched and uncomfortable night we started before dawn, pursuing a direction about west by north, and passed one of the openings from Prince Regent's River laid down in Captain King's chart, and there left without a termination, which I had thus an opportunity of fixing. Having completed about six miles I halted for breakfast. No signs whatever of the natives had been again seen; this restored my confidence and, as the sun was intensely hot and we were much fatigued, we lay about in rather a careless and imprudent way. Fortunately the gathering clouds prognosticated that we should

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soon have rain; and, as we could get no good shelter where we were, I ordered the men to move on: we had just gained the top of the range when a violent storm of rain overtook us, I therefore doubled back about a hundred yards to the left of our former track to gain some rocks forming a portion of a detached group upon a tableland, and which I had observed as we passed them.

### ATTACKED BY NATIVES.

Scarcely had we reached these rocks, and sheltered ourselves under the overhanging projections, when I saw a savage advancing with a spear in his right hand, and a bundle of similar weapons in his left; he was followed by a party of thirteen others, and with them was a small dog not of the kind common to this country. The men were curiously painted for war, red being the predominant colour, and each man carried several spears, a rowing stick, and a club. Their chief was in front, and distinguished by his hair being of a dark red colour from some composition with which it was smeared; the others followed him close, noiselessly, and with stealthy pace, one by one, whilst he, crouching almost to the earth, pricked off our trail.

We remained concealed and motionless until they had all passed, but the moment they came to where we had turned off they discovered our retreat, and raised loud shouts of triumph, as, forming themselves into a semicircle, they advanced upon us, brandishing their spears and bounding from rock to rock. It was in vain that I made friendly signs and gestures, they still closed upon us, and to my surprise I heard their war-cry answered by a party who were coming over the high rocks in our rear, which I had flattered myself protected us in that direction.

Our situation was now so critical that I was compelled to assume a hostile attitude. I therefore shouted in answer to their cries and, desiring the men to fire one at a time if I gave the word, I advanced rapidly, at the same time firing one barrel over their heads. This had the desired effect. With the exception of one more resolute than the rest they fled on all sides, and he, finding his efforts unavailing, soon followed their example.



Drawn on Stone by Geo. Bernard, from a Sketch by Capt. G. Grey

M & N Hanhart, Lith. Printers, 54 Charlotte St. Bathurst N.S.W.

ATTACK OF NATIVES NEAR HANOVER BAY.

#### RETURN TO THE ENCAMPMENT. HANOVER BAY.

Feeling however that the neighbourhood we were in was a dangerous one, and being anxious to know whether the party I had left at the encampment—only six in number—had seen these natives, I hurried our march, although the rain fell in torrents all day; and we that night made the camp.

#### PROCEEDINGS THERE DURING MY ABSENCE.

I found the party all in good health and spirits: they had seen nothing whatever of the natives during my absence. The sailing of the *Lynher* had been unfortunately delayed until the 21st of December. On the 18th and 19th the tides had been so low that, although Mr. Lushington had done his utmost, the schooner made little or no progress in her watering. On the 20th the crew and whole party were employed; yet they only succeeded in getting off 280 gallons for they were obliged to carry the water in small baricos to the boat, over slippery rocks and deep mud: and on the 21st,

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thinking it better to complete their water at Timor, they set sail. This difficulty of watering only arose from the lowness of the tides (neap) and our ignorance of the country. Subsequently we found no difficulty in procuring it; indeed no country in the world is better watered than this portion of Australia.

Since the sailing of the Lynher the party had been actively engaged in building a shed for the stores. This labour was still continued, after my arrival, and completed on Christmas eve.

### CHRISTMAS DINNER.

On Christmas Day we all dined together in a little booth made of boughs, which we dressed up as gaily as we could. I could not but feel considerable pleasure in seeing the happy countenances of the men ranged round the rough plank that formed our table. We sat down, a little band of nine, bound upon an adventure of which the issue to any and all of us was very uncertain: yet no forebodings appeared to damp the pleasure of the present moment; and as I anxiously looked round I could not detect the slightest trace of a gloomy thought in any of the cheerful faces that surrounded me. After dinner we drank the Queen's health, the first time such a toast had been given in these regions; and then, Mr. Walker and myself retiring to talk alone, left the rest to their own amusements.

1838.

### PLANTING USEFUL SEEDS.

The interval between that and New Year's Day found and left us full of occupation. On this latter day I had resolved to do homage to the country by a seasonable gift; and therefore, rising with the earliest dawn, spent the whole day in planting, in various positions, seeds of the most useful fruits and vegetables. Those we had already planted were doing well, and I hoped that this benefaction might prove one of no small value, perhaps to civilized man, or at least to the natives of the vicinity.

### WALK TO MUNSTER WATER.

January 4.

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A party of us this day walked to Hanover Bay for the purpose of making some observations on the sandy beach there, after which we went over to Prince Regent's River, near Munster Water. The country until near the bank of the river at this point was of the same sandy nature as that about the beach: there however it improves; and from the circumstance of my finding a regular haunt of the natives I feel sure that there is plenty of fresh water in the neighbourhood. This place of their sojourn resembled one before described, and many others I had seen. An extensive circle was formed by laying a large flat stone upon the ground, and on each of these a smaller one; between the two they evidently crushed the shellfish and nuts which formed their food. Near some of the stones were laid huge shells for the purpose of drinking from; and in the centre of the circle were the marks of frequent fires. We heard the natives calling to one another in the woods, but saw none of them; and in the evening returned to our encampment.

### ISTHMUS NEAR HANOVER BAY.

January 6.

I made an excursion this day for the purpose of examining the land lying between Port George the Fourth and Hanover Bay: it consists of a low neck which connects the peninsula terminating in High Bluff Point with the main. Thus it is bounded on two sides by the sea, and on the other two by rocky hills which are perfectly precipitous, both towards the main and the peninsula; but a natural terrace runs along under the cliff in the direction of Camden Sound, which I believe would form a good road to that harbour. The tract thus enclosed appears to be very fertile. Porphyry and basalt are the common rocks. The soil is rich vegetable mould, mixed with gravel and covered with the most luxuriant grass. The trees were in general small. We only found three springs here; these however were sufficient to prove that it was well supplied in this respect. A species of plant was observed here, which in appearance and smell exactly resembled the jasmine of England: and it would be difficult to give any adequate impression of the singular sensation of pleasure derived from the sight of this simple emblem of home. Here were regular beaten tracks of the natives, as completely pathways as those we find in England leading from a village to a farmhouse.

### HILL OF SHELLS.



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Near the sea we also came upon a complete hill of broken shells, which it must have taken some centuries to form, for it covered nearly, if not quite, half an acre of ground, and in some places was ten feet high: it was situated just over a bed of cockles, and was evidently formed from the remains of native feasts, as their fireplaces, and the last small heaps of shells were visible on the summit of the hill.<sup>8</sup> This neck of land is undoubtedly of the first importance; for, lying as it does between Port George the Fourth and Hanover Bay, it commands two excellent harbours, and its soil is moreover highly fertile. I conceive that a point nearer Camden Bay would be of greater consequence to the mother country; but, after such a spot, this neck of land is the most important position on the North-west coast of Australia.

For some days after our return from this excursion all hands were occupied in drying the stores, which had suffered a little from the late rains; in planting barley and potatoes; and in a variety of occupations of the same nature.

### EXCURSION TO COUNTRY ABOUT PRINCE REGENT'S RIVER.

As all the necessary magnetic and astronomical observations were now completed I seized the opportunity offered by the first favourable day and started with a party of three in the direction of Prince Regent's River.

We made the river about Halfway Bay, and then followed its course, keeping about a mile or two inland. A considerable portion of the land in the neighbourhood of the river was most excellent, consisting of rich meadow plains. The general proportion of good country compared with the bad was still however but small.

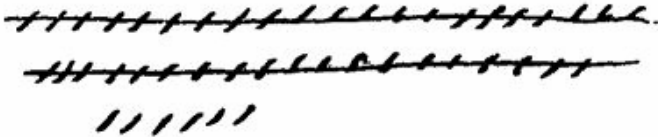
### GOUTY-STEMMED TREES.

There was a very remarkable feature in the appearance of this part of the country, caused by the number of gouty stemmed trees (a species of *Capparis* ?) These trees grow to a considerable height, and had the appearance of suffering from some disease, but, from the circumstance of all of them being affected in the same way, this was undoubtedly their natural state. I measured one of the largest I here saw, and found that at eighteen inches above the ground its circumference was about twenty-eight feet six inches.

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The foliage of this tree was slight but graceful, and it was loaded with a fruit of an elliptical form, as large as a coconut. This fruit was enclosed in a rind, closely resembling that of the almond, and inside the rind was a shell containing a soft white pulp, in which were placed a species of almond, very palatable to the taste, and arranged in this pulp much in the manner in which the seeds are placed in the pomegranate. Upon the bark of these trees being cut they yielded in small quantities a nutritious white gum, which both in taste and appearance resembles macaroni; and upon this bark being soaked in hot water an agreeable mucilaginous drink was produced.

This tree is, from this combination of useful qualities, a vegetable production of no slight value, and probably comes near the coconut tree in value. Its worth is well known to the natives for its vicinity is one of their favourite haunts. Around nearly all of them I have found marks of their fires, and on many of these trees were several successive rows of notches, formed in this manner:



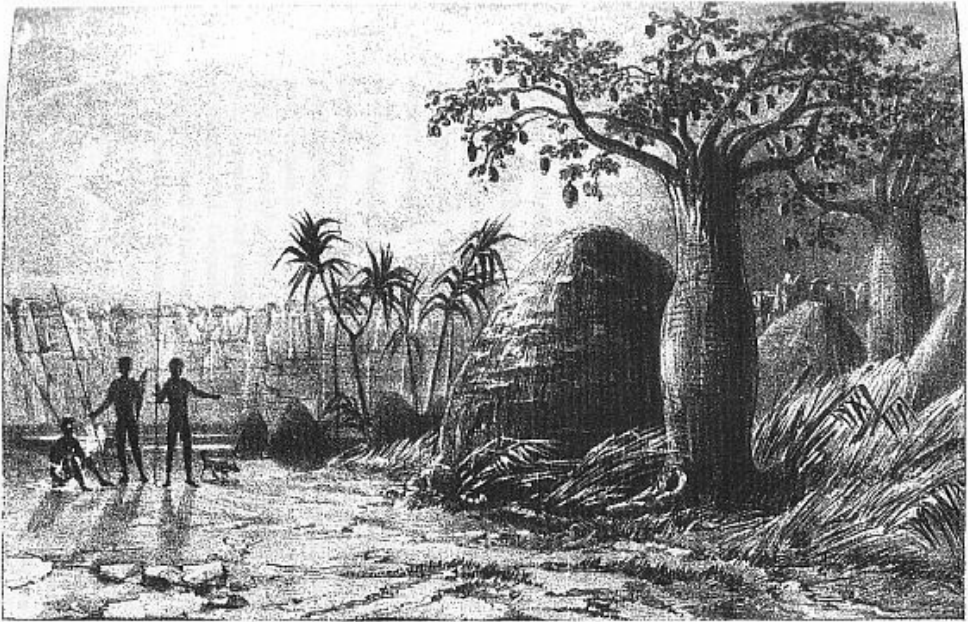
All but the last row being invariably scratched out. These rows of notches were evidently of different ages, and I imagine must indicate the number of nuts taken each year from the tree.<sup>9</sup> I often also found rude drawings scratched upon the trees, but none of these sketches indicated anything but a very ordinary degree of talent, even for a savage: some were so imperfect that it was impossible to tell what they were meant to represent.

### SINGULAR PIECES OF SANDSTONE.

I this day again remarked a circumstance which had before this period elicited my attention; which was that we occasionally found fixed in the boughs of trees, at a considerable height from the ground, pieces of sandstone, nearly circular in form, about an inch and a half in thickness, and from four to five in diameter, so that they resembled small millstones. What was the object in thus fashioning and placing these stones I never could conceive, for they were generally in the least remarkable spots: they cannot point out burial places, for I have made such minute searches that in such a

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case I must have found some of the bones; neither can they indicate any peculiar route through the country, for two never occur near one another.



Drawn on Stone by Geo. Esnard, from a Sketch by Capt. G. Grey.

M. N. Hanhart, lith. Printer, Charlotte St. Bathone Fl.

GIGANTIC ANTS NEST & GOUTY STEM TREE

Published by Tard. W. Boone, London.

### PREPARATION TO BUILD A BOAT.

On my return to the camp I found that the schooner had not yet arrived; I now began to fear that some accident had occurred, and made my preparations accordingly. The party was fully prepared to meet such a misfortune and, as we had the means of constructing a boat large enough to take us to Swan River, I felt more anxious for the safety of those in the vessel than for our own. That no time however might be lost I examined the neighbourhood of the encampment and found that within our immediate vicinity were plenty of trees well adapted for the purpose, which I marked, and had some of them felled.

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### CHAPTER 7. HANOVER BAY AND ITS VICINITY.

#### OCCUPATION AT THE CAMP.

During the absence of the schooner we had our attention fully engaged in forming a garden, collecting specimens, and building sheds for the stores. So difficult and rocky was the country we were in that I was employed for several days in finding a route by which unloaded horses could travel from the beach in Hanover Bay to the point where we were encamped, for the landing-place at the end of the ravine was so rocky as to be impracticable for that purpose. Mr. Walker at length discovered a pass in the cliffs, and by constructing a winding path in this he thought that we should be able to get loaded horses out of the valley. I feared that he was too sanguine, and therefore daily renewed my search in all directions. I travelled up the entire length of the ravine that we were encamped in but found that, even granting it was not flooded, we should find great difficulty in emerging by this route.

These circumstances made me resolve upon the return of the schooner to re-embark the stores, and land them again either upon a point I had fixed upon on the south bank of Prince Regent's River, or upon the neck of land I have before mentioned, which lay between Port George the Fourth and Hanover Bay; but I could not finally decide upon either of the points until the return of the vessel should enable me to examine the coast between Port George the Fourth and Camden Sound; for my party only consisted of nine men, of whom with the exception of three or four I knew nothing, and after what I had seen of the treacherous disposition of the natives I did not think, in my position, it would be prudent to absent myself from them for any length of time.

#### RETURN OF THE LYNHER.

Amidst such exciting and busy scenes, the time flew rapidly away until the 17th of January, when about 11 A.M. the report of a carronade came echoing up the valley. This was the preconcerted signal which was to announce to us that the vessel was safely at anchor in Hanover Bay. We were of course all anxiety to hear an account of their adventures, and to ascertain whether the horses were safe. I hastened directly to the landing-place, where I met Mr. Lushington and a party coming ashore from the schooner.

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### RELATION OF PROCEEDINGS AT KUPANG TIMOR AND ROTI.

The following outline of their transactions was soon given:

They had quitted Hanover Bay on the 21st December at 9 A.M., and reached Kupang in the Island of Timor on the 1st of January. For the first three days until they got clear of the land they had every evening, soon after sunset, heavy squalls from the north-east, accompanied with thunder, lightning, and rain; the prevalent wind was however from the north-west. The Lynher remained at Kupang until the 7th, during which time they completed their water and collected coconuts, bread-fruit trees, etc., to be planted in Australia; but as Mr. Lushington found that he should be able more easily to obtain ponies at the island of Roti than at Kupang, they sailed on the morning of the 7th for that place, and at 7 P.M. came to in the harbour of Rougun in eleven fathoms water, with muddy bottom.

They were enabled to procure at Roti the requisite number of horses by the evening of the 11th of January. The people of this island appeared to be excessively ignorant, knew but little of the nature and value of money, and were much astonished when they were shown a watch. Their favourite mode of disposing of their property was by barter; the articles they prized most were muskets and coarse gunpowder, but they preferred having the gunpowder in a claret bottle, as if this was considered by them to be some definite measure which bore a certain value. They were not very particular about the quality of the muskets provided their outward form and appearance were tolerably good. I have since ascertained that the natives of the little-frequented islands of the Archipelago invariably prefer an old musket to a new one, as they conceive a totally new one may be unsafe, from having been made merely for the purpose of sale; whilst one which has seen service has been indisputably manufactured for use. If they entertain any doubt about the goodness of a musket they generally insist upon the seller's firing it off.

### MODE OF BARTER AT ROTI.

The people of Roti are not allowed to fix themselves what is to be the price of their horses; all the details of the sale are settled by an assemblage of chiefs: their constant cry in bartering (if anything else is offered to them) is "schnapper, schnapper" (a musket, a musket). They refused at first to take percussion guns in exchange, but when

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they saw Captain Browse cock one of these, pour a quantity of water over the lock, and fire it off, their astonishment knew no bounds, and they then eagerly bartered for them. When they found that all the muskets were exhausted they were content to take money and other articles in lieu: an old dress waistcoat of mine and a regulation breastplate procured eight small sheep; and Captain Browse got fourteen goats for a pair of old pistols. The authorities give every encouragement to the trader; but the duties exacted are high, for at Kupang and Roti they demand six rupees duty for every horse exported, or musket imported. Arms and gunpowder are no longer considered contraband.

The inhabitants of Roti were described as being so indolent that it was almost impossible to induce them to do anything; although every means were used to tempt them to cut a sufficient quantity of fodder for the ponies on their passage they constantly delayed doing so and, Mr. Lushington's patience being at last worn out, the vessel put to sea on the 12th of January 1838.

### NEW ISLAND DISCOVERED.

On the 13th they sighted the Hibernian shoal which they made in 11 degrees 57 minutes south latitude and 123 degrees 22 minutes 30 seconds east longitude. On Monday 15th of January at 10 P.M. they discovered an island, thus described in the log of the Lynher:

At 10 hours 30 minutes P.M. saw land about a quarter of a mile ahead; hauled our wind to west by south; sounded in 12 fathoms water, rocky bottom; it appeared to be about one mile in extent, and about twenty feet above the water. After running west by south one mile, got no bottom with 40 fathoms of line. Kept our course south by east: it (the island) appeared to be quite level with rocks extending to north-west, with heavy breakers. Made it by observation south latitude 14 degrees 4 minutes; east longitude 123 degrees 31 minutes by good chronometer rated at Roti.

### TROUBLE WITH THE HORSES.

At 6 A.M. on the morning of the 16th they experienced heavy squalls of wind off Red Island, and this prevented them from getting into Hanover Bay on that day; but on the morning of the 17th they anchored safely, without having lost a single pony, or without

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having experienced any serious misfortune, having made the passage from Roti in five days.

### UNFORESEEN EMBARRASMENTS.

Some short time was occupied in narrating the adventures we had respectively encountered since we had last seen one another, and in giving way to the pleasure arising from meeting again in so distant a land, and under such circumstances: at last came the unpleasant announcement that there was not an atom of forage on board, so that the ponies must of necessity be landed tomorrow; and my plans of disembarking them at a more eligible site were thus at once overthrown. Being the only person who knew the route to Hanover Bay from the encampment, I was obliged to remain on shore to guide the party over there the next morning. Mr. Lushington and the Captain however returned on board to make preparations for landing the horses at daybreak.

### LANDING THE HORSES.

I lay down to sleep this night oppressed with very uneasy thoughts. I was thoroughly convinced that the position we occupied was a bad one to make a start from; but we had already approached too near the season of the heaviest rains (the beginning of February) to allow of longer delay, so that to have landed the horses, then to cut grass for them, and afterwards to have re-embarked them and the stores, would, in my opinion, have been a tedious and wrong course to adopt. Unforeseen difficulties, and against which we could not have guarded, had already completely encompassed us, so that, considering the scanty means at our disposal, the remote and unknown region in which we were situated, and the impossibility of our receiving further aid from any quarter, I saw no way of overcoming them. All therefore that was now left us was to make the most of our actual means, to acquit ourselves like men, and do our utmost.

### EXCURSION BY WATER TO PRINCE REGENT'S RIVER.

January 18.

Fortune smiled on us this morning in as far as she gave us a fine daybreak, and at dawn we started for Hanover Bay, leaving a small party at the encampment. After all the trouble I had taken to find a

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good route for the horses, we still had a great deal to do to render it at all practicable; we however all worked cheerfully and sturdily away at burning the grass, moving rocks and fallen trees, etc., and thus, as it were, fought our way through opposing obstacles to Hanover Bay, over a distance of about four miles.

### TROUBLE IN GETTING THE HORSES TO THE CAMP.

On arriving there I found Mr. Lushington already on shore and some of the horses disembarked. They were not only well selected for the purpose, but were generally in good condition. They had however two faults which could not have been avoided, and these were that they were very small and perfectly wild. By about two o'clock in the afternoon the whole twenty-six had been swum ashore, and we started for the huts.

Our progress was however slow; for, as there were only a few of us, each person was obliged to take charge of three or four of these untamed, unbroken brutes. The mode we adopted was to fasten them together by long ropes so that the number each man led could follow in a line; but, being wholly unused to this kind of discipline, they strenuously resisted it, biting and kicking at one another with the greatest ferocity; and as they were chiefly very courageous little entire horses, a variety of spirited contests took place, much to their own satisfaction, but to my infinite chagrin. Some of the men who were not much accustomed to horses regarded these wild ponies as being but little better than savage monsters, with whom it was dangerous to have anything to do; and, being thus rather afraid of them, treated them very cruelly, kicking them often with great violence whenever I for a moment looked away, and thus naturally rendering the ponies still more wild.

But even when we did induce these brutes to move along pacifically they would not follow one another in a line, but all strove to go in different directions, and, as our road lay through a rocky forest, the consequence of this pulling was that the connecting ropes kept on getting entangled in rocks and trees; indeed there was scarcely an instance of two of them passing on the same side of a tree or rock at the first attempt, so that we were continually halting to clear their tether ropes; again, one of the beasts would now and then become obstinate, refuse to move, and this delayed us all; for I would not allow the party to separate for fear of the natives. In consequence of all these adverse circumstances at sunset we had scarcely got half-



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way to the encampment; and just at this period one pony became and remained so obstinate that, in despair, I had it tied up to a tree alone. We now moved on again as fast as we could, but night soon surprised us, and, when it became too dark to see our course, we tethered our horses and laid down in the forest by them; but as it rained, and we had neither warm clothes nor covering, and many of the party had tasted nothing since dawn, our situation was not very pleasant; indeed, the combined circumstances of cold, hunger, and obstinate ponies had rendered some of the men more crabbed than I had ever before seen them.

January 19.

As soon as it was light enough to find the ponies we recommenced our march; and, all our annoyances of yesterday being repeated, did not succeed in arriving at the ravine until noon—it took us much care and a great deal of time to reach the bottom of this in safety; when however we had done so, we knee-haltered the ponies and let them loose amidst very good feed, of which they now stood much in need, for there was no grass whatever between the encampment and Hanover Bay; the whole of the intervening country being a mass of rock, scrub, and spinifex. I now sent a party back to bring on the refractory pony, which I had yesterday been obliged to tie up to a tree, and the long fast it had been subjected to appeared to have produced a very beneficial effect on its temper, for it now was perfectly docile.

### EXCURSION UP PRINCE REGENT'S RIVER. PREPARATIONS FOR MOVING.

For the next few days all was bustle and preparation. The ponies being so much smaller than I had expected, all our packsaddles had to be altered, and fourteen of them, which the party had made during the absence of the schooner, still had to be put together. Mr. Walker undertook the task of constructing a pathway up the cliffs, by means of which the loaded ponies could ascend; he laboured personally at making this path, occasionally assisted by two or three others; and it would be impossible for anyone who had not seen it at all to comprehend the obstacles he met with, and the perseverance with which he contended against and finally overcame them. We were obliged to complete everything in a hurried and unsatisfactory manner, for our departure had been so long delayed that we were every day in expectation of the setting in of the heavy rains and the

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consequent flooding of the ravine in which we were encamped; and in the event of this taking place before we made a start it was impossible to foresee for how long a period our movements might be delayed.

### CHARACTER OF ITS SHORES.

On Monday the 22nd Captain Browse and Mr. Walker accompanied me in the jolly-boat up Prince Regent's River; we went up with the flood-tide, entering the river by its northern mouth; I had thus an opportunity of examining the island which lies at the entrance to this great arm of the sea, and landed upon it in several places, but found only bad sandy land, occasionally covered with rocks; it was however well wooded and abounded with birds. After we had passed the mouth of Rothsay Water the tide swept us along with great rapidity, and we soon found ourselves in St. George's Basin. I kept close along the northern shore, where we saw but little good land after entering the basin; but there was one fertile island, of a small conical shape, bearing nearly due east as you enter. From the appearance of this island there can be no doubt whatever that it is of volcanic origin; as it in all respects resembles Mount Lyell and the other basaltic conical hills which we afterwards found in the fertile district of Glenelg; we did not however land on it, but merely ran close by, and then continued our route up the river.

St. George's Basin is a noble sheet of water some ten or twelve miles across. On its southern side deep inlets run up into a low and marshy country, leading to fertile districts, and the main object of my present excursion was to endeavour to identify these inlets with some I had seen on my first trip to the southward.

### SCENERY AND THUNDERSTORM.

On the northern bank lofty mountains, crowned with castellated summits, rear their sterile heads over the broad waters, and fling their giant shadows on the bosom of the basin, forming a scene of surpassing beauty.

We had entered the more contracted channel of the river, when there came on a tremendous squall of wind, rain, thunder, and most vivid lightning. The pealing echoes of the thunder as they bounded from height to height and from cliff to cliff was awfully magnificent; whilst the rugged mountains which had just before looked golden in

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the bright light of the setting sun were now shrouded in gloomy mists, and capped with dark clouds from which issued incessant and dazzling flashes of lightning.

During this grand and terrific elemental convulsion our little boat was driven powerless before the blast. The impenetrable forests of mangroves which clothed the riverbanks obliging us to run far up the stream until at last a convenient opening enabled us to land upon the southern shore.

### DELUSIVE APPEARANCE ON THE ROCKS.

We had not long landed when the rain ceased and, as we found several natural caverns in the rock and plenty of dead mangrove trees, we proceeded to make ourselves comfortable for the night; but the men soon reported that they saw the smoke of a native fire close to us, and Captain Browse and myself, under the conviction that such was the case, darted with Mr. Walker to endeavour to gain an interview. But, as we proceeded over the rocks, the smoke appeared gradually to retire, always keeping about the same distance from us: and we at last ascertained that what had appeared to us to be smoke was nothing but the rising vapour occasioned by the cold rain falling on sandstone rocks, which had during the whole day been exposed to the burning rays of a tropical sun.

We had now become so much accustomed to sleeping without any covering, and upon hard rocks, that we should not have minded our exposure had it not been for the rain which fell during the night and beat in under the rocks, beneath which we had crept for shelter. The cold air of the morning awoke us long before daylight; and Mr. Walker and myself, having explored the country to the southward and climbed a high hill from which we had an extensive view, we started on our return to the schooner. In proceeding down the river we landed on an island, situate at the south-eastern extremity of St. George's Basin, just where the river runs into it. The presence of large dead trees on this island, which had evidently been swept down the river in the time of floods and washed up far above the usual water-mark, showed that Prince Regent's River is subject to the same sudden inundations as all other rivers in Australia which I have seen. During our passage down the river we saw no extent of good land in any one place.

### STATE OF THE STOCK.

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For the next few days we had almost uninterrupted bad weather. The party were all occupied in preparing the saddles, etc. The ponies having eaten off the grass in the ravine, we were compelled, about the 28th, to move them to the higher grounds. These at our first arrival on this coast were perfectly dry and burnt up; but since the heavy rains had set in they teemed with running springs, along the margins of which grew a scanty coating of grass. Being obliged to send the horses to a distance to graze delayed us a great deal for one portion of our party was occupied in attending upon them. Our sheep also now began to die off: they had up to this time improved rapidly and were doing very well, having, during the absence of the vessel, been regularly tended and driven to the high dry ground to feed; but now the pressure of business was so great that we were compelled in some degree to neglect them, and from this they suffered. The goats had from some cause never succeeded well.

From the period of their being landed many of the horses had declined very much, and several of them were by this time reduced to a very weakly state. This originated from the heavy rains and the excessive cold which accompanied them, as well as from some food they had eaten which had not agreed with them. On the 28th and 29th the rains increased in violence and duration; but we still continued our occupations of completing the packsaddles and arranging the stores in such small packages that they could easily in case of necessity be transported on men's shoulders.

### FINAL ARRANGEMENTS FOR THE MARCH.

Having provided every requisite for the party, such as food, working utensils, soap, tobacco, etc., all of which were arranged in their respective packages, I issued an order that nothing but certain articles of clothing for each individual were to be put upon the ponies. This step was rendered the more necessary from their weakness and their diminutive size having greatly abridged our intended means of transport. Numerous requests were now made to me to be allowed to put various articles upon the horses, all of which I felt myself obliged to meet by a steady refusal; but this refusal, dictated entirely by the necessity of the case, raised angry and discontented feelings, tending to diminish materially the individual zeal and energy which were so much required at this juncture to ensure our success.

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### DEPARTURE FOR THE INTERIOR. DIFFICULTIES OF THE ROUTE.

On the 29th we began in the afternoon to load our horses. Mr. Walker's pathway was completed by means of a number of circuitous and sharp turnings: it led directly up the face of cliffs which were almost precipitous and 180 feet in height. To commemorate the completion of this really laborious undertaking I named the valley Walker's Valley.

### TROUBLESOME ASCENT FROM THE VALLEY. SICKNESS AND MORTALITY AMONG THE HORSES AND STOCK.

The ponies, though weak, bore their burdens and submitted to the packsaddles better than I had hoped. The first horse was led up by the stock-keeper in safety, with its saddle and load on it; I followed with the second, but was not so fortunate. I had accomplished about three-fourths of the ascent when, turning one of the sharp corners round a rock, the load struck against it and knocked the horse over on its side. I thought for a moment that the poor beast would have fallen down the precipice, but luckily its roll was checked in time to prevent this. There it lay however on a flat rock, four or five feet wide, a precipice of 150 feet on one side of it, and the projecting rock against which it had struck on the other, whilst I sat upon its head to prevent it from moving. Its long tail streamed in the wind over the precipice; its wild and fiery eye gleamed from its shaggy mane and forelock; and, ignorant of its impending danger, it kicked and struggled violently, whilst it appeared to hang in mid-air over the gloomy depth of this tropical ravine. Anxious as I felt for the safety of my pony I could not be unconscious of the singular beauty of the scene during the few minutes that elapsed whilst I was repressing its struggles on a narrow ledge of rock, of which the dark brow projected threateningly above me, whilst the noise of a rushing torrent was audible far below. I cut the girths of the saddle, which then with its load rolled over the precipice, and pitched with a heavy crash on a rock far down. Even then, if the brute had not been a denizen of a wild and mountainous country, it must have been lost; but now it no sooner felt itself freed from its encumbrance than, looking sagaciously around and then raising itself cautiously up, it stood trembling by my side upon the narrow terrace.

Warned by this misfortune we managed to make another turn in the path, by which this awkward rock was avoided, and the remainder

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of the horses, with their loads, reached the tableland in safety. But so rocky was this country that, even after having mastered the ascent, we found great difficulty in getting the loaded ponies half a mile further to a point I had fixed on for our camp. We had this night a continued succession of heavy showers, accompanied with thunder and lightning.

January 30.

This morning it was reported to me that several sheep were dead, and that the horses were beginning to suffer much from constant exposure to the heavy cold rains, for the trees were so small, and their foliage so slight, that they afforded no shelter whatever from tropical showers. On repairing to the ravine I found that the stream which even yesterday was much swollen had now become an impetuous torrent, so much so that even to swim across it was not an easy matter. A tree was soon felled and a temporary foot-bridge thus formed; and as the rain cleared off a little towards the afternoon we managed, in this interval of fine weather, to load the ponies and carry some stores up the cliffs, but the poor beasts were so much weakened since yesterday that we were obliged to diminish their loads considerably. They all appeared to be gradually declining in health, strength, and condition, but from what cause except exposure I could not tell.

### IMPEDIMENTS FROM BAD WEATHER.

January 31.

During last night we had heavy storms, the torrent was still more swollen and, although we laboured hard all day, we accomplished very little; several sheep died during the day, and the ponies appeared to be worse. I became now very anxious as to the result of the expedition; my worst apprehensions as to the rainy season setting in before we had got clear of the sandstone ranges had already been fully realized; every endeavour to hasten our preparations and to prevent this occurrence had been used, though unsuccessfully; it appeared now the better course to bear up against evils that could not be avoided than to lose time in murmuring; I therefore kept all hands constantly employed in doing something which might tend to accelerate our departure.

### HEAVY RAINS.

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February 1.

We again had heavy and incessant rain throughout Wednesday night, accompanied by thunder and lightning. At daylight the stock-keeper came to report to me that two horses, three sheep, and one goat were dead, and that several other horses appeared to be in a very dangerous state. All our stores with the exception of a few articles had now been removed from the valley in which we had first encamped; some of our goats were still left there, but the torrent had become so rapid and impetuous that it had swept away the bridge and was now impassable. Heavy rains fell throughout the greater portion of the day, and produced a beautiful effect in the ravines, for cascades were pouring over the cliffs on each side, sweeping every now and then before them massive pieces of rock, the crash of which in their fall echoed loudly through the valleys.

### FURTHER LOSS OF STOCK.

February 2.

Bad news came again this morning—the stock-keeper met me with a very rueful countenance to report that another horse and two sheep had just been found dead, and that several more sheep were missing. It still rained so heavily that we could not attempt to move, for already a considerable portion of our stores was damaged by the water which had filled the ditch, and regularly flooded the tent in which they were placed.

Mr. Walker started with me for the purpose of marking off a road to the place we next intended to halt at, for the country was so rocky that it was necessary to choose a path with the greatest caution, or we should soon have become embarrassed in precipitous places which the horses could not have traversed. Whilst I was thus engaged Mr. Lushington and two men made another unsuccessful attempt to get the goats and remaining stores across the stream.

### WEAKNESS AND OBSTINACY OF THE PONIES.

February 3.

This morning the rain had somewhat abated: the remaining stores were brought from the ravine, and the goats were swum across; in the meantime the ponies were brought up and loaded, and all

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preparations were at last made for a start: but a host of new difficulties arose; many of the ponies were found to be in such a weakly state that they could with great difficulty carry any weight at all. We were obliged to make a totally new division of the stores, and to select and put aside what articles we could best leave behind. These preparations occupied a considerable time, but we at last moved off in a south-east direction. Our progress was however very slow and tedious; the ponies, though lightly loaded, were so reduced that the slightest obstacle made many fall from weakness, whilst others laid down from obstinacy, and the men being inexperienced in re-fixing the loads, each horse that fell delayed us considerably. At last so many were down at one time that I advanced with such as were able to move to a point distant not more than half a mile, where I halted for the night; and, having unloaded and tethered these horses, we returned to assist the others, and after a great deal of difficulty got the remainder of the weak ponies safe to the encampment.

I slept but little this night for I doubted whether, with our cattle so enfeebled and so out of condition, we should ever succeed in penetrating any distance into the country. We were still a considerable way from the fertile plains I had seen to the southward, whilst the intervening ground was very difficult to travel across and afforded no good feed for the ponies. All my meditations however only terminated in the conviction that it was my duty to continue to use my best exertions under such adverse circumstances.

February 4.

There being no good grass for the horses where we were, I was obliged to move the party and commenced by using every method I could to lighten the loads and to rid the expedition of all encumbrances. I left here a male and female goat who, by their obstinacy, delayed our movements; thinking also that, if they escaped the natives, their offspring might become a valuable acquisition to this land.

We also left here 28 pounds of gunpowder, 10 pounds of ball cartridges, 70 pounds of shot, 200 pounds of preserved meat, some carpenters' tools, and many other useful articles; yet, notwithstanding this decrease in the loads of the ponies, the country we had to travel through was so bad that we only completed two miles in the course of the day; and yet to find the track by which we



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did succeed in crossing the range had cost me many successive hours' walking under a burning sun. The character of the country we passed through was the same as these sandstone ranges always present; namely, sandy scrubby plains, and low ranges of ruinous, rocky hills, in trying to scramble over which the ponies received numerous and severe falls. We however had a very beautiful halting-place, shaded by lofty pines and affording fair feed for the animals.

### NEW PLAN OF MOVEMENTS.

February 5.

On this morning it was reported to me that several of the ponies were in a dying state, and that none of them would be again able to carry even such light loads as they had hitherto done; the quantity of stores they could now convey was quite inadequate to supply a party of the strength we were obliged to move with for any great length of time. A new plan of operations was thus forced upon me, and I now resolved to proceed as follows:

To advance with half our stores to a convenient place for encamping at, and then, on the succeeding day, to send back some of the party with the ponies for the remaining portion of the provisions; whilst, accompanied by two men, I marked off the road by which we were to move on the following day. This mode of proceeding would not very much delay our movements; for the country we were at present in was of so intricate a nature that it was impossible to move loaded horses without previously marking a road for them; and by its adoption I trusted to be able to establish a depot of provisions at some point distant from the coast and whence we could yet make a good start in a southerly direction.

### LABOUR OF TRACING ROUTE.

In pursuance of this plan Mr. Lushington returned this day to our last camp to bring up the provisions we had abandoned; whilst I went off with two men to endeavour to pick out a route by which the ponies could travel. A more toilsome day's work than we had could not be imagined. For eleven hours I was incessantly walking, exposed during the greater part of the time to the burning rays of a tropical sun; and we found nothing but rocky, almost impassable sandstone ranges and precipitous ravines. I however at last succeeded in discovering a path along which it was just possible we

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might be able, by using great care, to lead loaded horses; and on my return to the camp I found that all the remaining stores had been brought up.

### DESCENT INTO A VALLEY.

February 6.

We began our descent this morning from the tableland into a deep valley, following the track we had yesterday marked off, which was still however so rugged and rocky as to be very difficult to get along. Heavy rains set in, and these were always so cold that the large drops falling upon us Occasioned quite a painful sensation. The valleys being all flooded there was no feed in them for the horses and sheep; I therefore was obliged to send them back under charge of Mr. Lushington to the camp, which we had this morning quitted.

I retained three men with me; and after the remainder of the party had moved off I left two of them in charge of the stores, and started with Corporal Coles, again to explore the country in front of us.

### CHARACTER OF THE COUNTRY. FLOODED RAVINE.

About half a mile to the south there was a deep ravine, bounded on each side by lofty cliffs. This ravine resembled in many respects the one we had first encamped in, but it was larger; and it was now impossible to travel either up or down in it on account of the great body of water which occupied its bed. Just opposite to where we were this ravine separated into three smaller ones, running up into the sandstone ranges along which I had previously sought for a route whereby to turn and travel round their heads; but I had found the country so rocky, so impracticable, and devoid of forage that I felt sure it was useless to attempt to traverse it.

My next object was to find a passage out of the main ravine, between the points where the subsidiary ravines ran into it, and where it joined the sea. If I could succeed in doing this our difficulties would, in a great measure, have terminated, for no other main ravine lay between us and the fertile plains which I had seen to the southward; and I knew that we should find no difficulty in traversing the intervening sandstone range, which consisted of a series of elevated plains or terraces, rising one behind the other.

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With this view Coles and myself searched until after sunset, but without success. We found the ravine bounded throughout its southern side by inaccessible cliffs. Occasionally little branch ravines ran into it; but on penetrating for some distance up these they invariably terminated in precipitous cascades. A great portion of this afternoon was spent up to our middles in water as we waded about the flooded valley; and the only thing we had to compensate us for the fatigue and suffering we underwent was the wild beauty of the scenery, which was as lovely and picturesque as impetuous torrents, foaming cascades, lofty rocks, and a rich tropical vegetation could render it.

### NATIVES.

On our return homewards, wearied and disappointed, we came close upon a large party of natives before they were aware of our presence. Coles had followed me up the northern bank of the ravine, and we thus occupied a good position; the natives had, I suppose, wished to avoid us, for we saw no more of them, but merely heard the sound of their retiring voices as they moved up the centre of the valley. We now returned to the men we had left in charge of the stores, and reached the tent soon after dark.

### LABOUR OF TRACING AND FORMING A PATH.

February 7.

This day was passed in constructing the pathway which was to lead us down into the deep ravine in our front. Whilst the men were thus engaged I traversed the country I had yesterday visited in the hope that I might yet find some outlet into the good country which would take us clear of the others; but my searches were in vain. Only one man accompanied me, and I completely knocked him up ere the evening closed in upon us. We then were obliged to retrace our steps to the camp, and I now found myself perfectly worn out by the fatigue consequent on such continued and violent walking exercise under a tropical sun.

It was however cheering to me to see how constantly some of the men had laboured at forming the road down the valleys which led into the ravine. The horses had been brought down thus far; but three more of them had died, so that our twenty-six ponies were reduced to nineteen, many of whom were in wretched condition.

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### CONTINUED DIFFICULTIES OF ROUTE.

February 8.

We again resumed our journey towards the interior; but the pathway, which ran through the valleys leading to the summit of the ravine, was still so broken and difficult that the ponies could only carry half loads along it; and the descent down the cliffs was so steep that they were obliged to be unladen and led into the ravine without their burdens, which were carried down upon the men's shoulders. Men could not have behaved better than they all did on this occasion, particularly Corporal Auger who, possessing the power of carrying on his back very heavy burdens, took every occasion of exercising it in such a way as to stimulate the others, and very much to accelerate our movements.

But even when we had with so much labour got ponies, stores, etc. to the bottom of the ravine, our troubles had, as it were, only commenced, for we now had to get out of it on the other side. In the course of the afternoon however a path had been made, and most of the stores were safely stowed upon an elevated tableland where we had pitched the tents. The place I had chosen for our camp was a pretty spot; a sweet, short herbage had been raised by the heavy rains from the sandy soil, and amongst this the beautiful flowers, for which Australia is deservedly celebrated, were so scattered and intermixed that they gave the country an enamelled appearance. A lofty species of *Casuarina* was intermingled with trees of a denser foliage, and on each side we looked down into two deep ravines; through the dense dark foliage of which could be seen the white foaming waters brawling on their way far below.

The next day was occupied in bringing up the remainder of the stores from the ravine and repairing the damages which had resulted from the bursting of bags and other mischief in their transit over such rough ground. Early in the morning we all had a good bath, and only those who have been so constantly engaged under a burning sun, and for upwards of a week without regularly washing or undressing, can at all estimate the pleasure with which I plunged into the clear and rapid stream.

### ASCENT FROM THE RAVINE.

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After thus performing our ablutions we breakfasted, and then, whilst the stores were being conveyed to the tableland, I started, accompanied by one man, to explore a route for our line of march next day. After continuing on the tableland for about a mile I traced a good route both into and out of another ravine; the stream which occupied the bed of this was so swollen that I had some difficulty in finding a ford across it; but after a few rather ludicrous plunges and falls upon the green slippery rocks I succeeded in detecting a tolerably good one. Our line of route now lay across some elevated open plains, clothed with spinifex, and thinly wooded with a large species of Eucalyptus. We saw here numerous signs of the natives, who had been cutting steps in the trees for the purpose of hunting opossums. These open plains extended for about two miles, and we then reached another small ravine, with a rapid stream running through it. A very good route brought us across this slight descent and stream; and from this point no further impediment of any consequence appeared to lie in our way. The direction in which I now wished to travel presented a series of rocky, sandy plains, thinly wooded, and affording a scanty sufficiency of food for the ponies.

### EXHAUSTION FROM FATIGUE. COLD RAINS.

During the time I was searching for this route the rain had fallen in torrents, and the quantity of ground I had walked over was so considerable that I was exhausted; riding was quite impossible in these excursions as, in many places where the ground was covered with loose rocks overgrown with a vegetation which concealed treacherous cavities, it was necessary to pass across it two or three times before I could determine whether a horse could move over it or not. Today I found myself completely knocked up, and felt certain that I could not for many days longer bear up against such continued fatigues. On my return to the camp I found all prepared for a start tomorrow; but many of the horses were so ill as to be incapable of carrying more than half a load.

February 10.

We moved off at daybreak and, having reached the ravine, set to work to form a pathway down the descent, and up the ascent on the other side, under the additional disadvantage of heavy rain. The sudden transition from the rays of a burning sun to this cold bath made my teeth chatter as if I had a tertian ague. When half our work was completed we breakfasted in the beautiful ravine amidst the

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dark luxuriant vegetation of the tropics, formed by the pandanus, bamboo, and palm.

After breakfast the men recommenced their labour on the road. About two P.M. it was completed, and we then loaded the ponies and set out. The poor animals were however so weak that it was almost impossible to get them to move; they stumbled and fell repeatedly, and thus thereby not only injured themselves but so delayed our movements that we only made three miles and a half during the day, and then halted for the night on very elevated land, and in a good position, for we were on a little sandy rise, along the base of which ran a stream, distant about one hundred yards.

### WORST DIFFICULTIES SURMOUNTED.

Having thus gained the elevated plains I laid down to sleep, satisfied that the worst of our labours were over; yet I could not but recollect that it had taken us ten days to reach a spot which by the proper route was only a short day's journey from the valley we were first encamped in, and that in our march through the country we had been compelled to traverse we had lost seven ponies, and injured many of those remaining; all these difficulties arose from our departure having been delayed so long that the rains had set in and so flooded the country that we could not proceed by the proper route.

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### CHAPTER 8. TO THE GLENELG RIVER.

#### MEETING AND ENCOUNTER WITH THE NATIVES.

February 11.

The stores we had left behind yesterday were so necessary to us that I was fearful they might be injured or destroyed if left exposed in the bush beyond today, and therefore despatched a party under Mr. Lushington for them.

Some time after they were gone I started from the encampment on foot, with the intention of choosing a track for our route next day, as well as of endeavouring to fall in with my former track in this direction; for by so doing I should be enabled to get the party on the good land without further impediment, and at the same time to complete my map of this part of the country.

#### GATHERING OF NATIVES ABOUT THE CAMP.

I was accompanied by Corporal Coles and a fine-looking young man about twenty years of age, from the Cape of Good Hope, leaving three men at the camp. Soon after my departure these men heard the voices of natives in the woods, and presently they appeared themselves in numbers which rapidly increased until there were collected together about two hundred men, women, and children. The party at the tents instantly got under arms, and posted themselves on the brow of the hill on which our tents stood; whilst at some distance from its base, and on the opposite side of the stream, the natives were assembled.

The advance of a large armed body from the woods seemed now to indicate that a hostile movement was about to be made; one of my party therefore shouted out to them in a threatening tone, motioning to them at the same time to go away. The natives immediately answered the shout, then halted, and, after apparently consulting together for some time, retired a little. The party at the tents simultaneously took counsel together and, agreeing that it would be imprudent in their small number to hold intercourse, under the existing circumstances, with so large a body of natives, it was resolved not to allow them to approach beyond a certain point, and, in the event of any armed portion passing the stream towards the tents in disregard of their signals, then to fire on them one by one.

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### PROCEEDINGS AT THE CAMP.

In the meantime the women and little children moved round the hill, examining everything with the most intense delight: a pony which was in front of the camp more particularly excited their attention; the little children laughed loudly at it, and appeared also to laugh at the party themselves, regarding them much the same way that little boys do a stranger in foreign costume when he appears in the streets of a country village in England. The native men regarded the pony more seriously; they walked round and round, examining it carefully, and when the little stallion, becoming playful from these marks of attention, neighed, put down his head, and prepared to fight and kick vigorously, they all beat a precipitate retreat.

The party at the tents overlooked all their movements and heard every word that was uttered. They describe the language this people spoke as clear, distinct, and agreeable to the ear; the men they observed to be a fine race, tall and athletic: two were remarked in particular, one of whom was very tall, and had his forehead and face painted with white (their sign of mourning, and that there is a death to avenge) whilst the other was of a far lighter shade of colour than the rest, and these two appeared to direct the general movements.

After some time distant shouts were heard from other natives in the direction in which my party had seen me go; and a large body of the native men instantly hurried off in that quarter, headed by the tall man and the light-coloured one I have just mentioned. Then ensued a pause of about two hours, during which the native women and children wandered about in the distance, conversing in groups: suddenly was heard shouts, as of distress, from the same quarter, which were answered by the natives in front of the camp, when all moved off in a hurried manner and were seen there no more. But in the interim another scene connected with this had been passing at a distance.

### EVENTS IN TRACING A ROAD.

On quitting the camp in the morning I and my two companions traversed for some time portions of the elevated sandstone plains which I had passed on a former occasion; and, after an hour's walking through the gloomy stringy-bark forest which covered them, we reached a stream of water running in a shallow valley; and as there was a bad route down to this I halted to make a road which



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the ponies could traverse. There was plenty of water and forage hereabouts, and a fine level country for our proceedings, so that we were all in high hopes and spirits, and, as I then believed, our principal difficulties were at an end.

Whilst at work at the road we all thought that we heard a native call, and that others answered him; having listened for a repetition of these sounds we again heard them, but they were so indistinct in character that none of us this time agreed as to what they were. I imagined that it was the call of a bird and, when I again heard the same sound very faintly in the distance, I felt convinced it was not a human voice, and proceeded on my way perfectly at ease.

My attention was soon occupied by other objects. I saw from a hill I ascended some remarkable blue peaks to the south: this gave us fresh hopes; and nothing occurred till about three-quarters of an hour after we had first heard the native call, when we arrived at a short descent covered with rocks, from which started a large kangaroo; I got a fair shot at, and knocked it over, but it sprang up again and hopped away; we then tried to track it but soon lost its footsteps in the scrubby vegetation of the gloomy forest,

It was the duty of the Cape man who accompanied me to mark a tree every here and there by chipping the bark, so that the party might the next day easily recognise the route which they had to pursue; upon looking back I now perceived that he had neglected a very remarkable tree about twenty or thirty yards behind us, and which stood close to the spot where I had fired at the kangaroo. I desired him to go back and chip it, and then to rejoin us; in the meantime I stood musing as to the best means of avoiding the little rocky ravine in our front.

### SUDDEN SURPRISE BY NATIVES.

Finding that the man remained absent longer than I had expected I called loudly to him, but received no answer, and therefore passed round some rocks which hid the tree from my view to look after him. Suddenly I saw him close to me breathless and speechless with terror, and a native with his spear fixed in a throwing-stick in full pursuit of him; immediately numbers of other natives burst upon my sight; each tree, each rock, seemed to give forth its black denizen, as if by enchantment.

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A moment before, the most solemn silence pervaded these woods. We deemed that not a human being moved within miles of us, and now they rang with savage and ferocious yells, and fierce armed men crowded round us on every side, bent on our destruction.

### CONTEST WITH THEM. UNFORTUNATE RESULTS.

There was something very terrible in so complete and sudden a surprise. Certain death appeared to stare us in the face: and, from the determined and resolute air of our opponents, I immediately guessed that the man who had first seen them, instead of boldly standing his ground, and calling to Coles and myself for assistance, had at once, like a coward, run away; thus giving the natives confidence in themselves, and a contempt for us: and this conjecture I afterwards ascertained was perfectly true.

We were now fairly engaged for our lives; escape was impossible, and surrender to such enemies out of the question.

As soon as I saw the natives around me I fired one barrel of my gun over the head of him who was pursuing my dismayed attendant, hoping the report would have checked his further career. He proved to be the tall man seen at the camp, painted with white. My shot stopped him not: he still closed on us and his spear whistled by my head; but, whilst he was fixing another in his throwing stick, a ball from my second barrel struck him in the arm and it fell powerless by his side. He now retired behind a rock, but the others still pressed on.

### IMMINENT DANGER.

I now made the two men retire behind some neighbouring rocks, which formed a kind of protecting parapet along our front and right flank, whilst I took post on the left. Both my barrels were now exhausted; and I desired the other two to fire separately, whilst I was reloading; but to my horror, Coles, who was armed with my rifle, reported hurriedly that the cloth case with which he had covered it for protection against rain had become entangled. His services were thus lost at a most critical moment whilst trying to tear off the lock cover; and the other man was so paralysed with fear that he could do nothing but cry out, "Oh, God! Sir, look at them; look at them!"

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In the meantime our opponents pressed more closely round; their spears kept whistling by us, and our fate seemed inevitable. The light coloured man, spoken of at the camp, now appeared to direct their movements. He sprang forward to a rock not more than thirty yards from us and, posting himself behind it, threw a spear with such deadly force and aim that, had I not drawn myself forward by a sudden jerk, it must have gone through my body, and as it was it touched my back in flying by. Another well-directed spear, from a different hand, would have pierced me in the breast, but, in the motion I made to avoid it, it struck upon the stock of my gun, of which it carried away a portion by its force.

All this took place in a few seconds of time, and no shot had been fired but by me. I now recognized in the light-coloured man an old enemy who had led on the former attack against me on the 22nd of December. By his cries and gestures he now appeared to be urging the others to surround and press on us, which they were rapidly doing.

### FALL OF THE NATIVE CHIEF.

I saw now that but one thing could be done to save our lives, so I gave Coles my gun to complete the reloading, and took the rifle which he had not yet disengaged from the cover. I tore it off and, stepping out from behind our parapet, advanced to the rock which covered my light-coloured opponent. I had not made two steps in advance when three spears struck me nearly at the same moment, one of which was thrown by him. I felt severely wounded in the hip, but knew not exactly where the others had struck me. The force of all knocked me down, and made me very giddy and faint, but as I fell I heard the savage yells of the natives' delight and triumph; these recalled me to myself, and, roused by momentary rage and indignation, I made a strong effort, rallied, and in a moment was on my legs; the spear was wrenched from my wound, and my haversack drawn closely over it, that neither my own party nor the natives might see it, and I advanced again steadily to the rock. The man became alarmed and threatened me with his club, yelling most furiously; but as I neared the rock behind which all but his head and arm was covered he fled towards an adjoining one, dodging dexterously, according to the native manner of confusing an assailant and avoiding the cast of his spear; but he was scarcely uncovered in his flight when my rifle ball pierced him through the

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back between the shoulders, and he fell heavily on his face with a deep groan.

### DISPERSION OF HIS FOLLOWERS.

The effect was electrical. The tumult of the combat had ceased: not another spear was thrown, not another yell was uttered. Native after native dropped away and noiselessly disappeared. I stood alone with the wretched savage dying before me, and my two men close to me behind the rocks, in the attitude of deep attention; and as I looked round upon the dark rocks and forests, now suddenly silent and lifeless but for the sight of the unhappy being who lay on the ground before me, I could have thought that the whole affair had been a horrid dream.

For a second or two I gazed on the scene and then returned to my former position. I took my gun from Coles, which he had not yet finished loading, and gave him the rifle. I then went up to the other man, and gave him two balls to hold, but when I placed them in his hands they rolled upon the earth—he could not hold them, for he was completely paralysed with terror, and they fell through his fingers; the perspiration streamed from every pore; he was ghastly pale and trembled from head to foot; his limbs refused their functions; his eyes were so fixed in the direction in which the natives had disappeared that I could draw his attention to nothing else; and he still continued repeating, “Good God, sir! look at them, look at them.”

The natives had all now concealed themselves, but they were not far off. Presently the wounded man made an effort to raise himself slowly from the ground: some of them instantly came from behind the rocks and trees, without their spears, crowding round him with the greatest tenderness and solicitude; two passed their arms round him, his head drooped senselessly upon his chest, and with hurried steps the whole party wound their way through the forest, their black forms being scarcely distinguishable from the charred trunks of the trees as they receded in the distance.

To have fired upon the other natives when they returned for the wounded man would, in my belief, have been an unnecessary piece of barbarity. I already felt deeply the death of him I had been compelled to shoot: and I believe that when a fellow-creature falls by one's hand, even in a single combat rendered unavoidable in self-

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defence, it is impossible not sincerely to regret the force of so cruel a necessity.

### RETURN WOUNDED.

I had now time to attend to my own state and that of my men, and found that they were uninjured. I had been severely wounded in the hip; another spear had just cut my right arm, and a third had deeply indented my powder-flask, whilst lying in a haversack, immediately over my stomach. The men were not, up to this moment, aware of my being wounded, as I had thought it better to conceal this circumstance from them as long as I could. The natives had gone off in the direction of the tents; and as I felt doubtful whether they might seize upon a favourable opportunity to surprise the party there, and thus revenge their defeat, I was anxious to reach the encampment as soon as possible. We therefore bound up my wound as well as we could, picked up the spear which I had drawn out from my hip, and started homewards.

We did not take with us any of the other spears or native weapons which were lying about in abundance; for I still wished to show this people that I was actuated by no ill will towards them. They did not however deal so generously with us; for Coles unfortunately forgot a notebook which he was carrying for me, containing many observations of great value; and I sent back a party to look for it, but the natives had returned to the place and carried off all their own spears, and other weapons, and my notebook likewise.

The first part of our march homewards was managed tolerably well. We saw the tracks of the natives, as if they were still retiring in the direction of the tents; and at one place, close to a group of detached rocks, were several tame native dogs, near which I have no doubt a party of men or women were concealed, as these animals seldom wander far from their masters. We did not however see any natives, and continued our route unmolested.

My wound began by degrees to get very stiff and painful, and I was moreover excessively weak and faint from loss of blood; indeed I grew so dizzy that I could scarcely see, and neither of the others were capable of leading the party back to the tents; yet I was afraid to halt and rest for I imagined that if I allowed my wound to grow cold and benumbed I should then be unable to move; leaning

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therefore on Coles's arm, I walked on as rapidly as I could, directing the men which way to go.

### MISTAKE OF THE ROUTE.

Unfortunately however we lost our track and, after walking for nearly two hours, I found that we were far from the encampment, whilst my sight and strength were momentarily failing. Under these circumstances I told Coles to walk in a direction which I gave him, and which led directly across the beaten track of the party; having reached which he could easily make out the encampment, and, leaning on his arm more heavily than before, we again moved on.

### INABILITY TO PROCEED.

Having reached the track of the party and turned southward to follow it I still pushed on until we were within two miles of the tent, when, as I tried to cross a stream, I strained my wounded hip severely, just reached the opposite shore, and fell utterly unable to rise again. Coles, with his usual courage and devotion to me, volunteered to go on alone to the party and send assistance; the other man was to remain with me and keep a lookout for the natives, and, had they again attacked us, I should still have had strength enough to have shot two of them, and thus have sold my life dearly. I desired Coles to say that a tent, stores, the surgeon, and two men were to be sent to me, for that I was not well enough to be moved.

### REFLECTIONS.

The water of the stream revived me considerably. My wound however was very painful, and the interim between Corporal Coles leaving me, and assistance arriving from the tent was spent in meditations, arising naturally from my present circumstances. I sat upon the rocky edge of a cool clear brook, supported by a small tree. The sun shone out brightly, the dark forest was alive with birds and insects. On such scenery I had loved to meditate when a boy, but now how changed I was; wounded, fatigued, and wandering in an unknown land. In momentary expectation of being attacked my finger was on the trigger, my gun ready to be raised, my eyes and ears busily engaged in detecting the slightest sounds, that I might defend a life which I at that moment believed was ebbing with my blood away; the loveliness of nature was around me, the sun rejoicing in his cloudless career, the birds were filling the woods

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with their songs, and my friends far away and unapprehensive of my condition, whilst I felt that I was dying there.

And in this way very many explorers yearly die. One poor youth (Mr. Frederick Smith) my own friend and companion, has thus fallen since the circumstances above described took place; others have, to my knowledge, lately perished in a similar way. A strange sun shines upon their lonely graves; the foot of the wild man yet roams over them: but let us hope when civilization has spread so far that their graves will be sacred spots that the future settlers will sometimes shed a tear over the remains of the first explorer, and tell their children how much they are indebted to the enthusiasm, perseverance, and courage of him who lies buried there.

Mr. Walker was by my side within an hour after the time that Coles had left me; he had come on alone ahead of the others, not knowing but that I might be in immediate danger, and therefore running a risk on my account that I can never forget.

He dressed my wound and told me that assistance was at hand to convey me to the tents. Mr. Lushington soon arrived with a pony. It was now growing very late in the day. I therefore did not like to remonstrate against being moved on horseback although, from the position of my wound, I feared that it was an injudicious mode of conveyance in my state. I was placed upon the pony and, supported by my comrades, moved onwards to the tent.

### REACH THE CAMP. CONSEQUENCES OF THE WOUND.

I cared but little for the want of comforts I must now be subject to. Therein I only shared the lot of many a worthy soldier; but one thing made the night very wretched, for then through the woods came the piercing shrieks of wailing women and the mournful cries of native men, sorrowing over him who had that day fallen by my hand. These cries rang on my ears all night, startling me at every moment from my feverish and fitful slumbers.

Early next morning the natives moved off in a westerly direction without having again attempted in any way whatever to molest us. My wound was not today so painful as I had anticipated. Mr. Walker, at my request, attempted to heal it by union by the first intention, as I hoped to be thus only compelled to delay the party for a few days.

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My pain and suffering were, after the first day, so great, owing to an abscess having formed in my hip, that I was unable to keep a regular journal, and will therefore give a short narrative of the events which occurred, recommencing my journal on the 27th of February, the day on which I was sufficiently recovered to enable me to proceed with the party.

### CAPE MAN SENT BACK TO THE VESSEL.

Two or three days after I had been wounded the man from the Cape, who had been with me at the time, came to request that he might be allowed to leave the party and return to the vessel. He stated very fairly that his horror and dread of the natives were so great he should never be able to face them; that he had never been before placed in circumstances of danger; and felt himself quite unable to cope with them; that if his own father had been with him when they attacked us he could not have helped him; and that he was sure he should die of fright if ever he saw them again.

I thought it would be cruel to compel him to remain with the party, and it was moreover impossible to tell what evil effect his cowardice might produce upon the others; when already he had, by running away from the natives, induced them to attack us. The only account he gave of this transaction was that he saw a native sitting on a rock with a spear and, feeling alarmed, immediately ran away. No one after this could feel in the least surprised at the consequences. The peculiar characteristic of this savage race appears to be that they in all cases act upon first impulses and impressions. I have repeatedly remarked this trait in their character; and undoubtedly when they found an unknown being in their native wilds, who fled from them in evident fear, it was to be expected that they would, in the first instance, feel very much inclined to run after, and throw a spear at him.

On the 21st of February I sent a party under Mr. Walker back to the schooner for the purpose of escorting this man, as well as to direct the Captain to delay her departure from the bay until the 2nd day of May; which delay would allow time for us to complete the exploration of this part of the country, and I could then decide upon what course I had better adopt.

### EVENTS DURING PERIOD OF HALT.



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Mr. Walker returned on the 22nd, having executed both these commissions; and his party brought back for me a little sugar, arrowroot, and wine. All of these were articles of which, in my present state, I stood much in need.

My recovery was a good deal delayed by the circumstances in which I was placed. The heat in the store-tent, a portion of which I occupied, was sometimes as high as 136 degrees of Fahrenheit, and until the return of Mr. Walker I had been able to obtain nothing to eat or drink but damper and tea without sugar; I also reclined upon the ground, until sores broke out from lying on so hard a surface in one position. Corporal Auger latterly however made a sort of low stretcher, which gave me a little more ease. Added to these bodily ills were many mental ones—but I will not dwell longer on times so replete with painful recollections.

### ANECDOTE OF RUSTON.

During the time I was lying in my tent, in great pain and very low spirits, I was attended with every care and kindness by Ruston, the sailor I had brought from the Cape, who occasionally suggested such odd topics of comfort as his philosophy could supply; and one day, either from some expressions I had dropped, or other circumstance, he conceived that the death of the native I had shot was preying most upon my mind; under this impression he came into the tent, seated himself on a flour-bag near me, and made his usual inquiries as to my wants and desires; then, glancing at recent events, proceeded to say: "Well, Sir, I'm sure if I were you, I shouldn't think nothing at all of having shot that there black fellow; why, Sir, they're very thick and plentiful up the country." I did not exactly see the consolation to be derived from this argument of Ruston's, but I could not forbear smiling at its quaintness, and feeling grateful for the kindness with which it was intended.

### TRACK FOUND.

During my illness Mr. Lushington explored a track to the westward of the one I had formerly taken, and of which he reported so favourably that I determined to pursue it. According to his account, by following it for seven or eight miles, we should get altogether clear of the sandstone ranges, and enter a tract of country of great fertility. On the 26th Mr. Walker reported me to be so much better

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that he thought I might with safety move on the next day on horseback, and preparations were accordingly made for a start.

A very serious change had taken place in our resources in one respect, for only fourteen ponies now remained alive out of twenty-six, and many of these were so weak and in such bad condition as to be almost useless. On opening one of those which had died about a hat-full of sand was found in its inside, and it therefore appeared very probable that the ponies, having been landed in the first instance on loose sandy soil producing only a short and scanty vegetation, had taken up so much sand with their food as to interfere with the functions of the stomach, and hence had arisen their gradual wasting away and ultimate death. I indeed entertain no doubt that the great loss of ponies we sustained arose from this cause.

### CHANGE OF PLANS.

This reduction in the number of our beasts of burden prevented me from entertaining further hope of being able to proceed for any great distance parallel to the coast in a southerly direction. I therefore formed a depot at our present encampment, burying all such stores as the remaining ponies were unable to carry on. My intentions being merely to proceed as far as the supply of provisions we could carry with us would last, then to return to our position, and from thence to the schooner.

### DESCRIPTION OF A NEW VOLCANIC COUNTRY.

On the morning of the 27th of February I was, in pursuance of this plan of operations, lifted on my horse, and we moved on in a south-west direction, across sandy plains covered with scrub and a species of stringy-bark; but on travelling for about a mile and a half the character of the country became more rocky and difficult. After moving down a slight descent, we came to a rapid stream, the same one on the banks of which I had heard the natives' calls on the day I was wounded; the banks afforded good food for the horses and trees which offered some shelter to the men from the burning heat of the sun. I determined therefore to halt here for breakfast; indeed the horses were so completely knocked up that they were incapable of travelling any further. We had already been compelled to abandon one of them in a dying state since we had started in the morning.

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We halted for about an hour and a half and then recommenced our journey, but were unfortunate enough to miss the marked trees, and therefore wandered a good deal in our attempts to find the right track. Whilst thus roaming in the wood we passed two spots about one hundred yards distant from each other, which I imagined to be native burying-places: they consisted of piles of small loose stones so heaped together as to form a large mound; these mounds were placed on flat bare rocks, one of them, the smaller, had been recently made, the other was larger and much older, for it was partly overgrown with plants.

### VIEW FROM THE SANDSTONE RANGE.

About 2 P.M. we reached the extremity of the sandstone ridges and a magnificent view burst upon us. From the summit of the hills on which we stood an almost precipitous descent led into a fertile plain below; and from this part, away to the southward, for thirty to forty miles, stretched a low luxuriant country, broken by conical peaks and rounded hills which were richly grassed to their very summits. The plains and hills were both thinly wooded, and curving lines of shady trees marked out the courses of numerous streams. Since I have visited this spot I have traversed large portions of Australia but have seen no land, no scenery to equal it. We were upon the confines of a great volcanic district, clothed with tropical vegetation, to which the Isle of France bears a greater resemblance than any other portion of the world which I am acquainted with. The rocks in both places are identical; many of the trees are also the same; and there are several other close and striking points of similarity.

### DESCENT FROM THE SANDSTONE RANGE INTO THE LOW COUNTRY.

The descent into the lowlands, being very difficult, occupied us nearly two hours; we then gained the bed of a ravine, in which ran a clear stream: the ravine gradually widening out as we reached the plains. I proceeded directly down it in the direction of a lofty peaked hill which bore to the westward of south; and, having gained a shoulder of this hill, we halted for the night.

Immediately above us a perfectly conical peak raised its head to the height of at least five hundred feet;<sup>10</sup> this hill was covered with rich grass, and there could be no doubt that it was of volcanic origin, for the rock of which it was composed was a vitrified lava resembling

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that of Ascension. It is from this lava that the natives form their most deadly spears, for which purpose it answers well, as it fractures easily, and the fracture resembles that of the coarse green glass of England; indeed a lump of this rock might readily be taken for a part of a glass bottle.

The horses and sheep revelled in the luxuriant pasture. The hill we had encamped on formed a sort of plateau; behind us stood dark mountains, and in our front lay fertile plains, from which green hills rose one behind the other until they were lost in the distance, without any perceptible change in the character of the country. To the eastward the prospect was similar, as well as to the westward, except that in this direction the hills were more lofty, and behind these the tropical sun was hurrying down with a rapidity of movement never witnessed by those who live in the gloomy climes of the north. The men all looked healthy and full of hope; the cool sea-breeze refreshed my feverish frame: I painted in fancy the rapid progress that this country would ere long make in commerce and civilization, and my weakness and fatigues were all forgotten.

### DISTANT EXPANSE OF WATER.

February 28.

At dawn this morning the sheep could not be found; tempted by the goodness of the feed they had broken out from the little enclosure we had made for them and had wandered off. The stock-keeper and two of the men, having ascended the conical hill behind us to try if they could see them from it, reported on their return that they could descry a large lake or expanse of water, which bore about south by west from us.

### VEXATIOUS DELAYS.

Whilst the search for the sheep was continued I sent another party up the hill to observe more particularly this sheet of water, who returned with a report similar to that of the stock-keeper, and I therefore determined, as soon as everything had been prepared for starting, to move off in the direction pointed out; unfortunately the sheep were not found till near noon but, as I was afraid we should consequently lose a whole day, I started directly after they were brought in. We had not proceeded more than half a mile ere I had cause to repent this measure, for two or three of the men suffered

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severely from exposure to the sun, and one of them became so unwell that I was obliged to halt the party.

The spot I chose was the bank of a stream, shaded over by dense trees and, if anything could have atoned for the mortification of being compelled to halt when so anxious to get on, the cool beauty of this spot would have done so.

When the sun began to fall we again moved on, following the course of the stream, which ran through a fertile valley about two miles wide and bounded on either side by gently sloping hills, extending through a country thinly wooded. We did not halt until after sunset.

March 1.

This morning we resumed our route along the banks of the stream, which continued gradually to increase in size. The marshy ground now extended further from its banks and, in order to free ourselves from this, I ascended some rising ground to the eastward, along which we pursued our route until we fell in with another rapid stream running from the eastward, and were again involved in marshy land, which delayed us for some time ere we found a point where loaded ponies could pass. At length however, having succeeded in getting clear of these obstructions, we continued our southerly course till we came to a deep stream running from south-south-east; but, not being able to cross it there, we travelled along its banks until a ford was found; and as soon as we had passed over I halted for breakfast.

### BEAUTIFUL BASALTIC COUNTRY.

We had traversed a most beautiful country this morning, composed of basaltic rocks and fine alluvial soil, whilst, from the size and number of the streams, it must be as well watered as any region in the world. Before we had completed our breakfast violent tropical rains set in; these were so cold that some of the men got into the stream, the waters of which were comparatively warm, and they thus saved themselves from the painful feeling caused by very cold water falling on the pores, which had been previously opened by profuse perspiration. The heavy rains continued without intermission for the remainder of the day and night, and two of the men were, on this occasion, attacked with dysentery, caused, I believe, by cold and exposure.

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### DISCOVERY AND CHARACTER OF THE GLENELG RIVER.

March 2.

We started at dawn, crossing a series of low ridges which ran out from a chain of hills to the eastward of us, and increased in elevation as we proceeded to the south. We passed numerous streams, and the country generally continued of a very rich and fertile character: at last, from the top of one of these ridges, there burst upon the sight a noble river, running through a beautiful country, and, where we saw it, at least three or four miles across, and studded with numerous verdant islands. I have since seen many Australian rivers, but none to equal this either in magnitude or beauty.

I at once named it the Glenelg in compliment to the Right Honourable Lord Glenelg, to whom we were all under great obligations.

### IMPEDIMENTS FROM MARSHES AND STREAMS. INEFFECTUAL ATTEMPT TO REACH IT.

My anxiety to reach this stream was too great to allow me to pass much time in looking at it, so, after I had taken a few bearings to the most remarkable points in the neighbourhood, we wound down the steep descent in front, and continued our advance towards the river, but were still at least five miles from it when we became involved in low marshy ground, traversed by deep sluggish streams, the banks of which were encumbered by a dense vegetation. Such a country, though admirably adapted both for commerce and agriculture, offered almost insurmountable difficulties to first explorers, at least to such as were compelled to move rapidly. We at last became so completely entangled in a marsh that further progress was hopeless, and we halted to prepare breakfast whilst a party searched for a path by which we might be enabled to proceed.

My wound was still open and my sufferings from it were great; whenever we moved on I was lifted on the pony, and when we halted I was lifted off again and laid on the ground, where weakness compelled me to remain during the whole period of our halt; and on occasions like the present, when most anxious myself to search for a route, I was obliged to lie still like a helpless child. My mind was as active and as ready for exertion as ever, yet the weak frame, of which it felt perfectly independent, was incapable of seconding my most

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moderate wishes; and the annoyance I experienced at finding myself in this state long retarded my recovery and rendered me weaker every day.

At length a route was found, and until sunset we continued our journey over a very difficult but fertile country, and then halted for the night on a small elevation, embosomed amidst conical hills which rose from verdant meadows, watered by several streams. The country was thinly timbered.

The spot we had halted at was so thickly tenanted with mosquitoes that it was impossible to sleep. I therefore laid awake, listening to the cries of the sea-birds and watching the brilliant fire-flies moving about in the dark foliage of the trees.

### PROGRESS TOWARDS THE UPPER PART OF THE GLENELG.

March 3.

Before the first dawn I called some of the party and we started off to visit the banks of the river. The first part of our journey lay across rich grassy flats, thinly wooded with large shady trees, or over gently rising grounds, on which grew an abundance of young grass which appeared to be a species of oat. These rising grounds were thinly wooded with a small sort of gum tree, called in the Isle of France the Bois noir.

We soon reached low marshy land intersected with large dry mud flats and, as it was impossible, from the nature of the country, to get the pony further, I tethered it, and we tried to make the river on foot. The position which we had selected was however so unfavourable that we did not succeed in reaching the river, and my wound became so painful that I was scarcely able to crawl back to the pony.

We then returned to the tents, which we reached in the afternoon, and I sent another party out to examine the country and to see if they could find a more favourable position for the tent where we might be less exposed to the mosquitoes. The remainder of the men were employed in repairing the packsaddles and in mending our shoes, which were in a very dilapidated condition. The detached party, on their return, reported that they could not find a more favourable position for the tents; and that we appeared to be on a low marshy

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tongue of land which the river nearly flowed round. We this day saw the tracks of an emu, and of several large dogs, and kangaroos.

### ASCEND A HILL.

March 4.

By sunrise I had gained the foot of the highest hill near our encampment. It is a very remarkable rocky eminence; in height above the immediate base it was only 250 feet, but it rose by a regular steep slope from the river, which was distant about four miles. I do not think therefore that its height above the level of the sea was less than 800 feet. I was unable to ride up this hill, from the rocky nature of the ground, which was composed of a basalt resembling that of the Isle of France; its sides were slightly wooded and clothed with a fine grass nearly as high as myself. From the heaviness of the dew, walking through a river would have been about as agreeable as walking through this grass; but when I had reached the summit the view amply repaid me for the trouble of the ascent.

### VIEW OF THE GLENELG FROM IT.

The river flowed through a rich and fertile country at the base of the hill, having in some places hereabouts a triple channel formed by large and apparently fertile islands, and its width must have been at least three or four miles; it however ran away so much to the north-eastward that I began to fear it might be a great salt-water inlet, communicating in some manner with Prince Regent's River, and that we might thus find ourselves upon a large island. I had a good view of the valley for 10 or 12 miles in an easterly direction over a country still very fertile, but all that I saw tended to make me believe that the river had some communication with the sea, somewhere towards the north-east.

We reached the camp before breakfast; and, as this was Sunday and our ponies were rapidly improving from the goodness of their feed, I determined to halt here for a day or two whilst a detachment examined the country to ascertain, if possible, whether we were on an island or not, and whether it was possible to cross the river near our present position.

March 5.



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This morning accordingly an exploring party started; and, as it was necessary that they should traverse the country on foot so as to be able to cross the low marshy grounds near the river, I was, on account of my wound, unable to accompany them, and therefore occupied myself in making a set of magnetic observations.

March 6.

This afternoon Mr. Lushington and the party returned, having found the northern bank of the river to consist of low marshy ground covered with a luxuriant vegetation, and in some places with such forests of mangrove trees that it was impossible to approach the stream. They however succeeded in reaching one of the channels of the river, which was upwards of 400 yards wide; the rise and fall of tide was here about twenty feet, and the current, of course, extremely rapid. They reported the river as being, to all appearance, navigable, and that the tide only set in from the westward.

### THE RIVER.

As the southern bank of the river was bordered by high rocky hills they saw nothing of the country in that direction. Their report was on the whole satisfactory, for it appeared that the good country still extended along the northern bank, and that we were upon the mainland.

### PORPOISES SEEN.

A good idea may be formed of the size of the river where the party made it from the circumstance of their seeing a large shoal of porpoises.

### IGUANA. DENSENESS OF VEGETATION.

March 7.

This morning we started early in a north-easterly direction and travelled all day through a very fertile and picturesque country. On our left lay hills covered with grass, and on our right extensive plains, through which ran the Glenelg. The vegetation in these was so luxuriant that it choked the fresh water up; and whole plains were sometimes thus inundated ankle deep. The country was thinly timbered, but in general the trees were of a very great size: one

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particularly took my fancy, having very large leaves about the colour of those of the horse-chestnut, and which cast more shade around them than any other which I have seen in Australia.

In the afternoon, as we were passing through a densely vegetated bottom, we saw a very large iguana run up a tree. This brute was of a beautiful green colour and five or six feet long; it sat on the tree, making a noise somewhat like a snake, and was the largest and ugliest of the lizard tribe which I have ever seen on land. As we could make no use of it I thought it would be wanton to kill it; so, after examining it as well as we could, we moved on, leaving it undisturbed.

The black flies on this day changed their character, and became much smaller than those I had hitherto seen.

March 8.

We made but little progress today on account of the denseness of the vegetation, which was so luxuriant that we found great difficulty in forcing our way through it; in several instances indeed it was wholly impassable; and, after making an attempt to penetrate through a jungle, we were obliged to turn about and coast round it. The numerous streams we met with were also a serious impediment, for many of these were so muddy and deep that we had great difficulty in finding a place where we could cross.

### SIGNS OF NATIVES.

We halted for breakfast near a stream of this kind, under the shade of a large group of the pandanus. This was evidently a favourite haunt of the natives, who had been feeding upon the almonds which this tree contains in its large complex fruit, and to give a relish to their repast had mingled with it roasted unios, or fresh-water mussels, which the stream produced in abundance. The remains of some old spears were also lying about, but the natives themselves were not visible.

Immediately after breakfast I ascended a hill to see if we could in any way get clear of the deep stream on the banks of which we had breakfasted. The Glenelg was distant about three miles to the south, and I found that, in order to disengage ourselves from the waters which almost encompassed us, we must turn off to the north-west,

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and thus almost double back on our former track, as there was no other resource. I returned at once to the party, and we spent the rest of the day in crossing two deep streams, and then proceeded about a mile to the eastward, where we halted for the night on the bank of a rocky watercourse, but not containing a drop of water. The timber today was larger than I had yet seen it, affording many new kinds, and one in particular, resembling in appearance and quality the English ash.

March 9.

We moved through a low country, densely vegetated, and still abounding in deep sluggish streams, almost unapproachable, on account of a dwarf bamboo and other tropical plants which clothed their margins. Some of these streams were twenty feet deep and upwards, and looked more like canals than natural watercourses.

### CASCADE OF THE RIVER.

The point where we halted for the night was not very distant from the river, for its roaring, as it forced itself over a rapid, could be distinctly heard. As it was important to ascertain if it ceased to be navigable at this point, as well as whether it could be here forded or not, I ordered a party to proceed at daylight and examine it, and in the interim we laid down to enjoy such repose as myriads of mosquitoes would allow us.

March 10.

The party started at dawn and did not return until the afternoon. They arrived at low-water at a point where the river formed a series of rapids and was apparently broken into several channels; the one which they reached was not more than fifty or sixty yards wide, the tide at low water being full seven or eight feet below the level of the rocks which formed the rapids, but at high-water it rose, judging from the marks on the rocks, as many feet above them. This channel would therefore cease to be navigable for vessels at this point, but large boats could proceed up it at high-water. There was no apparent possibility of our being able to pass it hereabouts on account of the great rapidity of the current. The river continued fresh below the rapids, and their account of the character of the country they saw was most satisfactory.

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### INCONVENIENT HALTING PLACE.

Almost immediately after they had entered the camp the rain began to fall in such torrents that it was impossible for us to move; this was unfortunate for where we were halted was unfit for a day's resting-place, and we should consequently be compelled to move on Sunday morning instead of making it a day of perfect rest. The point where the party made the river today was about south latitude 15 degrees 41 minutes; east longitude 124 degrees 53 minutes.

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### CHAPTER 9. TO THE UPPER GLENELG.

#### WORKS OF NATIVE INDUSTRY.

March 11.

The country we traversed this morning was still marshy, and intersected by deep streams. The party had yesterday fixed upon a point for us to encamp at; but, a sudden inundation having taken place, we could not cross a stream which lay between us and the spot selected, so that we were compelled about noon to halt at a position very ill adapted for our purpose.

#### VARIOUS TRACES OF NATIVES.

Close to our camp was a large mass of basaltic rocks, on which the natives had lately been, and had left behind them a few old spears: some drawings were also scratched upon the rocks, representing heads, hands, and other parts of the human frame: they were however indifferently executed.

Another branch of industry which had engaged their attention was the manufacture of stone spearheads, the chips and remnants of which were lying about on every side. As this looked very like a preparation to give us a warm reception I kept upon the alert. From constantly sleeping on the wet ground, and the exposure I was obliged to undergo, such an attack of rheumatism had been produced in my left hip and knee that I was not only crippled but suffered such dreadful agony from my wounded limb that I was able to pay but little attention to passing events.

I crept about however as well as I could, and found that we were in a very populous neighbourhood. At one place a large party of natives appeared to have lived for some time, twelve bark beds having been left in a circle round a fire. In this respect they differ in custom from the natives of the southern parts of Australia, who generally sleep all of a heap, or, at least, four or five persons together, whereas each individual here appeared to occupy his own little bark bed. In the course of the morning's march we had passed a very neat native oven, or fireplace, much more carefully constructed than anything of the kind I have since seen; it consisted of a hole sunk eight inches deep in the earth, which was quite circular, three feet in diameter, and very neatly paved and lined with flat stones; the last article

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cooked here had been a large quantity of turtles' eggs, the remnants of which were lying scattered all around. This is a dish by no means to be despised; and the discovery was rather interesting to me as it proved that turtle came so far up the river. It rained hard during the greater part of the day.

March 12.

As we were preparing to start this morning one of the ponies was found to be so knocked up as to be unable to proceed; I therefore abandoned it, though, I fear, in a state too far gone to recover; but if perfect rest and abundance of good feed and water could effect a restoration it had still a fair chance.

### DIFFICULTIES OF THE ROUTE.

A ford over the stream had yesterday been found between the Glenelg and our encampment, which we now succeeded in getting the ponies over, and, in order to avoid another stream, which had been seen to the eastward, we turned north-east, but in about three miles were again at fault, on the banks of a deep brook. I now turned due north and, after tracing the stream for about a mile, discovered a ford across which, after a due proportion of sticking in the mud and falling with their loads in the deep water, we led all the ponies, and found ourselves happily established in a jungle on the other side of it. The vegetation here consisted of grass and reeds which rose so high and thick that I could see nothing over them, although there was rising land within a mile of us.

We first endeavoured to push through this jungle in an easterly direction; but, after having very resolutely made our way onwards for about an hour, I saw some very high land to the south-east of us, distant four or five miles, and therefore changed the direction of our march to make for these hills; as soon as we had gained a clear place in the jungle I halted for breakfast, and, after resting for an hour, we continued, notwithstanding the dreadful heat of the day, to move on, but soon again came to a deep, sluggish stream which obliged us to turn off to the north-east; and it was not until near nightfall that we found a place where we could cross it.

### MOUNT LYELL.

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Having traversed the stream we proceeded to the foot of a very lofty peak, the most remarkable hill in this part of the country, and which I named Mount Lyell, after C. Lyell, Esquire. We here pitched the tents, and scarcely was this operation performed ere the rain fell in such torrents that the water stood even under them to the depth of two or three inches, and yet the tents were fixed in the best position that could be found. The night was dark and stormy so that, even had a better place offered, it would now have been useless to move; we therefore resigned ourselves to our fate and lay down on our watery beds, which possessed at least one merit, that they were free from mosquitoes.

March 13.

Before the mists of morning had cleared away from the lofty hills to the north-east of our encampment I had commenced their ascent with a party of three men. To my great vexation, on taking out the barometer at the bottom of the hill, it was broken, and I could therefore no longer hope to be able to obtain the height of remarkable elevations. I managed to ride the pony up the hill for some time, but the broken and rocky nature of the ground obliged me at last to walk, and I left the animal tethered in rich grass higher than itself.

### VIEW FROM IT. MAGNIFICENT PROSPECT.

When we gained the summit of the hill I found that in the mists of the morning we had ascended the wrong peak. The one we stood on was composed of basalt and at least twelve hundred feet high; but Mount Lyell, another peak springing from the same range, and not more than a mile to the eastward, must have been four or five hundred feet higher. It was moreover distinguished by a very remarkable feature, namely, a regular circle, as it were, drawn round the peak, some two hundred feet below the summit, and above this ring no trees grew; the conical peak which reared its head above the region of trees being only clothed with the greenest grass, whilst that on which I stood and all the others I could see were thinly wooded to their very summits.

The peak we had ascended afforded us a very beautiful view: to the north lay Prince Regent's River, and the good country we were now upon extended as far as the inlets which communicated with this great navigable stream; to the south and south-westward ran the

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Glenelg, meandering through as verdant and fertile a district as the eye of man ever rested on. The luxuriance of tropical vegetation was now seen to the greatest advantage, in the height of the rainy season. The smoke of native fires rose in various directions from the country, which lay like a map at our feet; and when I recollected that all these natural riches of soil and climate lay between two navigable rivers, and that its sea-coast frontage, not much exceeding fifty miles in latitude, contained three of the finest harbours in the world, in each of which the tide rose and fell thirty-seven and a half feet, I could not but feel we were in a land singularly favoured by nature.

### CONTINUATION OF ROUTE. TORRENTS OF RAIN.

I remained for some time on the summit of this hill, enjoying the prospect, and taking bearings. When this operation was completed we returned to the camp and prepared once more to proceed upon our route; but, to our misfortune, had not made more than two or three miles through a fertile country when the rain again fell in such torrents that we were compelled to halt. Indeed none but those who have been in tropical countries can at all conceive with what suddenness and force these storms burst upon us.

March 14.

We this morning made an attempt to get clear of the marshes by following a south-easterly course, and were thus forced up into a range of lofty basaltic mountains, the slopes of which were of the richest description. Had our ponies been provided with shoes we could have travelled here with great speed and facility, but the higher land was invariably covered with sharp pebbles over which the unshod ponies could only move with pain and difficulty. When however we had gained the summit of the range the view from it was similar to that which I have just described. Mount Wellington and Mount Trafalgar formed splendid objects, rearing their bold rocky heads over St. George's Basin, which now bore the appearance of being a vast lake. The pleasure of the prospect was however in my eyes somewhat diminished from seeing on the other side of the range so considerable a stream that I anticipated great difficulty in crossing it; I therefore steered a course somewhat more southerly than our former route and, having reached the extremity of the range, we once more descended into the fertile lowlands.

GLENELG RIVER.



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Along these our course continued through an uninterrupted succession of rich flats, thinly wooded but luxuriantly grassed, until near sunset, when, as we were about descending the brow of a low hill, I found that the Glenelg, having made a sudden turn, was close to us, whilst in our front, and completely blocking up our passage, there was a very large tributary which joined the river from the north-east; I therefore halted the party here for the night, and at once proceeded down to the river.

It was quite fresh and running at the rate of more than five knots an hour; the bed was composed of fine white sand, and even close to the margin it was 2 1/2 fathoms in depth. The trees which bordered it were of a gigantic height and size, I think the largest that I have seen in Australia; whilst it was almost impossible to get down to the stream, from the denseness of the vegetation on its banks. Before we reached the main channel of the river we had several smaller ones to cross, but of very insignificant depth.

I stood for some time watching this dark turbid stream sweeping rapidly along, and could not but wonder where so great a body of water could have its source. I had then seen no other Australian rivers, but judging from description this differed widely from them all.

I have since visited many of the most noted Australian streams and found this distinguished by many peculiar characteristics; nor would I hesitate to say that, with exception perhaps of the Murray, it will be found the most important on that continent; and, taking into consideration its geographical position, the fertility of the country on its banks, as far as it is yet known, and the rise and fall of tide, it may perhaps not yield in consideration even to the Murray.

### TORRENTS OF RAIN.

I now examined the tributary stream which here joined the Glenelg, and to my chagrin found that it was so much swollen by the late rains as to be utterly impassable. To attempt to construct a bridge over it would have been useless for the adjacent ground was now so swampy the horses were bogged before we got them near it. I wandered up its banks as far as I could before nightfall, but could not succeed in finding any place in our vicinity at which we might hope to effect our passage. Just as it got dark the rain again began to pour in torrents; thus, if possible, rendering our position worse than

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before, and I returned late to the tents much dispirited at the unfavourable weather we had encountered.

### RISE OF THE WATERS. MARKS OF INUNDATIONS.

On going down to the Glenelg the next morning I found it so swollen by the heavy rain of the preceding night as to render it impossible to get near the main bed. The river was now far beyond its banks, and in the forks of the trees above our heads we saw driftwood, reeds, dead grass, etc., lodged at least fifteen feet higher than the present level; and which could only have been left there during some great flood. Whether these had frequently recurred we had of course no means of judging, but during such floods the whole of the very low country which we here saw to the south-west of us must be inundated. I need scarcely add that in a tropical country no ground could be conceived better adapted to the growth of rice than the extensive levels which border the Glenelg.

A detached party now went of to search for a route by which we could proceed. The stock-keeper came and reported that the sheep were suffering greatly from the continued rain and exposure to wet, several of them having died during the night; only five were thus left alive out of the number we started with, and, one of these being in a drooping state, I had it killed that we might not lose the advantage of it altogether.

### NATIVES.

Immediately on the other side of the tributary stream which lay to the south of us there rose a high precipitous sandy range, similar to those we had fallen in with on first landing. This range completely overlooked our encampment from a distance, and on it a party of natives had posted themselves. We saw the smoke of their fires and heard their own cries and the yelling of their dogs; and with the help of my telescope I once distinguished their dusky forms moving about in the bush.

### COCKATOOS.

A large flight of cockatoos which lay between us and them were kept in a constant state of screaming anxiety from the movements of one or the other party, and at last found their position so unpleasant that they evacuated it and flew off to some more quiet roosting-place.

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Their departure however was a serious loss to us, as they played somewhat the same part that the geese once did in the Capitol; for whenever our sable neighbours made the slightest movement the watchful sentinels of the cockatoos instantly detected it and, by stretching out their crests, screaming, standing on their toes on the highest trees, with their wings spread abroad to support them, and peering eagerly in the direction where the movement was made, they gave us faithful intimation of every motion.

When therefore this advanced guard took unto themselves wings and flew away I was obliged to keep all hands on the alert to prevent a surprise. Whilst we were thus occupied our detachment returned and reported the country to be utterly impracticable. I determined however to examine it myself the next morning in order to be quite satisfied upon so important a point.

March 16.

I moved off at dawn this morning with a party, but after following the direction of the stream for several miles I found that the whole of the land between it and the foot of the hills had been rendered by the heavy rains a marsh quite impassable for horses, which was rendered the more annoying as the swamp was not more than a mile in width, so that this slight space alone prevented us from pursuing our desired route. Nothing however was now left us but to turn once more to the north-west, and thus to endeavour to head the marsh.

DANGER FROM NATIVES.

Just as we had prepared to return home the cries of the natives arose close to us; their fire was about half a mile away, and their calls had already several times been heard. Now that they were so near us I thought it better to load my second barrel with ball, for I did not like their hanging about us in the way they had done for several days. On putting my hand into my haversack in order to prepare some ammunition I found, to my great dismay, that I had taken in mistake one which belonged to another man and which contained no ammunition; nor was there a ball in possession of any person with me which would fit my gun and, as I knew that the aim of those with me was not much to be depended on, even under the coolest and most favourable circumstances, I thought that in the moment of a desperate attack it might be still less sure; this, added to the want of confidence incident on finding oneself unarmed and dependent on

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the protection of others, made me feel very uncomfortable until we once more reached the tents.

### RAINS CONTINUE. TORRENTS OF RAIN.

During the early part of the day the rain fell in torrents; but, as it cleared off a little soon after our arrival, we started in a north-westerly direction. Such violent storms of thunder, lightning, and rain set in when we had made about two or three miles that I was again obliged to halt; and as it continued to rain heavily throughout the night, our situation, which was already bad, might now be said to be hourly growing worse; and it can readily be conceived that, between rheumatism in my wounded limb, lying in water, and vexation at the constant difficulties we experienced, I was too much harassed to be able to sleep.

### SWAMPS.

The continued rain during the night had necessarily rendered the marsh far more impracticable than before; but, as no other route to the southward could be found on account of the river which lay upon either hand, I was compelled to wait until the ground again in some measure dried. But it would have been equally as impossible to beat a retreat as it was to get forward, for we were in a manner surrounded by swampy land, and when the loads were placed upon the ponies they sank nearly up to the shoulders in a bog in whichever direction we attempted to move; but as our present position would have been unsafe in the event of an extensive inundation taking place I judged it necessary at all events to reach a somewhat elevated outlying hill of sandstone which was distant about two miles. This point we succeeded at last in gaining, although not without severely injuring and straining some of the ponies in effecting it. This rising ground was however well situated for our camp under present circumstances: it was composed of porous sandstone, which in these climates dries almost immediately after rain. There was plenty of dead wood upon it and it was surrounded by richly-grassed flats, whilst from the base gushed forth a clear spring, which then murmured along a purling brook, traversing the flat on which the ponies were tethered.

### SNAKE AND KANGAROO.

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Close to this spot the attention of Mr. Lushington was drawn to a curious misshapen mass which came advancing from some bushes with a novel and uncouth motion. He fired and it fell, and on going up to it he found that it was a small kangaroo enveloped in the folds of a large snake, a species of Boa. The kangaroo was now quite dead, and flattened from the pressure of the folds of the snake which, being surprised at the disturbance it met with, was beginning to uncoil itself, when Mr. Lushington drew out a pistol and shot it through the head. It was of a brownish yellow colour and eight feet six inches long. The kangaroo we found very good eating; and Mr. Walker, who ate a portion of the snake, considered it to be as great a delicacy as an eel, but rather tougher.

There fortunately was an elevated pinnacle of rocks on the rising ground upon which we were encamped; and from the top of these I was able in the course of the day to get bearings and angles to many important objects; I could also see many fixed points in my survey, so that the day could not be considered as altogether a lost one.

### CONDITION OF THE PONIES.

March 18.

Throughout the whole of this day the rain poured in torrents so that the ponies, notwithstanding the goodness of the feed, began again to suffer from cold and exposure to the weather. They were so wild that we could not venture to let them run loose, and, as it was impossible to tether all of them under trees, the majority were left exposed to the pitiless pelting of the storms; and they certainly made a very wretched appearance as they stood with their sterns presented to the blast, and the water pouring from their sides in perfect streams. I do not know whether this was a very extraordinary season, but it is certain that if all rainy periods in North-West Australia resemble it, to attempt to explore the country at this time of the year would be fruitless. Such a good supply of rain is a great advantage to an occupied country through which regular lines of communication exist; as it then raises but slight impediments to travellers; but the case is very different to first explorers who have to find a ford over every stream and a passage across every swamp, and who constantly run the risk of involving themselves in a perfectly impassable region.

### NATIVES NEAR THE CAMP.

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March 19.

This morning was also ushered in with torrents of rain, chequered by occasional intervals of fine weather of perhaps half an hour's duration. Another sheep died and several of the ponies were very unwell. The men who had been shifting the tethers of the horses at noon returned with the intelligence that, during the period of their absence from the encampment, a party of natives must have been close to us, watching our movements, for that when they went out there were no traces of them near the camp, which were now discernible in nearly every direction around us.

I selected the best bushman of my party and went off to see whether anything was to be apprehended from these natives, but I soon found that the report was in some degree exaggerated. Some natives had crept up to within about a hundred yards of us, probably with the intention of making a reconnaissance, and of then framing their future plans; they had however been disturbed by the return of the men from the horses, and then made off. It appears that they had approached us by walking up a stream of water so as to conceal their trail, and then turned out of the stream up its right bank; and although they had carefully trod in one another's foot-marks, so as to conceal their number, we could make out the traces of at least six or seven different men, which we followed to the spot where, whilst creeping about to watch us, they had been disturbed. From this point these children of the bush had disappeared, as it were by magic: not a twig was broken, not a stone was turned, and we could not perceive that the heavy drops of rain had been shaken from a single blade of grass. We made wide casts in different directions but, not being able to hit on their trail, I returned to the tents, more than ever convinced of the necessity of being constantly on the watch against beings who were often near us when we least dreamt of their presence, and, in an unguarded moment, might so easily surprise and spear some of the party.

### APPEARANCE OF THE COUNTRY.

The rain continued to fall throughout the 20th, rendering our condition every hour worse. Towards noon however the weather cleared a little, and in a fine interval I mounted a high range of basaltic hills which lay about a mile and a half to the westward. These hills were the highest which I had yet ascended; and from them I gained a very extensive view. The farthest extremity of the

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sandstone range which lay to the southward and eastward did not appear to be more than ten or twelve miles distant. Behind this barren range there again rose the conical tops of basaltic hills, clothed in the greenest grass; and beyond these, in the far south-east, I made out with the telescope a range of very lofty hills, which, stretching their heads high into the clouds, left me without means of forming any idea of their elevation: but even the portion of them which met my view must have had a very considerable altitude. I took a set of angles from this point but the mistiness of the day rendered it very unfit for my purpose. Whilst I was thus occupied, we heard the cries and calls of a party of natives between us and the tents. From the loudness and proximity of these I augured badly and therefore hurried my return; but we neither saw the natives themselves nor their tracks, and were quite in ignorance as to what had been their intentions. Soon after sunset the weather cleared up a little, and the stars, which came peeping out, promised well for the next day.

### NATIVES NEAR THE CAMP AGAIN.

March 21.

Although it had rained during the night and the sun this morning rose bright and clear the country was still impassable owing to the late continued torrents. I therefore went out with a detachment for the purpose of exploring a route by which we could proceed the next day, as well as to define some more points in the country we were about to enter. In the course of our walk we crossed the track of the natives we had heard yesterday. Their party must have been large, for they approached to within about three hundred yards of the tents, leaving a trail as broad and large as was made by our ponies and party together. I did not much like their hanging about us for so many days as I rather mistrusted their intentions; their object however appeared to have been to examine the ponies, for they had only come as far as the tethering ground and, after wandering about there a little, had again retired. We were unfortunate in our search for a good line of country by which to proceed, but I made some important additions to my map.

### MARSH AND SANDSTONE RANGE.

March 22.

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As fine weather had apparently set in again we this morning resumed our journey. The poor ponies looked very weak and wretched when they were brought up to start, and we were all ragged, dirty, and worn out from the constant exposure to wind and rain; indeed our appearance was altogether very miserable on moving off, and our progress, too, very slow and fatiguing, both to ourselves and the horses, on account of the swampy nature of the ground; but we strenuously persevered until near noon, when I halted for breakfast at the foot of some lofty hills, at the base of which ran the stream which was giving us so much trouble. As soon as we had despatched our scanty breakfast I tried with a party to find a passage across the marsh, but our search was in vain and, on examining the sandstone range on the other side of the stream, I found it so precipitous that our weak ponies could not possibly have clambered up it.

### NATIVE BRIDGE.

Whilst on our return we found a native bridge, formed of a fallen tree, which rested against two others and was secured in its position by forked boughs.

### PRECIPITOUS PASS.

I was thus obliged to continue to travel in a north-east direction for the remainder of the afternoon, when we found, at last, a passage over the marsh, but made vain attempts to cross the sandstone range in no less than four different places; the ponies were so weak and the route so precipitous that each time we were obliged to return. At length we reached the watershed, from one side of which the streams ran down to Prince Regent's River, and from the other to the Glenelg; the rocks on the south side were ancient sandstone resting on basalt, and on the opposite the basalt crept out, forming elevated hills. This position was remarkable both in a geological and geographical point of view; and, the sandstone range over against us looking rather more accessible than it had previously done, I determined to halt here for the night and examine the country; but my resolution was scarcely formed ere such heavy storms of rain, accompanied by thunder and lightning, came on as totally to prevent me from seeing to any distance or taking any bearings.

On entering the old red sandstone district again the parakeets became once more common, and the green ants reappeared. These



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last seem to be solely confined to the sandstone, for I did not see one without its limits.

### ASCENT OF THE SANDSTONE RANGE.

March 23.

This morning we made a more fortunate effort to ascend the sandstone range which had yesterday so baffled our efforts; and having commenced the ascent at 6 A.M. reached the summit at 10, but the poor little ponies were dreadfully exhausted. Having now established ourselves upon this narrow elevated tableland the next thing was to descend on the other side. The prospect to the southward and eastward was not very cheering, for before we could make any further progress in either of those directions we had a perfect precipice to get down, at the foot of which lay a beautiful and verdant valley about three miles wide, diversified with wood and water; whilst a large cascade which could be seen falling in a dark forest on the other side added much to the scenery. Beyond the valley rose again rocky sandstone ranges, but I knew that the width of these was inconsiderable.

### DESCENT ON THE OPPOSITE SIDE.

After a very tedious search we discovered a sort of pass leading diagonally down the face of the precipice; but before attempting to take the ponies over this it was necessary to move many large rocks and stones, to cut down trees, and otherwise make it practicable for them. All hands however set cheerfully to work, and by 1 P.M. the whole party had safely reached the bottom of the precipice. The valley that we were in was very fertile but, from the incessant rain which had lately fallen, the centre part of it had become an impassable swamp, and we were thus once more obliged to turn to the northward in order to travel round it: but as rest and food were necessary both for horses and men we halted at the foot of the sandstone range for breakfast.

### REMARKABLE FRILLED LIZARD. BEAUTIFUL COUNTRY.

As we were pursuing our route in the afternoon we fell in with a specimen of the remarkable frilled lizard (*Chlamydosaurus kingii*); this animal measures about twenty-four inches from the tip of the nose to the point of its tail, and lives principally in trees, although it

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can run very swiftly along the ground: when not provoked or disturbed it moves quietly about, with its frill lying back in plaits upon the body: but it is very irascible and, directly it is frightened, elevates the frill or ruff and makes for a tree; where if overtaken it throws itself upon its stern, raising its head and chest as high as it can upon the forelegs, then doubling its tail underneath the body and displaying a very formidable set of teeth. From the concavity of its large frill it boldly faces any opponent, biting fiercely whatever is presented to it, and even venturing so far in its rage as to fairly make a fierce charge at its enemy. We repeatedly tried the courage of this lizard, and it certainly fought bravely whenever attacked. From the animal making so much use of this frill as a covering and means of defence for its body this is most probably one of the uses to which nature intended the appendage should be applied.

We at length reached the watershed connecting the country we had left with that we were entering upon, and were now again enabled to turn to the eastward and thus to travel round the swamp. This watershed consisted principally of a range of elevated hills from which streams were thrown off to the Glenelg and to Prince Regent's River. The scenery here was very fine, but I have so often before described the same character of landscape that it will be sufficient to say we again looked down from high land on a very fertile country, covered with a tropical vegetation and lying between two navigable rivers. I can compare this to no other Australian scenery, for I have met with nothing in the other portions of the continent which at all resembles it. When we had nearly headed the valley the night closed in so rapidly on us that I was obliged to halt the party; and by the time the arrangements for security and rest were completed it was quite dark.

### CURIOUS NEST.

March 24.

This morning we started as soon as it was light and, continuing our route round the valley, passed the beautiful cascade seen yesterday and, after fording a clear running brook like an English trout stream, we began to ascend the next sandstone range. On gaining the summit we fell in with a very remarkable nest, or what appeared to me to be such, and which I shall describe more particularly when I advert to the natural history of this part of the country. We had previously seen several of them, and they had always afforded us

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food for conjecture as to the agent and purpose of such singular structures.

### DEEP VALLEY.

Soon after quitting this nest we found a very convenient pass through a deep and fertile valley, which led directly up into the heart of the sandstone range; a fine stream ran through it in which were several large reservoirs of fresh water; the hills on each side were lofty, being at times of a rounded character, and at others broken into precipitous and fantastic cliffs; the country was thinly wooded with large timber, and the varied scenery, the facility which the country afforded for travelling, and the pleasure incident on finding ourselves clear of the marshy ground which had so long encumbered our movements, combined to make me push along as fast as possible; the only check was the heat of the sun; and it should always be borne in mind that no parallel whatever can be instituted between travels in tropical and extra-tropical Australia, for in the former the more exhausting nature of the climate unfits both men and horses for making long journeys, and indeed renders it almost impossible to travel during the heat of the day, whilst the difficult nature of the ground caused by the dense vegetation, the jungles, the ravines, and marshes, render it altogether impracticable to move at night through an unknown country.

### WILD OATS.

We crossed during the day several recent tracks of natives but did not fall in with the natives themselves; we also saw many kangaroos, and halted for the night on an elevated basaltic ridge, at a point close to which there was a large crop of the grain which we called wild oats. This is a remarkable vegetable production, growing to the height of from five to six feet; in the stalk, the shape, and mode of insertion of the leaves it is similar to the oat of Europe; the manner in which the seeds grow in the two plants is also the same, and the seeds are nearly of the same size, but the Australian oat is furnished with a beard like the barley. When hungry I have repeatedly eaten these oats, which in some parts grow in such abundance that several acres of them might be mown at once; and I have little doubt that this plant would with cultivation turn out to be a very great addition to our tropical grains.<sup>11</sup>

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March 25.

This morning we resumed our journey, crossing a succession of basaltic valleys. The vegetation was luxuriant beyond description; and it was ludicrous to see the heavy-tailed kangaroos leaping and floundering about in the long grass when they had quitted their beaten pathways and were suddenly disturbed by our approach.

### CURIOUS BIRDS.

In crossing the second of these large valleys we saw two large white and black birds, more like pelicans than any other kind I am acquainted with; they had webbed feet, and the colour and form of their body resembled that of the pelican, but the head and beak were very different; after flying two or three times round our heads, well out of shot, so as to have a good peep at us, they flew away, and for the first and last time I saw this curious bird.

We now ascended a ridge of sandstone tableland which crossed our route: this was about three miles in width, and at its southern extremity were two lofty basaltic hills, from between which a small valley led down into another very large one that was the general receptacle of the streams which came pouring in from all directions. This last might be considered as a good type of the valleys in this portion of the country: at its northern extremity it was about four miles wide, being bounded on all sides by rocky wooded ranges with dark gullies from which numerous streams and springs poured forth their watery contributions to the main one. This last ran nearly down the centre of the principal valley, the width of which gradually contracted towards the south, where it terminated almost in a point, having a narrow lateral opening at the south-west end of not more than a quarter of a mile wide, and bounded by steep cliffs on each side, so as to form a perfect gorge, the direction of which was due west. In about a mile and a half this gorge met a cross valley, running from the south to the north, down which the waters were poured, so as to run back as it were upon their former course.

### BASALTIC VALLEY.

We halted for the day in the main valley, which from the run of the waters above described must necessarily have been very elevated; it was, moreover, nearly level, forming indeed a sort of enclosed plateau, so that the streams, which both on entering and quitting it

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ran bubbling merrily along, preserved whilst in it a sluggish and scarcely perceptible course. When to this I add that it was composed of basaltic rocks and received the deposit of such an extent of elevated basaltic land I need scarcely add that it was highly fertile. I believe that these valleys, which are very common in North-Western Australia and contain from four to five thousand acres each, are as rich as any other spots upon the globe, and moreover possess the great advantage of being situated close to navigable rivers.

March 26.

This morning we moved down the valley in which we had been encamped yesterday and, as it was thinly wooded, we experienced no difficulty whatever until the main stream suddenly turned off from south to due west; this was a sufficient proof that the gorge of the valley was on its western side, but I was not anxious to follow the course of the water, from the apprehension of being led into low and marshy land; I thought also that a low ridge which I saw to the south could easily be crossed, and that we should thus gain access to a valley similar to that we were in. I therefore resolved to cross the stream at the first ford we could find, and after a little trouble we discovered one suited to our purpose through which the ponies passed in safety.

### IMPASSABLE SANDSTONE RANGE.

We then continued our route in a due southerly direction until we reached the low range which I had before seen; this range turned out to be composed of sandstone, and where we made it it was so rocky and precipitous as to be quite impracticable. We therefore travelled along it in an easterly direction for about three miles, but throughout this distance it presented no single pass through which I could hope to penetrate. The sun having now become very powerful we halted for breakfast; and whilst this meal was preparing, I sent out a detached party to search for a road, which soon returned to report that they were able to find no path by which we could proceed.

I did not however like to retrace our footsteps without having made a careful search; and although my wound was still open and very painful I rapidly swallowed a portion of my allowance of damper and started with another detachment on foot to examine the country. The sandstone range, which ran nearly east and west, was terminated everywhere throughout its southern side by perfectly

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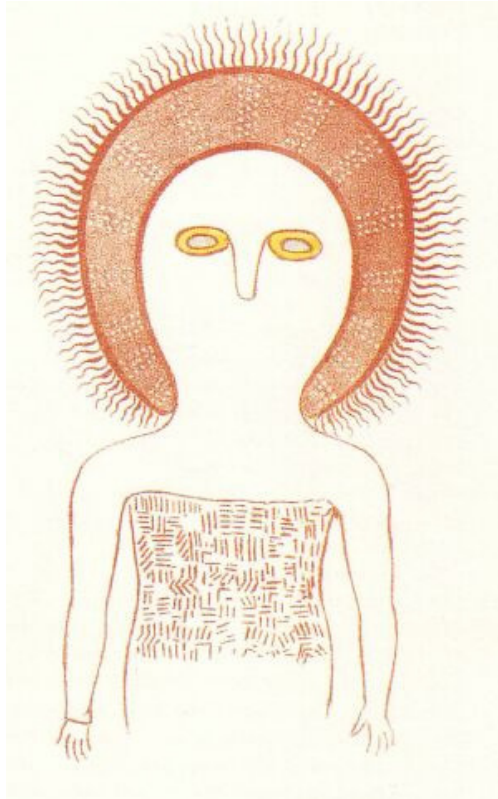
precipitous rocks, at the foot of which lay a fertile valley, resembling the one in which we had encamped yesterday except that it was on a much lower level. The position that we were in appeared to be the pass by which the natives communicated with the country to the south of us, for marks of them were visible everywhere about, but they could easily clamber about these precipitous rocks, though it was quite impossible to get the ponies down, even by forming a path, as we had often previously done.

### PAINTED CAVE. DRAWING ON ROOF OF A CAVE.

Finding that it would be useless to lose more time in searching for a route through this country I proceeded to rejoin the party once more; but whilst returning to them my attention was drawn to the numerous remains of native fires and encampments which we met with, till at last, on looking over some bushes at the sandstone rocks which were above us, I suddenly saw from one of them a most extraordinary large figure peering down upon me. Upon examination this proved to be a drawing at the entrance to a cave, which on entering I found to contain, besides, many remarkable paintings.

The cave appeared to be a natural hollow in the sandstone rocks; its floor was elevated about five feet from the ground, and numerous flat broken pieces of the same rock, which were scattered about, looked at a distance like steps leading up to the cave, which was thirty-five feet wide at the entrance and sixteen feet deep; but beyond this several small branches ran further back. Its height in front was rather more than eight feet, the roof being formed by a solid slab of sandstone about nine feet thick and which rapidly inclined towards the back of the cave, which was there not more than five feet high.

On this sloping roof the principal figure (Number 1) which I have just alluded to, was drawn; in order to produce the greater effect the rock about it was painted black and the figure itself coloured with the most vivid red and white. It thus appeared to stand out from the rock; and I was certainly rather surprised at the moment that I first saw this gigantic head and upper part of a body bending over and staring grimly down at me.



DESCRIPTION OF THE FIGURES.

It would be impossible to convey in words an adequate idea of this uncouth and savage figure; I shall therefore only give such a succinct account of this and the other paintings as will serve as a sort of description to accompany the annexed plates.

The dimensions of the figure were:

Length of head and face 2 feet.

Width of face 17 inches.

Length from bottom of face to navel 2 feet 6 inches.

Its head was encircled by bright red rays, something like the rays which one sees proceeding from the sun when depicted on the sign-board of a public house; inside of this came a broad stripe of very brilliant red, which was coped by lines of white, but both inside and

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outside of this red space were narrow stripes of a still deeper red, intended probably to mark its boundaries; the face was painted vividly white, and the eyes black, being however surrounded by red and yellow lines; the body, hands, and arms were outlined in red, the body being curiously painted with red stripes and bars.

### DRAWING OF FOUR HEADS.

Upon the rock which formed the left hand wall of this cave, and which partly faced you on entering, was a very singular painting (Number 2) vividly coloured, representing four heads joined together. From the mild expression of the countenances I imagined them to represent females, and they appeared to be drawn in such a manner and in such a position as to look up at the principal figure which I have before described; each had a very remarkable head-dress, coloured with a deep bright blue, and one had a necklace on. Both of the lower figures had a sort of dress painted with red in the same manner as that of the principal figure, and one of them had a band round her waist. Each of the four faces was marked by a totally distinct expression of countenance, and, although none of them had mouths, two, I thought, were otherwise rather good looking. The whole painting was executed on a white ground, and its dimensions were:





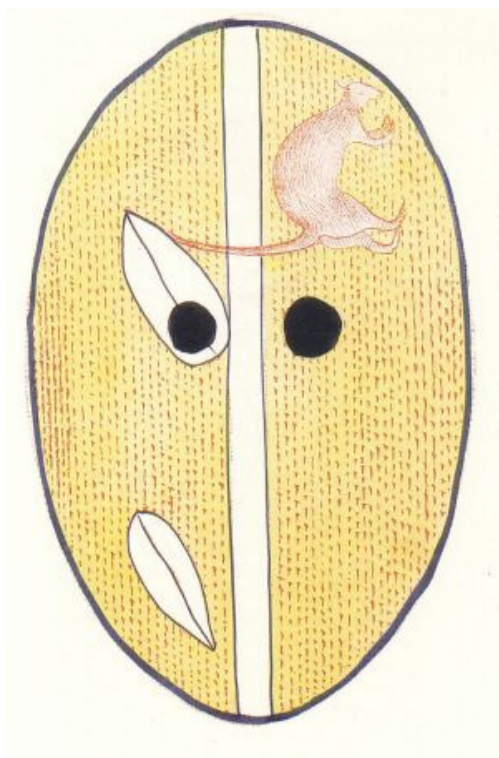
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Total length of painting 3 feet 6 3/4 inches.

Breadth across two upper heads 2 feet 6 inches.

Ditto across the two lower ones 3 feet 1 1/2 inches.

The next most remarkable drawing in the cave (Number 3) was an ellipse, three feet in length and one foot ten inches in breadth: the outside line of this painting was of a deep blue colour, the body of the ellipse being of a bright yellow dotted over with red lines and spots, whilst across it ran two transverse lines of blue. The portion of the painting above described formed the ground, or main part of the picture, and upon this ground was painted a kangaroo in the act of feeding, two stone spearheads, and two black balls; one of the spearheads was flying to the kangaroo, and one away from it; so that the whole subject probably constituted a sort of charm by which the luck of an enquirer in killing game could be ascertained.



TWO OTHER DRAWINGS.



There was another rather humorous sketch (Number 4) which represented a native in the act of carrying a kangaroo; the height of the man being three feet. The number of drawings in the cave could not altogether have been less than from fifty to sixty, but the majority of them consisted of men, kangaroos, etc.; the figures being carelessly and badly executed and having evidently a very different origin to those which I have first described. Another very striking piece of art was exhibited in the little gloomy cavities situated at the back of the main cavern. In these instances some rock at the sides of the cavity had been selected, and the stamp of a hand and arm by some means transferred to it; this outline of the hand and arm was then painted black, and the rock about it white, so that on entering that part of the cave it appeared as if a human hand and arm were projecting through a crevice admitting light.

After having discovered this cave I returned to the party and, directing them to prepare for moving on, I ordered that as soon as all

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was ready they should proceed past the cave, so that all would have an opportunity of examining it, and in the meantime I returned in order to make sketches of the principal paintings. The party soon arrived and, when my sketches and notes were completed, we retraced a portion of our route of this morning, moving round the sandstone ridge through one portion of which I saw a sort of pass which I thought might perhaps afford us a means of egress. I therefore halted the party and moved up with Corporal Auger to examine it. After proceeding some distance we found a cave larger than the one seen this morning; of its actual size however I have no idea, for being pressed for time I did not attempt to explore it, having merely ascertained that it contained no paintings.

### INTAGLIO CUT IN A ROCK.

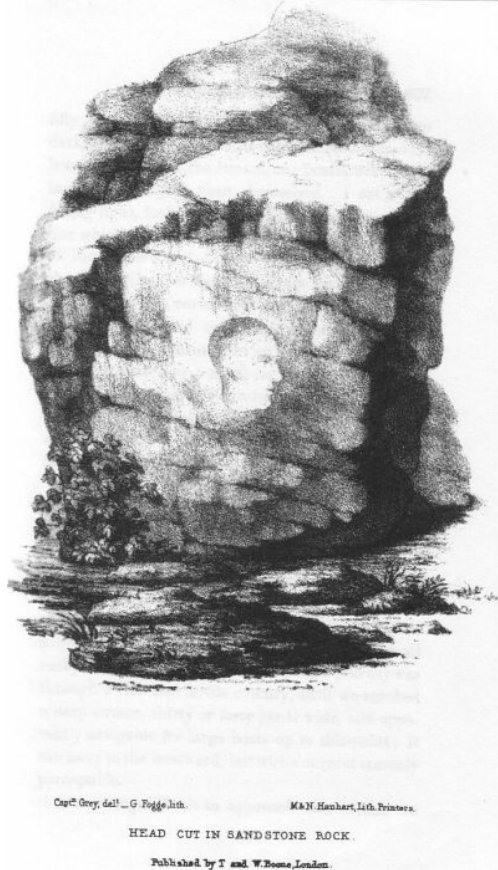
I was moving on when we observed the profile of a human face and head cut out in a sandstone rock which fronted the cave; this rock was so hard that to have removed such a large portion of it with no better tool than a knife and hatchet made of stone, such as the Australian natives generally possess, would have been a work of very great labour. The head was two feet in length, and sixteen inches in breadth in the broadest part; the depth of the profile increased gradually from the edges where it was nothing, to the centre where it was an inch and a half; the ear was rather badly placed, but otherwise the whole of the work was good, and far superior to what a savage race could be supposed capable of executing. The only proof of antiquity that it bore about it was that all the edges of the cutting were rounded and perfectly smooth, much more so than they could have been from any other cause than long exposure to atmospheric influences.

### ROUTE CONTINUED. HIGH GRASS.

After having made a sketch of this head (see the accompanying plate) I returned to the party and, as I had not been able to find a path which would lead us across the sandstone ridge, we continued our course round it, retracing our steps until we reached the stream which had been crossed this morning, and then moved westward, keeping along its southern bank until we had turned the sandstone range and reached another stream running from the south, which we traced up in the direction of its source, travelling through a series of basaltic valleys of so luxuriant a character that those of the party who were not very tall travelled, as they themselves expressed it,

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between two high green walls, over which they could not see; and these green walls were composed of rich grass which the ponies ate with avidity. On a subsequent occasion when we visited this valley we had to call to one another in order to ascertain our relative positions when only a few yards apart; and yet the vegetation was neither rank nor coarse, but as fine a grass as I have ever seen.



### REFLECTIONS.

We halted for the night in one of these lovely valleys; a clear stream bubbled along within about fifty yards of us and, about a mile beyond, two darkly-wooded basaltic hills raised their heads, and between these and the stream our ponies were feeding in grass higher than themselves. I sat in the fading light, looking at the beautiful scenery around me, which now for the first time gladdened

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the eyes of Europeans; and I wondered that so fair a land should only be the abode of savage men; and then I thought of the curious paintings we had this day seen, of the timid character of the natives, of their anomalous position in so fertile a country, and wondered how long these things were to be. With so wide a field of conjecture before me, thought naturally thronged on thought, and the night was far advanced ere I laid down to seek repose from the fatigues of the day.

### DEEP STREAM.

March 27.

The ponies having been routed out of their long and excellent feed, amongst which indeed it was no easy matter to find them, we moved on. I could not but reflect how different our position and the condition of the ponies would have been had we known as much of the country at first starting as we did at present; but these reflections were now useless. With the exception of one small rocky valley, the whole of our morning's journey was through a rich and fertile country until we reached a deep stream, thirty or forty yards wide and apparently navigable for large boats up to this point; it ran away to the westward, but with a current scarcely perceptible.

### DIFFICULT APPROACH TO IT.

It was very difficult to approach this stream on account of the marshy nature of its banks, which were overgrown with bamboo and, even if we could have got the ponies to it, it was not fordable here. We therefore turned up it in an easterly direction to look for a passage over it; and in so doing were necessarily compelled to cross many smaller streams and a great deal of swampy ground in which some of the most weakly of the ponies got bogged and were only extricated with great difficulty. However annoying this was I could not but smile at the distress of some of the men, who had contracted a friendship for the animals they had so long led, when one of their favourites got into a difficulty. The exclamations of Ruston the old sailor were particularly amusing, as, according to the position in which the animal got bogged, he used to roar out for someone "to come and give his pony a heave upon the starboard or larboard quarters;" and once, when violently alarmed at the danger he imagined his pet pony to be in, he shouted amain, "By G—, Sir, she'll go down by the stern." At last however we got clear of the marsh,

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and reached a rocky gorge where this stream issued from the hills, and here we stopped for breakfast

This spot was very picturesque. The river as it issued from the gorge in the high wooded hills first formed a series of cascades, and then at the mouth of the gorge expanded into a large pool. It was at this point, although only a secondary stream in this country, far larger than any of the rivers of South-Western Australia. At the gorges, where they issue from the hills, its banks were clothed with the pandanus, lofty gum trees, and a very luxuriant vegetation. We first sought for a ford up the river in the direction of the rapids, but our search was fruitless. On returning to breakfast I found that the men had caught three fish and one of the long-necked fresh-water turtle which are common over the whole of this continent. Mr. Lushington had also shot several black cockatoos so that we were supplied with a meal of meat, a luxury we had not enjoyed for a long time.

### CROSS A LARGE RIVER.

After breakfast Corporal Auger started alone and returned in about an hour to report that he had found a ford across the river close to us. I therefore ordered the ponies to be brought up and we at once moved on. The river where we crossed it in south latitude 15 degrees 49 minutes, east longitude 125 degrees 6 minutes, was about a hundred yards wide. It was however nowhere more than knee deep as we wound through it, following a circuitous course; but we passed very deep parts on each side, and I could not but admire the perseverance of Auger in having discovered so very intricate a ford as this was. There were several minor channels to the stream not much wider than an English ditch; they were however very deep and went winding along through groves of the pandanus and lofty reeds, which formed leafy tunnels above them. It was some time before we got rid of the main stream, and we then found ourselves on a narrow terrace of land which was bounded on the left by rocky cliffs, and on the right by a large tributary of the stream we had just crossed. This tributary was not fordable here so we were compelled to travel up the terrace where our way was much impeded by the luxuriant vegetation and by fallen trees of great magnitude; indeed of a size which those alone who have traversed tropical virgin forests can conceive.

That we could not get off this terrace was the more provoking from seeing, immediately on the other side of the stream, one of those

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wide open basaltic valleys which I have so often mentioned. We at length reached the point where the stream issued from the high land and, having here forded it, entered the large valley, but in its centre we found another impassable stream and, in order to turn this, were obliged to travel round the valley; but before we could gain the head of it we had to cross two streams which ran into it on the eastern side. These however gave us but little trouble.

### NATIVE HUT.

On the tongue of land between them we found a native hut which differed from any before seen, in having a sloping roof. After passing this hut we began to wind up a rocky ascent, and just at sunset reached the watershed, which threw off streams to the north and south: the valley which lay immediately to the south of us appearing as fertile as that which we had been travelling through for the whole day.

March 28.

The first part of our journey was through a fertile valley, about four miles in length, through which wound a rapid stream. It was clothed with the richest grass, abounded in kangaroos, and was marked at its southern extremity by a very remarkable precipitous hill. The heights to the westward were all composed of basalt, whilst those to the eastward were sandstone. On passing the ridge of hills which bounded this valley to the south we entered on a sandstone district, although the hills to the westward were still basaltic.

### NATURAL GRAPERY. GRAPE-LIKE FRUIT.

I here halted the party for breakfast by the side of a stream and, on casting my eyes upwards, I found that I was in a sort of natural grapery, for the tree under which I lay was covered with a plant which bears a sort of grape and I believe is a species of *cissus*.

We met altogether with three varieties of this plant, all of which were creepers but differing from each other in their habits and in the size of their fruit. Two of them generally ran along the ground or amongst low shrubs and the third climbed high trees; this latter kind bore the finest fruit, and it was a plant of this description which I today found. Its fruit in size, appearance, and flavour resembled a small black grape, but the stones were different, being larger, and

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shaped like a coffee berry. All three produced their fruit in bunches, like the vine, and, the day being very sultry, I do not know that we could have fallen upon anything more acceptable than this fruit was to us.

### FORD THE GLENELG. ANOTHER RIVER.

After breakfast we continued our route through a barren, sandy district, heavily timbered; and in the course of the afternoon met either the Glenelg or a very considerable branch of that stream in south latitude 15 degrees 56 minutes, east longitude 125 degrees 8 minutes: it was 250 yards across and formed a series of rapids at this point, where it emerged from a rocky gorge. Just above the rapids we found a good ford, the average depth of which was not more than three feet. After crossing, the banks on the other side were clothed with a species of *Casuarina* which I did not observe elsewhere. The country on that side of the stream was sandy and, as I found by the time we had proceeded two or three miles that we were getting embarrassed in a sandstone range, I halted the party for the night and went on to try if I could find a pass across it. My exertions were not however very successful: I came upon a path which I thought might be rendered practicable for the ponies over the first part of the range, but found no line by which we could proceed without making a road.

### WEAKNESS OF THE MEN.

March 29.

At dawn this morning the men were at work forming the road; the poor fellows were however so much enfeebled from constant fatigue and very inefficient nutriment, whilst exposed to the great heat of a tropical climate, that they were unable to exert the same energy as formerly, and I could not but be struck with the great difference in their strength as evinced in their incapacity to move stones and other obstacles, which a few weeks ago they would have had little difficulty in lifting. The path was however soon made as passable as our abilities permitted, and we started along it with the ponies; some of them were however no less reduced than the men and, in endeavouring to lead one of them up a rocky hill, it fell, and from weakness sank under its light load without making an effort to save itself; the spine was thus so severely injured as to render it unable to



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move the hinder extremities; we therefore killed the poor creature and moved on.

### SANDSTONE CAVE.

Throughout the day we continued gradually the ascent of the range which we had yesterday commenced. The large valley we were in led us by a gentle slope winding higher and higher amongst the rocky hills; at first it had been so wide as to appear like a plain, but by degrees it contracted its dimensions, until, towards the afternoon, it suddenly assumed almost the character of a gorge. Just at this point we saw in the cliffs on our left hand a cave, which I entered in the hope of finding native paintings.

Nor was I disappointed for it contained several of a very curious character. This cave was a natural chasm in the sandstone rocks, elevated at its entrance several feet above the level of the ground, from which the ascent to it was by a natural flight of sandstone steps, irregular, of course, but formed of successive thin strata, resting one upon another, and thus constituting an easy ascent; these successive layers continued into the body of the cave, quite to the end, where was a central slab, more elevated than the others, and on each side of this two other larger ones which reached the top of the cave and partly served to support the immense sandstone slab that formed the roof.

### ANOTHER PAINTED CAVE.

The cave was twenty feet deep and at the entrance seven feet high and about forty feet wide. As before stated the floor gradually approached the roof in the direction of the bottom of the cavern, and its width also contracted, so that at the extremity it was not broader than the slab of rock, which formed a natural seat.

### FIGURE DRAWN ON THE ROOF.

The principal painting in it was the figure of a man, ten feet six inches in length, clothed from the chin downwards in a red garment which reached to the wrists and ankles; beyond this red dress the feet and hands protruded and were badly executed.

The face and head of the figure were enveloped in a succession of circular bandages or rollers, or what appeared to be painted to

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represent such. These were coloured red, yellow, and white; and the eyes were the only features represented on the face. Upon the highest bandage or roller a series of lines were painted in red, but, although so regularly done as to indicate that they have some meaning, it was impossible to tell whether they were intended to depict written characters or some ornament for the head. This figure was so drawn on the roof that its feet were just in front of the natural seat, whilst its head and face looked directly down on anyone who stood in the entrance of the cave, but it was totally invisible from the outside. The painting was more injured by the damp and atmosphere, and had the appearance of being much more defaced and ancient, than any of the others which we had seen.<sup>12</sup>



### OTHER PAINTINGS.

There were two other paintings, one on each of the rocks which stood on either side of the natural seat; they were carefully executed and yet had no apparent design in them; unless they were intended to represent some fabulous species of turtle; for the natives of

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Australia are generally fond of narrating tales of fabulous and extraordinary animals such as gigantic snakes, etc.

One of the party who appeared much amused at these different paintings walked straight up the cavern, gradually ascending the steps until he reached the slab at the end, and then, taking his hat off with a solemn air, seated himself; to his own, and our surprise, his bare head just touched the roof of the cave, and on examining this part of it we found it fairly polished, and very greasy, from all appearance caused by the constant rubbing against it of the head of a person whilst seated on the rock. This and other circumstances led us to conjecture that the cave was frequented by some wise man or native doctor who was resorted to by the inhabitants in cases of disease or witchcraft. We saw many footmarks about, and found other signs of the close presence of the natives, but they themselves remained invisible.

### BEAUTIFUL SCENERY.

The cave was situated in an exceedingly picturesque position, it occupied the corner leading from a wide valley to a narrow ravine, down which came bubbling along a clear deep stream, which passed within a few yards of the cave's mouth. After making sketches of the paintings and for a few minutes admiring this romantic spot we moved up the ravine, which appeared to lead by a gradual ascent to the summit of the mountain range that now completely hemmed us in both to the southward and eastward.

This ravine, in the luxuriance of its vegetation and the great size of the trees, as well as in its rapid stream, at times leaping in cascades or foaming in rapids, resembled those we had before seen in the sandstone ranges, but it differed from them in the greater height of the surrounding hills and cliffs which, being overshadowed with hanging trees and climbing plants, presented as rich a painting as the eye could behold: and, as these grew golden with the rays of the setting sun or were thrown into deep and massive shadows, I could not but regret that no Claude of the tropics had arisen to transfer to canvas scenes which words cannot express.

But however beautiful the scenery was the road we had to travel was so extremely inconvenient that the view scarcely made amends for it; we were continually compelled from old land-slips to cross from one side of the stream to the other, and this, from the depth of the ford

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and the slipperiness of the rocky bottom, was sometimes no easy task; moreover the ravine continued rapidly to contract in width and to become more rugged and precipitous; I therefore turned off to the right into a rocky amphitheatre which seemed well suited for encamping, and halted the party for the night; then, taking one of my men with me, I ascended the cliffs to see if I could make out any line by which to get clear of the precipices which embarrassed us, but on all sides I could descry nothing but lofty hills and frowning crags, except in the direction of the ravine which appeared to run directly into the heart of the mountain chain; I therefore turned about to rejoin the party, with the intention of continuing the same course the ensuing morning as we had done this evening.

### NARROW ESCAPE.

Both myself and the man who was with me had however a narrow escape of being shot, for, as we were returning he let his rifle fall and it exploded, the ball striking the rocks close to us before it glanced into the air.

### OTHER CAVES.

March 30.

At the earliest dawn we continued our course up the valley, which rapidly became narrower and more inclined so that it formed, as it were, a series of elevated terraces, at the edge of each of which was a little cascade. We found two caves in the cliffs on the right hand, both of which were painted all over but with no regularity of pattern: the only colours used were red, yellow, and white. The largest of the caves exceeded in breadth and depth any others I had seen, but it was only three feet high; in this one there were several drawings of fish, one of which was four feet in length; these I copied, although they were badly executed. The caves themselves cannot be considered as at all analogous to those I have before described.

### INCREASING DIFFICULTIES OF ROUTE. IMPASSABLE SANDSTONE RANGES.

The difficulties of the road continued to increase rapidly, and the dimensions of the ravine became so contracted that I hesitated whether I should not turn up another which branched off to the right; previously however to taking this step I sent a man forward to

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examine the one we were in; he soon returned and reported that it terminated in a high cascade a few hundred yards further on. This intelligence confirming my previous opinion, I now moved up the ravine which came from the westward, but we had not proceeded for more than half a mile when the rugged nature of the country brought us to a complete stand; we found ourselves in a rocky area, bounded on all sides by cliffs, the only outlet from which was the path by which we had entered. I therefore halted the party for breakfast whilst I prepared to ascend some lofty pinnacles which lay to the south of us.

The state of my wound rendered this exertion one of great pain and difficulty; I however accomplished it, and found myself on the top of a high rocky eminence which bore the appearance of having fallen into ruins; the prospect from it was cheerless in the extreme; to the north lay the rich valley country far below us, and to the south and east nothing could be seen but barren sandstone rocks and ranges rising one above the other until they met the horizon at no great distance from the eye; the only outlet, except the ravine by which we had approached, appeared to be by the westward, and I descended to the party in this direction to see if I could find a route from where they were to the terrace leading to that point. I struck on a place up the cliffs where I imagined it possible to construct a road by which the ponies could ascend, and then returned to breakfast.

### COUNTRY INACCESSIBLE FOR HORSES.

As soon as our scanty meal had been concluded all hands were employed in making this road; and sincerely did I pity the feeble men, whom I saw in the burning heat of a tropical sun, which was reflected with redoubled intensity from the bare sandstone rocks, toiling to displace large stones and obstacles which they had hardly sufficient strength to move; not a murmur however escaped them; they saw the necessity of the case and exerted their failing energies as readily as they had done when these were in full strength and vigour. The road was at last made and we moved on to the westward, toiling for the remainder of the day amongst steep precipices of barren sandstone rocks and hills, utterly inaccessible to horses, till, finding our efforts to proceed useless, I at last turned the party about and halted them for the night just above where we had breakfasted; intending with the earliest dawn to renew my search for a pass by which we might cross this mountain range.

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### CHAPTER 10. RETURN TO HANOVER BAY.

#### UNSUCCESSFUL SEARCH FOR A PASS.

March 31.

This day at dawn I sent out a party under Mr. Lushington and Mr. Walker to try if any pass through the mountains could be found, but they returned in four or five hours to report that it was utterly impossible for horses to proceed further in the direction we desired. During their absence I had made a careful examination of the stores and found that, even at our reduced allowance, we had only provisions left for twenty days; our horses were also reduced in number to twelve, but these, excepting that their feet were sore, were rather improved in condition than otherwise since the commencement of the journey.

#### CAUSES FOR RETURNING.

My intention had always been, when I found myself reduced to such an extremity as the present, to proceed for a few days by forced marches towards the interior, accompanied by four men, and then, returning to the remainder of the party, to have taken all together back to the vessel; when there I knew I could have got four volunteers to accompany me and, having loaded the horses with ammunition and provisions, I had it in contemplation to have started with them again for Swan River. But these projects became now impracticable from the declining state of my health, consequent on having started too soon after having received my wound, to the exertions I was obliged daily to make whilst labouring under its effects, and to the want of those comforts which contribute so materially to restore an invalid to health. Our allowance of food too had been but scanty, and, whilst I fared as my men, who, unshattered in health, had yet grown thin and weak under privation, I, in proportion, had suffered far more.

#### PREPARATIONS TO RETURN.

Mr. Walker, who was aware of my design, came to me today and said he felt it his duty to recommend me without delay to return to the vessel; that as long as he thought the risk I ran was no more than he considered a man who had undertaken such a service should be prepared to incur, he had refrained from pressing this advice upon

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me, but in my present debilitated state exposure even for a single night might very probably cost me my life. To this opinion I felt constrained to yield, and Mr. Walker, having at my desire repeated it in a letter this afternoon, I arranged my plans accordingly.

### LIGHT EXPLORING PARTY SENT FORWARD UNDER LIEUTENANT LUSHINGTON.

The march in advance, which, had my health permitted, I had intended to make myself, was now deputed to Mr. Lushington: four of those men who remained the strongest of our enfeebled band were selected for an excursion of three days under him; after which we were to return to the vessel.

April 1 and 2.

At dawn on Sunday the 1st the party started; and these two days I occupied myself in making magnetic and astronomical observations. Our latitude I found by two meridian altitudes of the moon to be 16 degrees 0 minutes 45 seconds south, and our longitude by chronometer 125 degrees 11 minutes east.

### REPORT OF ADVANCED PARTY.

April 3.

Mr. Lushington's party came in at 12 o'clock this day, reporting as follows: That they proceeded about eighteen miles from the camp upon a course of 195 degrees from the north, and the remaining half upon a course of 155 1/2 degrees; that the whole of their route lay over a country utterly impassable for horses owing to the steepness of the hills; that they crossed a great number of under-features at right angles to their route, between which lay small streams flowing away to the westward, and which under-features were so steep in their descent to the southward that, in going down, the men repeatedly fell: both grass and water were however everywhere abundant; and they saw, in the spots where the grass was most luxuriant, the root which I found on the hill at our first encampment on the good land. The last point they attained was a lofty hill which ran out from a range to the eastward, from which range sprang also all the under-features that they had crossed. From this hill they had an extensive view to the northward, eastward, and westward. The land they saw to the northward is laid down upon my map.

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### THEIR DESCRIPTION OF THE COUNTRY.

To the eastward they saw nothing but ranges of hills, precisely resembling those that we had crossed since entering this mountainous district; and to the westward others of the same nature, but gradually falling in that direction, whilst on the other hand the land seemed to rise gently to the eastward, though they saw no very high hills in an easterly direction. To the southward their view was impeded by a very high bluff point, distant six or seven miles, and a line of cliffs under which they conceived that a river or an opening of the sea may run, but if so, it could not be a stream of great magnitude. Their view of the base of the cliff was however impeded by the under-features of the hill on which they stood. They also noticed, as a very remarkable circumstance, that there were no signs of these mountains having been visited by the natives. The first part of their route lay over an extensive plain, four miles in width, which bore no appearance of the great native conflagrations having ever reached it. This was so generally the case that, when they halted, they were unable to obtain a sufficiency of firewood. They saw a native dog of the regular Australian breed; kangaroos were abundant, but these as well as all other game were much less wild than any of the party had before observed.

The foregoing summary of the information brought back rests not on the report of any one individual but expresses the opinions of the party with regard to those points on which they were all agreed; and the only one as to which I have any distrust is that of the distance they went, which I believe to be overrated; having always found the estimates of every one of the party as to the daily distance travelled very erroneous, and sometimes more than doubled. This indeed is a mistake well known to be of common occurrence, and very difficult to guard against in a new and wild country, and when I consider the diminished strength of the men's pedestrian powers, and the weights they had to carry, I am disposed to calculate that the total direct distance they made did not exceed, if it equalled, twelve miles.

### WANT OF FIREWOOD.

Their report of want of firewood is singular as, in all other parts which we passed over, even upon plains of a similar character though not so highly elevated or so difficult of access, we had always found the ground thickly covered with trees which had fallen from the effects of the native fires.



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The only remarkable circumstances about the spot we were encamped in were the great coldness of the nights and mornings; and moreover that exactly at nine o'clock every morning a cold breeze, in character precisely resembling a sea-breeze, set in from the south-east and lasted until about half-past three in the afternoon.

### RETURN. COMMENCEMENT OF MARCH BACK.

April 4.

We this day started on our march homewards. I was afraid, from the appearance of the weather, that we might soon have rain, and, as a continuance of it for even three or four days might have prevented our passing the rivers for several weeks, it became necessary that this part of our march should be accomplished with the utmost celerity. I therefore made the first river before I allowed a halt for breakfast. On our route we passed the spot where, on the 29th ultimo, we had been compelled to kill the horse; the native dogs had already made it a perfect skeleton and scattered its bones about.

### NATIVE AND HIS DOG.

I committed unintentionally this day what must have appeared to the natives a very wanton act of aggression: as we were passing the river, a dog, not of the Australian breed, came from a pass in the rocks on the opposite side, moving quietly towards us over some flat rocks; when he had advanced a few yards from the pass he stopped and looked back, so that from his manner I might have known that his master was near, but without reflection I fired and struck the ground close to him; he became alarmed and ran back in the same line he had come; I now took up my own rifle and just as he turned a point in the rocks I fired, and, although a very long shot, I struck him far forward in the shoulder. For a moment he staggered, then turned round and limped up a glen in the hills in quite a different direction. I had neither time nor strength to follow him, but on passing the river I found from the tracks that minute made that a single native had been coming down to the river with the dog, and had (probably from hearing the shots) turned sharp off to the right and made his escape into some bushes. This day the weakness of our last sheep obliged us to kill it.

### CONTINUATION OF ROUTE BACK. CHANGE OF TRACK.

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April 5.

I continued on our old track this morning until I had passed the other river, and then, quitting our former route, made a push straight over the sandstone ridge for our old enemy the marsh, as I felt sure after the present long continuance of fine weather that it would be now quite passable. We encamped this night on the sandstone range under a group of lofty firs, or rather pines.

April 6.

I found a very easy route over the sandstone, quite passable in fine weather, but after rains, I think, from the marshy nature of the ground, that it would present some difficulty. The marsh itself was perfectly passable, could without any difficulty be drained, and consisted of good and fertile land. A remarkable circumstance connected with it was the great depth of the beds of its streams, the banks in some places being fourteen feet above the existing water level, whilst I could observe no signs of the water having ever risen to that height. In the afternoon I once more struck our old track, which I quitted again in the evening. We halted a few hundred yards from two remarkable heaps of stones of the same kind as those I have before mentioned.

### CURIOUS NATIVE MOUNDS OR TOMBS OF STONES.

April 7.

This morning I started off before dawn and opened the most southern of the two mounds of stones which presented the following curious facts:

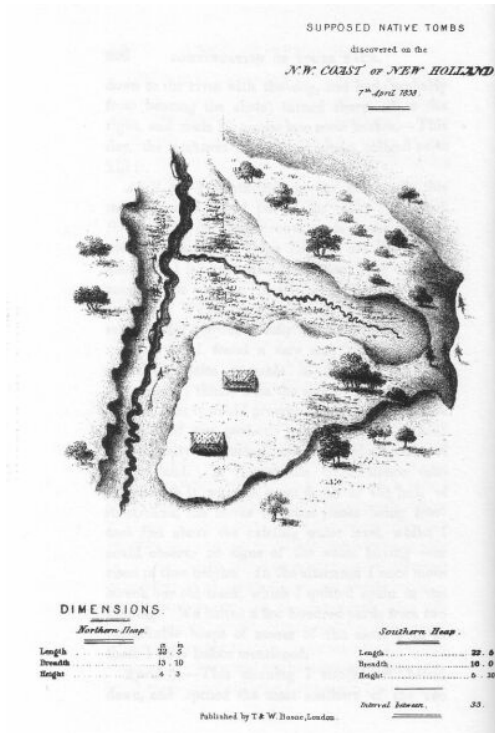
1. They were both placed due east and west and, as will be seen by the annexed plates, with great regularity.
2. They were both exactly of the same length but differed in breadth and height.
3. They were not formed altogether of small stones from the rock on which they stood, but many were portions of very distant rocks, which must have been brought by human labour, for their angles were as sharp as the day they were broken off; there were also the

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remains of many and different kinds of seashells in the heap we opened.

My own opinion concerning these heaps of stones had been that they were tombs; and this opinion remains unaltered, though we found no bones in the mound, only a great deal of fine mould having a damp dank smell. The antiquity of the central part of the one we opened appeared to be very great, I should say two or three hundred years; but the stones above were much more modern, the outer ones having been very recently placed; this was also the case with the other heap: can this be regarded by the natives as a holy spot?

We explored the heap by making an opening in the side, working on to the centre, and thence downwards to the middle, filling up the former opening as the men went on; yet five men provided with tools were occupied two hours in completing this opening and closing it again, for I left everything precisely as I had found it. The stones were of all sizes, from one as weighty as a strong man could lift, to the smallest pebble. The base of each heap was covered with a rank vegetation, but the top was clear, from the stones there having been recently deposited.



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### PASS IN MOUNTAIN RANGE.

In the afternoon we proceeded on our route, travelling nearly north. After marching some distance we traversed at right angles a variety of under-features terminating in sandstone cliffs, but the hills on our right were composed of the same black rock as the chain in which Mount Lyell lies. Private Mustard being ill, I gave him my horse and tried to walk, but injured myself materially by so doing. We were obliged to encamp at the head of a large mangrove inlet.

April 8.

It being Sunday I halted all the morning and only started late in the afternoon. Our route lay through a mountainous country and consequently our progress was slow. Quartz was here largely developed in rocks. We halted this evening in a valley surrounded by mountains.

### PASS MOUNT LYELL.

April 9.

We started at dawn and soon found that the valley we had encamped in was the true pass across the range of mountains. It ran in nearly a south-west direction to the foot of Mount Lyell. Here I halted for breakfast; and, on finding my position by cross bearings, which I was now able to do, and comparing it with my position by dead reckoning, was glad to find that the error only amounted to 150 yards. The valley we travelled up in the morning was fertile, connected with several other large ones of similar character, and contained two small lakes, or large ponds of water, the least of which was elevated considerably above the low ground in the neighbourhood. In the afternoon we crossed the mountains by a narrow neck, which is the best pass over this range of hills for anyone travelling to the south and east. We crossed our old track twice in the afternoon and encamped in the evening under a conical hill.

April 10.

Started at dawn, travelling nearly north-west, and crossed the heads of all the streams which I had before seen emptying themselves into the river Glenelg in the opening lying between Mount Sturt and

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Mount Eyre. Just under the point where we encamped for the night was a large marsh in which my horse got bogged and I had a severe fall.

### CONTINUATION OF ROUTE.

April 11.

On starting this morning all the party insisted that they saw a hill, under which our old track had passed. I felt convinced that such could not be the case; and, had it been so, an error of four miles must have existed in my map: yet all were so positive of their correctness that I felt it would appear like obstinacy in me not to yield to the general opinion. I therefore quitted our direct course to make for the foot of this hill, and there convinced myself that I was right; yet, even when we had now passed it, proceeding on our route, I heard several remark, "We shall soon march back here again." But this evening I had the pleasure of halting under the sandstone range, and the very hill we had wished to gain.

### RECOVERY OF BURIED STORES.

April 12.

We marched early, and on the way passed more native tombs; when we came to the place where the horse had been left I found that, through inadvertence on the part of the man who led him, he had been starved to death, having been left tethered. This discovery shocked me much. Some of the stores which had been left where he fell and covered with a tarpaulin remained uninjured. We proceeded onwards to the camp where I had lain so long wounded, and, on arriving found all our provisions in good order, the natives apparently not having since visited the spot. We were not a little glad to find our preserved meats which had been left buried here. Halted for the night, and enjoyed our repast.

### PRECAUTIONS ON REACHING HANOVER BAY.

April 13.

After digging up our supply of preserved meats yesterday we had made rather more free with them than was prudent in men who had been for so long a time compelled to subsist upon very scanty fare,

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and in consequence had been nearly all affected with violent sickness; and, as six of the party, including Mr. Lushington and myself, were now ill, we did not start very early; the remaining ponies were also so weak that they could scarcely carry themselves, and we therefore were only able to place very light loads upon them.

I have already described the very difficult nature of the country we had to traverse; but the roads we had previously constructed through it proved extremely serviceable. So little had they been injured that they formed a very fair and passable line of communication. Early in the evening we crossed the Lushington and halted at the summit of the cliffs which formed its northern bank.

April 14.

I sent the most efficient of the party back with the horses for the remaining stores whilst with four men I remained in charge of the tents.

### ANXIETY ON APPROACHING HANOVER BAY.

Sunday April 15.

Our anxiety to ascertain if any accident had happened to the schooner now became very great: since such a circumstance was of course by no means impossible. As our position would then have been very precarious, and our only chance of ultimate safety have rested on the most exact discipline and cautious rules of conduct being observed from the very first, I thought it would be most prudent not to allow such a calamity (had it occurred) to burst too suddenly upon the men when they were quite unprepared for it.

Two of them were therefore selected and, accompanied by these, I started before daylight for the sandy beach in Hanover Bay; leaving the party to make the best of their way to the heights above the valley where we had first encamped, and where plenty of food and water could be found for the ponies; these, in the event of anything having happened to the schooner, would become the mainstay of our hopes.

These arrangements having been made we moved off through the rocky difficult country we had first encountered: every step we took was over well-known ground, in which no change had taken place

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save that there were evident marks of bodies of natives having been in the neighbourhood since our departure.

As I proceeded nearly in a direct line to Hanover Bay we encountered some difficulty from the broken character of the ground, but about eleven o'clock had gained the hilly country at the back of the beach, from whence however we could not obtain a view of the spot where the vessel lay. On emerging from the mangroves upon the beach we saw painted upon the sandstone cliffs, in very large letters, "Beagle Observatory, letters south-east 52 paces."

### REJOIN THE LYNHER. MEETING WITH THE BEAGLE.

No one who has not been similarly situated can at all conceive the thrill which went through me when these letters first met my eye; even had anything happened to the schooner, friends were upon the coast, and I knew that Captain Wickham, who had passed a great portion of his life in adventures of this kind, would leave nothing undone which was in his power to ensure our safety. We now hurried across the beach, and on gaining the highest part of it saw the little schooner riding safely at anchor. A gun being fired all became life and expectation on board the vessel; and whilst the boat pulled ashore we searched for our letters. These had however not yet been deposited at the spot indicated, and I therefore conjectured that we should find them on board.

On reaching the vessel we learnt that the mate was gone to the Beagle, now lying in Port George the Fourth but expected to sail this very day. It appeared that at 7 o'clock on the morning of the 8th the report of four carronades was heard on board the schooner; this was conjectured by all to denote the presence of the Beagle on the coast, but the echo ran from cliff to cliff with so many reverberations that none could tell from what direction the sound had originally proceeded. The silence of the night was not again disturbed; and those on board the schooner felt no small solicitude to know if their conjectures were correct, and if so in what direction the Beagle lay.

### ARRIVAL OF THE BEAGLE.

The next morning the mystery was cleared up. Before noon a yawl was seen to round the headland and to stand across the bay in the direction of the mouth of Prince Regent's River. As soon as the schooner was recognised the yawl altered her course, and Captain

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Wickham was soon on board the *Lynher*, making anxious enquiries for us and ascertaining what steps could be taken to assist us and promote our views.

From that time up to the present date the *Beagle* had lain in Port George the Fourth to take in wood, water, etc., and to await the return of Mr. Stokes, who was absent exploring the coast between Collier's Bay and Port George the Fourth.

As there was no time to lose I at once started in a boat for the *Beagle*, and it was late in the evening when we drew near it. I could see anxious groups looking eagerly at the little boat as it drew near, and when at length we were recognised the hearty cheers that greeted us as we came up alongside plainly showed that the pleasure of meeting was not confined to ourselves.

### RESULTS OF HER SURVEY.

As Mr. Stokes was hourly expected to return, and I was very anxious to know if he had discovered the mouth of the *Glenelg*, I remained on board the *Beagle* and, as all had much to hear and much to communicate, the evening wore rapidly away. The next day Mr. Stokes arrived, having seen nothing of the mouth of the river; this however in my apprehension arose from the greater portion of the time they were absent having been spent in the examination of Collier's Bay, which was the point of by far the greatest interest and promise; and that consequently they were compelled, from want of time and supplies, to examine the intervening coastline less narrowly than its irregular character rendered necessary. What rather confirms this opinion is, that Captain King, in his survey of this part, states his belief, drawn from observation, that it is indented with inlets similar to Prince Regent's River, now this is exactly the character of the *Glenelg*.

Mr. Stokes described Camden Sound as being one of the finest harbours he had seen; and, such being the case, it must undoubtedly be the most important position on this part of the coast. It lies close to the *Glenelg* and Prince Regent's River, two large navigable streams; and I have already declared my opinion that I have never seen a richer tract of country than the extensive alluvial and basaltic districts in the neighbourhood of the *Glenelg*, and under the rare circumstance of lying between two navigable rivers which are separated from each other by so short an interval.



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### PREPARATIONS FOR REEMBARKING.

Soon after Mr. Stokes's arrival I started for the Lynher, and the next morning repaired on shore. During my absence on board the Beagle fourteen natives had made their appearance near the encampment on the cliffs above the valley; they appeared however to have been solely attracted from motives of curiosity and a desire to visit our former huts. From the fearful disposition which had hitherto been evinced by the natives of these parts it was necessary however that every precaution should be observed. This was most carefully done by Mr. Lushington; and as soon as the natives saw that they were watched they moved off and were not again observed, although the smokes of their fires were visible in several points.

On the 17th we commenced our preparations for leaving this part of the coast. The stores remaining were all carried on board. We had but eleven ponies left, the greater number of which were so marked and scarred from falls amongst the rocks that they would have been valueless if brought to sale; besides which, to have cut and dried a quantity of grass sufficient for them until we reached the Isle of France would, in the burnt up state of the country, have delayed us many days, had we even succeeded at last. On the other hand, if left free in the bush, two good mares which were amongst them might possibly be the means of giving a very valuable race of horses to this country. These considerations determined me; and the companions of our weary wanderings were turned loose—a new race upon the land; and, as we trusted, to become the progenitors of a numerous herd.

### STATE OF THE PLANTS AND SEEDS LEFT AT THE ENCAMPMENT.

Our whole residence in this country had been marked by toils and sufferings. Heat, wounds, hunger, thirst, and many other things had combined to harass us. Under these circumstances it might have been imagined that we left these shores without a single regret; but such was far from being the case: when the ponies had wandered off, when all the remaining stores had been removed, and the only marks of our residence in this valley were a few shattered bark huts, young coconut plants, a bread-fruit, and some other useful trees and plants, I felt very loth to leave the spot. I considered what a blessing to the country these plants must eventually prove if they should continue to thrive as they had yet done and, as I called to mind how

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much forethought and care their transport to their present position had occasioned, I would very gladly have passed a year or two of my life in watching over them and seeing them attain to a useful maturity. One large pumpkin plant in particular claimed my notice. The tropical warmth and rains, and the virgin soil in which it grew, had imparted to it a rich luxuriance: it did not creep along the ground, but its long shoots were spreading upwards amongst the trees. The young coconuts grew humbly amidst the wild plants and reeds, their worth unknown. Most of these plants I had placed in the ground myself, and had watched their early progress: now they must be left to their fate.

### REEMBARKATION.

Amidst such thoughts we resumed our course down the valley and embarked in the boats; but had not proceeded far when a dog belonging to one of the men was missed and, as we could not abandon so faithful a companion, a party returned to search for it, and the dog was brought safely on board.

### SAIL FOR THE MAURITIUS.

We then weighed and sailed for the Isle of France, where we arrived on the 17th May without having met with any circumstance on our voyage worthy of record.

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### CHAPTER 11. NATURAL HISTORY. CLIMATE. ABORIGINES.

#### NATURAL HISTORY.

North-Western Australia seems to be peculiarly prolific in birds, reptiles, and insects, who dwell here nearly unmolested, mutually preying upon each other, and thus, by a wise provision, setting the necessary check to their own multiplication.

#### DISTRIBUTION OF ANIMALS.

Of quadrupeds there are but few species, and of these the individuals, considered in proportion to the surface they roam over, are rare. The only species I observed during a residence of five months were four of kangaroos, namely the large *Macropus giganteus* ? of Shaw, two smaller kinds, one of which is the *Petrogale brachyotis* of Gould, and a kangaroo rat, which last is always seen amongst the rocks on the sea coast. One species of opossum, a flying squirrel (*Petaurista*) two kinds of dog, of which one is new, rats, and a fieldmouse. Of these the kangaroos are alone numerous, and only in particular spots.

#### NEW KANGAROO.

I shot a female kangaroo of the *Petrogale brachyotis* near Hanover Bay, and by the preservation of the skin and other parts enabled Mr. Gould to identify it as a new species.

This graceful little animal is excessively wild and shy in its habits, frequenting, in the daytime, the highest and most inaccessible rocks, and only descending into the valleys to feed early in the morning and late in the evening. When disturbed in the daytime amongst the roughest and most precipitous rocks, it bounds along from one to the other with the greatest apparent facility, and is so watchful and wary in its habits that it is by no means easy to get a shot at it. One very surprising thing is, how it can support the temperature to which it is exposed in the situations it always frequents amongst the burning sandstone rocks, the mercury there during the heat of the day being frequently at 136 degrees. I have never seen these animals in the plains or lowlands, and believe that they frequent mountains alone.

#### NEW DOMESTIC DOG.

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The new species of dog differs totally from the Dingo or *Canis australiensis*. I never saw one nearer than from twenty to thirty yards, and was unable to procure a specimen. Its colour is the same as that of the Australian dog, in parts however having a blackish tinge. The muzzle is narrow, long, thin, and tapers much, resembling that of a greyhound, whilst in general form it approaches the English lurcher. Some of the party who went to Timor stated it to resemble precisely the Malay dog common to that island, and considered it to be of the same breed; which I think not improbable, as I cannot state that I ever saw one wild, or unless in the vicinity of natives; in company with whom they were generally observed in a domesticated state. On the other hand the *Canis australiensis* was common in some parts in a state of nature: of these I saw several myself and, from the descriptions given by other individuals of the party of dogs they had observed, I recognised their identity with the same species. We heard them also repeatedly howling during the night and, although they never attacked our sheep or goats, many portions of dead animals were carried off by them. I saw but two flying squirrels and know not to which species of *Petaurista* they are to be referred.

### OTHER ANIMALS.

Both mice and rats are common, the former precisely resembling in appearance the English fieldmouse. The rats on one occasion ate up a live pet parakeet, leaving the bones gnawed and strewn about; and on another, when I had shot a crane (*Ardea scolopacea*) intending it for breakfast, they in the night devoured nearly the whole of it.

### CHECKS ON INCREASE OF ANIMALS.

The multiplication of kangaroos, opossums, rats, etc. may be checked by various causes; but man, I imagine, is the most deadly enemy they have to contend with. The numerous remains of these animals that I have seen about the native fires attest the number destroyed. In all those caves in which I found native paintings were representations either of kangaroo hunts, or of men bringing down these animals dead on their shoulders; and many a hollow tree bore witness of its having been smoked in order to drive forth to certain death the trembling opossum or bandicoot rat which had taken refuge in it.

### INFLUENCE OF MAN ON THEIR HABITS.

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A convincing proof of the dread in which man is held by the various kinds of kangaroos is given by their extreme shyness. I never but on two or three occasions got within shot of the larger kangaroos as they were always so wary; and, although I at different times wounded two, I never could succeed in actually capturing either. Now, when the detached party sent forward just before we commenced our return to Hanover Bay crossed a range of mountains on which were neither traces of the natives or their fires, they found the direct reverse of this to be the case, and were all surprised at the tameness of the kangaroos compared with those they had previously seen.

In the same way, when I entered a new district, the birds merely flew up into a lofty tree without attempting to go farther away, and it was not until I had shot for a day or two in the neighbourhood of a place that the birds there became at all wild.

The native dog, doubtless being dependent for subsistence upon the game he can procure, must contribute to thin the numbers of the lesser animals, who also, together perhaps with the rapacious dog himself, frequently fall a prey to the various snakes that inhabit the country; as was evinced in the event narrated on the 16th of March of the destruction, by Mr. Lushington, of the boa with a small kangaroo compressed in its folds.

The manner, too, in which I have seen the rapacious birds of prey soar over plains where the small kangaroos abound, convinces me that they also bear their part in the destruction of this harmless race.

### TRACES OF AN ANIMAL WITH A DIVIDED HOOF.

I have already alluded to the paucity of quadrupeds, both in species and in number, but I have still to record the remarkable fact of the existence in these parts of a large quadruped with a divided hoof: this animal I have never seen, but twice came upon its traces. On one occasion I followed its track for above a mile and a half, and at last altogether lost it in rocky ground. The footmarks exceeded in size those of a buffalo, and it was apparently much larger, for, where it had passed through brushwood, shrubs of considerable size in its way had been broken down and, from the openings there left, I could form some comparative estimate of its bulk. These tracks were first seen by a man of the name of Mustard, who had joined me at the Cape, and who had there been on the frontier during the Kaffir

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war; he told me that he had seen the spoor of a buffalo, imagining that they were here as plentiful as in Africa. I conceived at the time that he had made some mistake, and paid no attention to him until I afterwards twice saw the same traces myself.

### BIRDS.

To describe the birds common to these parts requires more time than to detail the names of the few quadrupeds to be found; indeed in no other country that I have yet visited do birds so abound. Even the virgin forests of South America cannot, in my belief, boast of such numerous feathered denizens; yet I cannot, after all, assert that the number of genera and species is at all proportionate to that of individual birds. The contrary is probably the real case.

### BEAUTY OF THE BIRDS.

The birds of this country possess in many instances an excessively beautiful plumage; and he alone who has traversed these wild and romantic regions, who has beheld a flock of many-coloured parakeets sweeping like a moving rainbow through the air whilst the rocks and dells resounded with their playful cries, can form any adequate idea of the scenes that there burst on the eyes of the wondering naturalist.

The beginning of the month of February, or the end of January, is the season in which the birds in these parts pair. In the beginning of March I found many nests with eggs in them; and in the end of that month eggs nearly hatched were observed in most of the nests, as well as young birds occasionally.

### RAPACIOUS BIRDS.

Of rapacious birds I saw but four kinds, but these are by no means common:

The first species was a very large bird, of a dark colour (*Aquila fucosa*, Cuvier) in size, appearance, and flight closely resembling the golden eagle which I have often seen, and have once shot on the north-west coast of Ireland. I have approached these birds closely—so closely indeed that I have on two occasions shot them, but each time they fell into a thick mangrove inlet and I was not fortunate enough to procure either of them; they appeared to me always to

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frequent the shores, for I never saw them further inland than a mile from the sea. The large nests Captain King mentions as having been found upon the coast I imagine must have belonged to this species.

The second species was a sort of hawk (*Haliaeetus leucosternus*, Gould) rather larger than the sparrow-hawk, of a light cinnamon colour, with a perfectly white head. They also frequent the shores, but I never shot one.

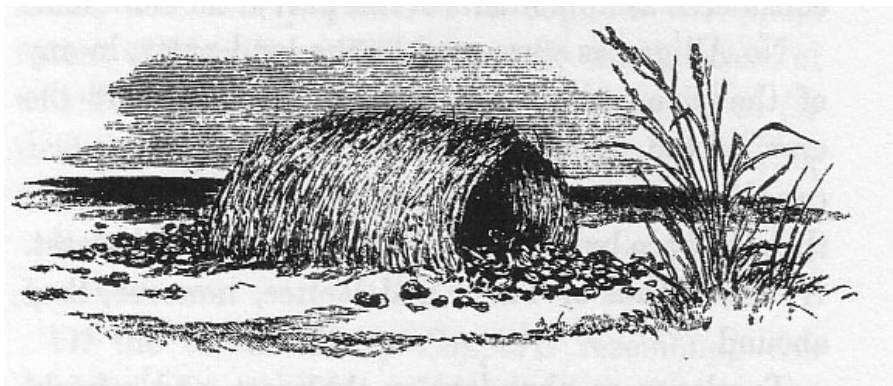
The third species was a Peregrine falcon (*Falco melanogenys*, Gould) which is nearly allied to that of Europe. I was not fortunate enough to procure a specimen of this bird.

The fourth was the Athene Boobook. Belly brown and white; wings brown, with white spots; third quill-feather, longest; legs feathered, lightish brown colour; tail brownish white, marked with transverse bars of a darker brown; eye prominent; iris blue. The only difference I could observe between the male and female is that the female is rather larger than the male, and her colours somewhat lighter. These birds inhabit the whole of that part of North-western Australia lying between the Prince Regent and Glenelg Rivers, and probably may be distributed over the greater portion of the Continent. They feed on insects, reptiles, and birds of the smaller kind. I have always found them seated in holes in the rocks, or in shady dells, and have never seen them fly in the daytime unless compelled by fear; they are very stupid when disturbed, and in flight and manner closely resemble the common English owl. I cannot however recollect having ever seen one on the wing during the night.

Upon describing the two singular birds mentioned above in Chapter 9 to Mr. Gould he informed me that they were most probably of the rare species *Anas semipalmata*.

### REMARKABLE NEST.

I have already spoken in the 9th chapter of a very curious sort of nest which was frequently found by myself and other individuals of the party, not only along the seashore, but in some instances at a distance of six or seven miles from it. This nest, which is figured in Illustration 19, I once conceived must have belonged to the kangaroo rat I have above mentioned, until Mr. Gould, who has lately returned from Australia, informed me that it is the run or playing ground of the bird he has named *Chalmydera nuchalis*.



These nests were formed of dead grass, and parts of bushes, sunk a slight depth into two parallel furrows, in sandy soil, and then nicely arched above. But the most remarkable fact connected with them was that they were always full of broken shells, large heaps of which protruded from each extremity of the nest. These were invariably seashells. In one instance, in the nest most remote from the sea that we discovered, one of the men of the party found and brought to me the stone of some fruit which had evidently been rolled in the sea; these stones he found lying in a heap in the nest, and they are now in my possession.

#### EMUS.

I have seen no Emus in North-western Australia, but on two occasions their tracks were impressed in the mud on some plains lying on the banks of Glenelg River; and Mr. Dring, of H.M.S. Beagle, informed me that, whilst that vessel was employed in the survey of Fitzroy River, about seventy miles to the southward of the former, he not only several times saw traces of them but that, on one occasion when he was in the bush, two of them passed within a few yards of him. They may, I conceive, therefore be considered as inhabitants of this part of the continent.

#### ALLIGATORS.

No alligators were seen by the land party in any of the rivers of North-western Australia, but the crew of the schooner saw one in Hanover Bay. I can however safely assert from my own experience



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that they are by no means numerous upon this coast. At the islands of Timor and Roti however they abound.

### TURTLES.

Turtles were abundant on the coast, and a freshwater tortoise was found inland.

### PLANTS.

Amongst the vegetable kingdom I shall only observe generally that the Calamus, or rattan, which in King's voyage<sup>13</sup> is considered to be peculiar to the primary granitic formation on the east coast, is abundant in the interior of the north-west between latitude 15 and 17 degrees south.

I found a dwarf cabbage-palm between 15 and 16 degrees south latitude, always in moist situations in the neighbourhood of streams, although not immediately on the banks.

Of the family of Urticeae many species of *Ficus* were observed.

The *Banksia*, common to Swan River, and bearing a yellow flower, is to be found in many of the valleys on the north-west coast; thus appearing to form an exception to Mr. Cunningham's observation inserted in Captain King's voyage,<sup>14</sup> wherein he says:

Viewing the general distribution of *Banksia*, it is a singular fact in the geographical distribution of this genus that its species, which have been traced through almost every meridian of the south coast, upon the islands in Bass Strait, in Van Diemen's Land, and widely scattered throughout the whole extent of New South Wales to the north coast, at which extreme *Banksia dentata* has been observed as far west as longitude 136 degrees south, should be wholly wanting on the line of the north-west coast.

I observed a great variety of plants of the order Leguminosae.

Of the extraordinary *Capparis* resembling the African *Adansonia* I have already spoken in Chapter 6.

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A species of *Callitris* (Pine) was common, as was the *Pandanus*; and the *Araucaria excelsa* was found on the heights, both near the sea coast and further inland.

### CLIMATE. ITS HEALTHINESS.

I conceive the climate of North-western Australia to be one of the finest in the world, and my reasons for thus thinking are grounded upon the following circumstances.

### PROOFS OF ITS SALUBRITY.

I was resident there from the beginning of the month of December 1837 to the middle of the month of April 1838; a period of four months and a half: and during the whole of this time the men under my command were exposed to great hardships and privations. On one occasion three of us slept in the open air without any covering or warm clothes for five successive nights, during three of which we had constant showers of heavy rain, and yet did not in any way suffer from this exposure.

Other detached parties were on various occasions subjected for a shorter period to exposure of a similar nature, and no instance occurred of any individual suffering in the least from it. One or two cases of slight diarrhoea occurred, but they could be always traced to some food that had been eaten the day before, and never were sufficiently violent to delay us for a single hour.

Whilst this perfect freedom from disease existed amongst the party they had not only to bear exposure of the nature above stated, but the provisions with which I was enabled to supply them were sometimes very insufficient for their wants. During the whole month of March and part of April their daily full allowance of food was about 1 3/4 pounds of flour, first made into dough and then baked in the form of a flat cake upon a large stone.

This low diet, at the same time that they were compelled to work very hard, naturally rendered some of them extremely weak, and several were, on our return to the coast, in a very reduced state.

I should here state that we were (perhaps fortunately) unable to carry more than one pint of brandy with us, hence no spirits were issued to the men, and the non-appearance of diseases of an

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inflammatory nature may perhaps in some measure be attributed to this circumstance.

The opinion of Captain Wickham, R.N. commanding H.M. ship *Beagle*, is perfectly in accordance with my own. He was upon the coast at the same time that we were, and in a letter to me writes thus: "Our cruise has been altogether a fortunate one, as we have been enabled to examine the whole coast from Cape Villaret to this place (Port George the Fourth) without any accident, and the climate is so good that we have had no sick."

### THERMOMETRICAL OBSERVATIONS. RAIN AND TEMPERATURE.

I have annexed a short statement of the weather and range of the thermometer during some parts of the months of December, January, and February. It will be seen from this that the heat was on some occasions great, even as high as to 136 degrees of Fahrenheit in the sun; yet, by not exposing ourselves to its influence in the heat of the day more than we could help, we suffered no inconvenience from this circumstance: indeed in other tropical countries where the heat has not been so great I have suffered much more than I did in North-western Australia.

### NUMBER OF DAYS IN WHICH RAIN FELL:

December: 6 days.

January: 19 days, namely, 12, to January 19th, 4 between 19th and 28th, 3 to end of month.

February: 7 days.

March: 12 days.

To 12th April: 2 days.

In January the greatest quantity of rain fell between the 15th and 30th, accompanied by storms of thunder and lightning.

In February the greatest quantity of rain fell in the commencement of the month. For several nights in the middle of February we had thunder, lightning, and strong gusts of wind, seldom accompanied by rain.

In March the greatest quantity of rain fell from the 17th to the 23rd.

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The mean temperature of the different periods of the day for the month of December 1838 at Hanover Bay, determined by observations for only six successive days from the 26th to the 31st inclusive (thermometer in the shade) are as follows:

6 A.M. 82.2.  
9 A.M. 85.3.  
12 m. 91.3.  
3 P.M. 90.2.  
6 P.M. 85.8.  
9 P.M. 83.5.

The same for the month of January 1838, determined by observations made from the 1st to the 19th inclusive, was:

6 A.M. 78.2.  
9 A.M. 84.3.  
12 M. 83.1.  
3 P.M. 85.7.  
6 P.M. 80.7.  
9 P.M. 83.4.

I should observe that the mean temperature for 9 P.M. for this month is deduced from only seven days observation.

The same as the above for the month of February, taken twelve miles to the south of Hanover Bay, from the 19th to the 26th February inclusive, is as follows:

6 A.M. 77.0.  
9 A.M. 86.0.  
12 A.M. 92.7.  
3 P.M. 94.0.  
6 P.M. 83.3.

### ABORIGINES, THEIR HABITS AND MANNERS.

I was never fortunate enough to succeed in obtaining a friendly interview with the natives of these parts; but I have repeatedly seen them closely, was twice forced into dispute with them and, in one of these instances, into deadly conflict. My knowledge of them is chiefly drawn from what I have observed of their haunts, their painted caves, and drawings. I have moreover become acquainted

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with several of their weapons, some of their ordinary implements, and I took some pains to study their disposition and habits as far as I could.

In their manner of life, their roving habits, their weapons, and mode of hunting, they closely resemble the other Australian tribes with which I have since become pretty intimately acquainted; whilst in their form and appearance there is a striking difference. They are in general very tall and robust, and exhibit in their legs and arms a fine full development of muscle which is unknown to the southern races.

They wear no clothes, and their bodies are marked by scars and wales. They seem to have no regular mode of dressing their hair, this appearing to depend entirely on individual taste or caprice.

They appear to live in tribes subject, perhaps, to some individual authority; and each tribe has a sort of capital, or headquarters, where the women and children remain whilst the men, divided into small parties, hunt and shoot in different directions. The largest number we saw together amounted to nearly two hundred, women and children included.

### THEIR WEAPONS AND IMPLEMENTS.

Their arms consist of stone-headed spears (which they throw with great strength and precision) of throwing sticks, boomerangs or kileys, clubs, and stone hatchets. The dogs they use in hunting I have already stated to be of a kind unknown in other parts of Australia, and they were never seen wild by us.

The natives manufacture their water-buckets and weapons very neatly; and make from the bark of a tree a light but strong cord. Their huts, of which I only saw those on the sea-coast, are constructed in an oval form of the boughs of trees, and are roofed with dry reeds. The diameter of one which I measured was about fourteen feet at the base.

### LANGUAGE.

Their language is soft and melodious, so much so as to lead to the inference that it differs very materially, if not radically, from the more southern Australian dialects which I have since had an opportunity of enquiring into. Their gesticulation is expressive, and

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their bearing manly and noble. They never speared a horse or sheep belonging to us and, judging by the degree of industry shown in the execution of some of their paintings, the absence of anything offensive in the subjects delineated, and the careful finish of some articles of common use, I should infer that under proper treatment they might easily be raised very considerably in the scale of civilization.

### INDIVIDUALS OF AN ALIEN WHITE RACE.

A remarkable circumstance is the presence amongst them of a race, to appearance, totally different, and almost white, who seem to exercise no small influence over the rest. I am forced to believe that the distrust evinced towards strangers arose from these persons, as in both instances, when we were attacked, the hostile party was led by one of these light-coloured men.

### SIMILARITY OF CUSTOMS WITH OTHER AUSTRALIAN TRIBES.

Captain King, who had previously experienced the same feelings of ill-will in the natives of Vansittart Bay, attributed them to the periodical visits of the Malays during the season of the trepang fishery. He says (volume 1 page 320):

On this beach (of Vansittart Bay) we found a broken earthen pot, which decidedly proved the fact of the Malays visiting this part of the coast, and explained the mischievous disposition of the natives.

\* \* \* \* \*

I saw but three men of this fair race myself, and thought they closely resembled Malays; some of my men observed a fourth.

### NATIVES AT ROEBUCK BAY.

An individual differing in appearance and colour from his aboriginal associates was also seen amongst a native tribe whilst the boats of the Beagle were surveying in Roebuck Bay, and is thus ably described by Mr. Usberne, the master of the vessel; who was in command of the boat at the time he was observed, and who thus narrates the interview:<sup>15</sup>

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To prevent interruption during dinner the things were removed to the boat, and she was then shoved a few yards off the beach, and we commenced our repast.

As we took to the water they (the natives) rose and followed us close; but in the act of shoving off, the boat-hook being pointed over the bow, they one and all involuntarily stepped back a couple of paces, thinking no doubt that it was one of our spears, which to them must have appeared a formidable weapon; but, seeing no harm was intended, they remained at the water's edge, watching us whilst at dinner.

At this time I had a good opportunity of examining them. They were about the middle age, about five feet six inches to five feet nine in height, broad shoulders, with large heads and overhanging brows; but it was not remarked that any of their teeth were wanting (as we afterwards observed in others); their legs were long and very slight, and their only covering a bit of grass suspended round the loins. There was an exception in the youngest, who appeared of an entirely different race: his skin was a copper colour, whilst the others were black; his head was not so large, and more rounded; the overhanging brow was lost; the shoulders more of a European turn, and the body and legs much better proportioned; in fact he might be considered a well-made man at our standard of figure. They were each armed with one, and some with two, spears, and pieces of stick about eight feet long and pointed at both ends. It was used after the manner of the Pacific Islanders, and the throwing-stick so much in use by the natives of the south did not appear known to them.

After talking loud, and using very extravagant gestures, without any of our party replying, the youngest threw a stone, which fell close to the boat.

\* \* \* \* \*

### COINCIDENCE OF CUSTOMS.

It appears to me very probable that the same dark-coloured race inhabit the whole of Northern Australia, and perhaps extend over the islands in Torres Strait.

In order to support this opinion I shall first give an extract from the journal of Dr. Duncan, from Wilson's Voyage round the World, page

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148, which contains a detail of the customs of Flinders Islands and part of Northern Australia, and displays two or three remarkable customs coinciding with those observed by myself and others to exist in Northwest Australia:

At 8 hours 40 minutes P.M. the colonial brig Mary arrived, bringing along with her a native of India, whom she picked up on one of Flinders Islands.

On the 18th July the Lascar came on board the Success, and from him I learned the following particulars: That he belonged to the ship Fame, which was wrecked in the Straits; that he and a few others escaped in a leaky boat after rowing for forty-eight hours. On landing the natives stripped them of their clothes, etc., but otherwise behaved very kindly to them. His companions in misfortune died the first year of his residence amongst the natives, which in all amounted, he said, to six or seven years.

The men in that part of Australia have from five to ten wives, of whom they are rather jealous at times. The tribes are continually at war with one another, and have regular pitched battles; but the moment that one is killed on either side, the battle ceases, until they carry off their dead, and mourn for certain days, according to their custom; bedaubing themselves over with black earth, and on another day the fight begins and ends in a similar way.

\* \* \* \* \*

### DISPOSAL OF THEIR DEAD.

This is singularly analogous to what occurred on our encounter with them on the 11th February. Dr. Duncan continues:

When one dies or is killed they bury the body in the earth, but at the end of five days dig it up again and wrap up the bones, etc., in bark of trees, and carry them along with them. When the women fight, which is very often, they use a short kind of club. The natives paint their bodies over with red clay to prevent the mosquitoes from biting them. When they paint their bodies white it is a sign of war with some other tribe.

\* \* \* \* \*



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A very remarkable instance of coincidence in this custom with regard to the dead will be found in a subjoined extract from a letter sent to me by an officer of the *Beagle*, together with a skeleton which he had found at Cygnet Bay. The skeleton has been presented to the Royal College of Surgeons:

The skeleton was found enveloped in three pieces of papyrus bark, on a small sandy point in Cygnet Bay. All the bones were closely packed together, and the head surmounted the whole. It did not appear to have been long interred. They had evidently been packed with care. All the long bones were undermost, and the small ones were strewed in among them. The head was resting on its base, face across.

Three natives were close to the place when we first landed: the eldest of the party went up to the spot immediately after I had removed the bones; he turned up the bark with his foot, and did not appear to show the slightest symptom of uneasiness. They were for some days among the watering party on very friendly terms.

\* \* \* \* \*

### CAVES. DRAWINGS. TOMBS.

As I never, during my subsequent travels in Australia, saw anything at all resembling the painted caves which I have described in the ninth chapter, I shall here add some observations on the subject, which I could not have there detailed without too great an interruption to the narrative.

Two other instances of Australian caves which contain paintings have been recorded. The first is by Captain Flinders and the second by Mr. Cunningham in King's voyage.

### PAINTINGS AT CHASM ISLAND.

The caves found by Flinders were in Chasm Island, in the Gulf of Carpentaria, and are thus described:<sup>16</sup>

In the steep sides of the chasms were deep holes or caverns undermining the cliffs; upon the walls of which I found rude drawings, made with charcoal, and something like red paint, upon the white ground of the rock. These drawings represented porpoises,

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turtles, kangaroos, and a human hand; and Mr. Westall, who went afterwards to see them, found the representation of a kangaroo, with a file of thirty-two persons following after it. The third person of the band was twice the height of the others, and held in his hand something resembling the waddy or wooden sword of the natives of Port Jackson.

\* \* \* \* \*

### PAINTINGS AT CLACK'S ISLAND.<sup>17</sup>

The second instance is taken from Mr. Cunningham's manuscripts and is contained in the following extract:<sup>18</sup>

The south and south-eastern extremes of Clack's Island presented a steep, rocky bluff, thinly covered with small trees. I ascended the steep head, which rose to an elevation of a hundred and eighty feet above the sea.

The remarkable structure of the geological features of this islet led me to examine the south-east part, which was the most exposed to the weather, and where the disposition of the strata was of course more plainly developed. The base is a coarse, granular, siliceous sandstone, in which large pebbles of quartz and jasper are imbedded: this stratum continues for sixteen to twenty feet above the water: for the next ten feet there is a horizontal stratum of black schistose rock which was of so soft a consistence that the weather had excavated several tiers of galleries; upon the roof and sides of which some curious drawings were observed, which deserve to be particularly described. They were executed on a ground of red ochre (rubbed on the black schistus) and were delineated by dots of a white argillaceous earth, which had been worked up into a paste. They represented tolerable figures of sharks, porpoises, turtles, lizards (of which I saw several small ones among the rocks) trepang, starfish, clubs, canoes, water gourds, and some quadrupeds, which were probably intended to represent kangaroos and dogs. The figures, besides being outlined by the dots, were decorated all over with the same pigment in dotted transverse belts. Tracing a gallery round to windward, it brought me to a commodious cave or recess, overhung by a portion of the schistus, sufficiently large to shelter twenty natives whose recent fire places appeared on the projecting area of the cave.

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Many turtles' heads were placed on the shelves or niches of the excavation, amply demonstrative of the luxurious and profuse mode of life these outcasts of society had, at a period rather recently, followed. The roof and sides of this snug retreat were also entirely covered with the uncouth figures I have already described.

As this is the first specimen of Australian taste in the fine arts that we have detected in these voyages it became me to make a particular observation thereon: Captain Flinders had discovered figures on Chasm Island, in the Gulf of Carpentaria, formed with a burnt stick; but this performance, exceeding a hundred and fifty figures, which must have occupied much time, appears at least to be one step nearer refinement than those simply executed with a piece of charred wood. Immediately above this schistose is a superincumbent mass of sandstone which appeared to form the upper structure of the island.

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### PAINTINGS IN THE YORK DISTRICT.

There is a third instance of a cave with a figure in it in the district of York, in the settlement of Swan River; but in this case the species of circle which is drawn on the cave, or rather scraped into it with a piece of stone, may represent anything or nothing; in fact it is no more than any idle or thoughtless savage might have executed, without any fixed design whatever. The only other vestige of drawing contained in the cave is evidently the mere impression of a hand, which has been rubbed over with the red paint with which the natives are in the constant habit of bedaubing themselves, and has then been pressed in on the wall.

### NATIVE TRADITIONS.

I had been told that the natives had some very curious traditions current amongst them with regard to this last cave and, after having visited it and satisfied myself that there was no analogy between it and the caves on the north-west continent of Australia, I set about collecting some of the native stories that related to it. These legends nearly all agreed in one point, that originally the moon, who was a man, had lived there; but beyond this there was nothing common to them all, for every narrator indulged his own powers of invention to the greatest possible degree, scarcely ever relating the same story twice, but on each occasion inventing a new tradition; and the

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amount of marvels and wonders which he unfolded in this revelation were exactly proportioned to the quantity of food which I promised to give him. I once or twice charged them with attempting to impose upon my credulity and, far from denying the charge, they only laughed and said, "that was a very good thing which they told me, and that the Djanga (white men) liked it very much."

### COLOURS USED IN PAINTING.

In the painted caves on the north-western coasts five colours were used: red, several shades; yellow; blue; black, and white. With the exception of blue these colours are all known to the natives of the whole continent. The red they either dig up from the earth, fit for use, in the form of red earthy pebbles, or they find it in the form of a brilliant yellow clay, which they beat, clean, and dry, leaving it exposed to the air for several days, when they bake it in a bark basket, and then, if the clay is good and it has been well prepared and burnt, it is nearly as bright as vermilion. In some parts of the continent however no good clay can be found; and in this case, at their annual fair, where they meet to exchange certain commodities only locally produced, this brilliant red ochre is considered a very valuable article of traffic.

Yellow they obtain from several sources: the most common is the yellow clay from which the red is afterwards produced, but they also procure it from a stone which is traversed by veins of yellow earth; from the interior of the nest of a species of ant which collects a yellow dust; and from a sort of fungus from which a similar dust is also obtained.

The black is nothing but finely pounded charcoal.

The white is a very fine greasy species of pipe-clay, common all over Australia, and which they use either wet or dry.

How the blue colour used in the caves on the north-west was obtained I do not know; it is very dark and brilliant, and closely resembles the colour obtained from the seed-vessel of a plant very common there, and which, on being broken, yields a few drops of a brilliant blue liquid. I therefore imagined that it was procured from this source.

### AGE AND MOTIVE OF DRAWINGS.

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With regard to the age of these paintings we had no clue whatever to guide us. It is certain that they may have been very ancient, for, although the colours were composed of such perishable materials, they were all mixed with a resinous gum, insoluble in water, and, no doubt, when thus prepared, they would be capable of resisting, for a long period, the usual atmospheric causes of decay. The painting which appeared to me to have been the longest executed was the one clothed in the long red dress, but I came to this conclusion solely from its state of decay and dilapidation, and these may possibly have misled me very much; but, whatever may have been the age of these paintings, it is scarcely probable that they could have been executed by a self-taught savage. Their origin therefore I think must still be open to conjecture.

But the art and skill with which some of the figures are drawn, and the great effect which has been produced by such simple means, renders it most probable that these paintings must have been executed with the intention of exercising an influence upon the fears and superstitious feelings of the ignorant and barbarous natives: for such a purpose they are indeed well calculated; and I think that an attentive examination of the arrangement of the figures we first discovered, more particularly of that one over the entrance of the cave, will tend considerably to bear out the conclusion I have here advanced.

### SINGULARITY REGARDING THEM.

It is a singularity worthy of remark that the drawings we found in the vicinity of the coast were nothing but the rudest scratches; that they gradually improved until we reached the farthest point we attained from the sea; and that it was in the vicinity of this point that some of the best productions were found.

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### CHAPTER 12. PHYSICAL GEOGRAPHY. COMMERCIAL PROSPECTS.

#### PHYSICAL GEOGRAPHY. MOUNTAIN RANGES.

The most remarkable geographical feature in North-Western Australia is a high range of mountains running north-north-east and south-south-west, named by me Stephen's Range after James Stephen, Esquire, Under-Secretary of State for the Colonies. From this primary range several branches are thrown off: 1. One between Roe's River on the north and Prince Regent's River on the south. 2. Macdonald's Range that throws off streams to Prince Regent's River on the north and to Glenelg River on the south. 3. Whateley's Range which gives forth streams to Glenelg River on the north, and to the low country behind Collier's Bay and Dampier's Land on the south.

These branch ranges as well as the principal one are all composed of ancient sandstone, deposited in nearly horizontal strata, or of basaltic rocks which are only visible in certain places, and are most fully developed in that part of Stephen's Range which lies behind Collier's Bay, and in the low ground near Glenelg River.

With the extent of Stephen's Range I am unacquainted; but I have no doubt that the high land whence the Fitzroy River takes its rise is merely an under-feature again thrown off from it, and which I propose to call Wickham's Range after Captain Wickham, R.N., the discoverer of the Fitzroy.

We may form some idea of the limits of Stephen's Range in a north and east direction from the following passage extracted from Captain King's survey of these coasts:<sup>19</sup>

Lacrosse Island is situated in the entrance of a deep opening trending to the south-south-west towards some steep, rugged hills. The character of the country is here entirely changed. Irregular ranges of detached rocky hills of sandstone formation, very slightly clothed with small shrubs and rising abruptly from extensive plains of low, level land, seem to have superseded the low wooded coasts that almost uninterruptedly prevails between this and Cape Wessel, a distance of more than six hundred miles!

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It appears therefore that this main range contains within it the sources of Roe's River, Prince Regent's and Glenelg Rivers, most probably the Fitzroy, and those that run into Cambridge Gulf and perhaps others that have their embouchures between this last and Admiralty Gulf.

From an accident having occurred to the only barometer we could carry with us I am unable to state the elevation of the highest land we reached above the level of the sea; but the appearance of the country on the coast does not give the impression of any very elevated ground existing near it. This however is owing to the great height of the shore cliffs and the gradual rise of the land towards the interior. The following observations, made with the barometer before it was broken, will show however that the altitude of the country at no great distance from the coast is considerable.

### MACDONALD'S RANGE.

Our first encampment was on the banks of a small river at a spot 2,640 feet from the sea. This river ran through a deep and narrow valley, descending with a nearly regular slope from a tableland of sandstone, in which it took its rise about seven miles inland. At this encampment the height of the bed of the river above the level of the sea was 188.76 feet, as found by the mean of several very accordant observations, which, at the same average slope, gives an elevation of about 377 feet for the height of a spot on its banks distant only one mile from the sea; and if we conceive the average increase of elevation to the sandstone tableland to be only 200 feet in every mile (and I believe it to have been more) we shall have 1400 feet for the elevation of the tableland which formed one of the highest parts of Macdonald's Range.

### ELEVATION OF HILLS.

After passing across this range we again descended rapidly into the low country, the face of which is much broken by conical hills composed of basalt. The heights of some of these hills above their base, which had a considerable elevation above the sea level, were in three instances as follows:

February 28.

The measured height of a hill above its base was 331 feet.

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March 4.

Measured the altitude of a hill above its base and found it to be 222 feet.

March 8.

Measured the altitude of a hill above its base and found it to be 229.5 feet.

None of these hills had apparently near so great an elevation as the sandstone range of which they were under-features. At this period our barometer was unfortunately broken. We now proceeded up the banks of the Glenelg and arrived at many hills and conical peaks, apparently much higher than those I had measured; yet on afterwards passing the river and attaining the summit of the opposite sandstone range, we looked down upon them as hills of far inferior elevation to those on which we stood. From this circumstance, and from the very perceptible change of temperature we experienced, I should think the altitude of the farthest point of Stephen's Range which we reached must have been 2,500 or 3,000 feet above the sea.

### CHARACTER OF THE RIVERS.

The rivers in North-western Australia much resemble in character those of the south-eastern parts of the continent. They rise at no very great distance from the sea. Near their sources they are mountain torrents, but in the lowlands they become generally streams with slow currents, winding through fertile and extensive valleys or plains which are liable to sudden and terrific inundations, caused, I conceive, by the rain which falls in that part of the mountains where the rivers take their rise; for at one period, when we had our encampment on the bank of the small stream near the sea at Hanover Bay, I was myself distant about fourteen miles in the interior in the direction of its source, where we had heavy rain; and on my return I found that the party at the station had been surprised by a sudden rising of the water for which there was no apparent cause as there had been no rain where they were.

The Glenelg River, in like manner, is subject to sweeping inundations, rising sometimes to the height of fourteen to fifteen feet



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above its usual level, as was evinced by the weeds and other substances we saw in the trees on its banks.

To show that these are characteristics of the Fitzroy River I shall quote the authority of Captain Wickham from a letter addressed to me just before our meeting at Hanover Bay:

It (the Fitzroy) appears to be very similar to the rivers on the south-east side of New Holland, subject to dreadful inundations, caused by heavy floods in the interior, and in no way connected with the rainy season on the coast. Our visit to it being in February and March, immediately after the rainy season on the coast, without our seeing any indication of a recent flooding, although there were large trunks of trees and quantities of grass and weeds lying on the bank and suspended from the branches of trees from ten to twelve feet above the level of the river. The bed is entirely of sand.

\* \* \* \* \*

### INUNDATIONS.

It will be clearly seen how nearly this corresponds with what we observed about the same season on the banks of the Glenelg. I have therefore little doubt that the Fitzroy takes its origin from the same mountain chain, and that the inundations described by Captain Wickham originate in the causes which I have here assigned.

To demonstrate more clearly the similarity of character of these rivers with those of New South Wales I shall quote two passages from the British Colonies of Mr. Montgomery Martin, regarding the Hawkesbury and Hunter Rivers of that colony:

The Hawkesbury, which is a continuation of the Nepean River, after the junction of the latter with a considerable stream, called the Grose, issues from a remarkable cleft in the Blue Mountains in the vicinity of the beautiful town of Richmond, about forty miles from Sydney. Along the base of these mountains the Hawkesbury flows in a northerly direction, fed by numerous tributary mountain torrents, descending from narrow gorges, which, after heavy rains, cause the Hawkesbury to rise and overflow its banks as it approaches the sea. In one instance it rose near the town of Windsor ninety-seven feet above its ordinary level. Volume 4 page 257.

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Again he says, page 258:

Hunter's River, about seventy miles to the northward of Port Jackson, disembogues into the sea at the harbour of Newcastle.

There are three branches to the Hunter, called the upper, the lower, and the middle: the two former are navigable for boats for about 120 miles, and the latter for about 200 miles; but the branches are all subject to sudden and terrific inundations owing to the rapid descent of torrents from the Blue Mountains.

\* \* \* \* \*

### MOUTH OF THE GLENELG.

In concluding my remarks on the rivers of the north-west I should state that Mr. Stokes, the surveyor of the Beagle, after a careful examination of the coast did not succeed in finding the mouth of the Glenelg; and he imagines that it has several openings, consisting of large mangrove creeks, which fall into Stokes Bay; whilst it is my impression that it will be found to run out somewhere between Camden Sound and Collier's Bay, and that by some accidental circumstance its mouth was missed. That it joins the sea in a considerable body I should infer from a shoal of porpoises having been seen high up the river, and from the rise and fall of tide, which was twenty feet at the direct distance of thirty miles from the coast.

### VALLEYS.

The valleys in this country are of two kinds: those which are almost ravines, bordered on each side by nearly inaccessible cliffs; and valleys of great width, bordered by fertile plains, often extensive, and which occur where the basaltic rocks are developed; although ravines of this formation are also of frequent occurrence in the mountainous parts.

### CHARACTER OF THE VALLEYS. SOIL.

The soil found in the valleys of the former kind is extremely rich, but they are all subject to very heavy inundations. As an example of this kind of valley I may cite the one in which we first encamped. Its mean width was only 147 feet, and the rocky precipitous cliffs at half

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a mile from the sea rose above their base 138 feet. These deep valleys undoubtedly afford water at all seasons of the year.

The sandstone formation is intersected in all directions by valleys of this kind, which are seldom more than from two to three miles apart, while the top of the range between them is a tableland, divided by lateral valleys and gently rising towards the interior. Seawards they all terminate in saltwater creeks, having the same narrow, rocky, and precipitous character as they present themselves.

These tablelands afford good timber, particularly pine. Sheep thrive upon the food there produced, but we found goats did not answer so well.

The richest land in this part of the country is found in the valleys of the second class. The streams flowing through these valleys have generally almost imperceptible currents and often form wide reaches. The land upon their margins is thinly wooded; and I have often seen exposed fine vegetable mould of ten or twelve feet in thickness, through which these streams had worn their way. Good examples of this kind of valley are those through which run the Fitzroy and Glenelg rivers.

The northern banks of Prince Regent's River I conceive to offer no inducement whatever for the formation of a settlement, the whole of the country in that direction, as far as I have seen, consisting entirely of sandstone ridges. These ridges are continually intersected by valleys, or rather ravines of great fertility, but they are so narrow, and the good land contained in them is so very limited in extent, that from the first moment of the establishment of a colony here the individuals composing it must necessarily be scattered over a large space of country. They would thus be separated from one another by considerable intervals, which separation would not only render them more liable to disagreements with the natives, but would for many other reasons be highly detrimental to the interests of an infant colony.

The same objection holds good with regard to the south bank of this river, as far as the longitude of 125 degrees 3 minutes east, and even after passing this point the land immediately bordering the river is of the same sterile character; however a creek which trends nearly south runs up from thence into one of the most fertile countries I have ever seen.

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### HARBOURS.

The coastline to the south of Prince Regent's River is indented, as shown upon Captain King's chart, by numerous deep bays, many of which afford excellent anchorage; indeed I believe that there is no other part of the world in which an example occurs of three such fine harbours as Port George the Fourth, Hanover Bay, and Camden Sound, lying so close to one another.

These harbours alone render this a point of considerable consequence to Great Britain; but when viewed in connexion with the fine tract of country lying behind them its importance is very materially increased.

### COMMERCIAL ADVANTAGES.

Should this part of Australia be found eligible for colonization its commercial importance is well worthy of consideration.

### PRODUCTIONS SUITED FOR CULTIVATION. COTTON TRADE.

The cultivated productions for the growth of which the country and climate seem best adapted are cotton, sugar, indigo, and rice.

A species of cotton plant grows wild in the greatest abundance, and if a colony was established and the proper cotton-plant introduced the following advantages would be obtained:

Great Britain would possess in Northern Australia a colony standing in the same relation to her manufacturies for cotton that her colonies in the south do to her wool-market.

This colony would also form a sort of entrepot to which the manufactured cotton would again be exported for the purpose of sale in the islands of the Indian Archipelago or its vicinity, and other parts where we have at present no trade, and where printed cottons now are, and from the nature of these countries must constantly be, in great demand.

Thus a fresh supply of cotton for our markets would be obtained, which, coming from an English colony, would give employment to British vessels alone, and the industry of our manufacturers would be called into operation by an entirely new market for cotton goods

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being thrown open to them, in which the demand for these articles is far greater than the supply could be for many years.

### ARTICLES OF EXPORT.

The natural productions that are at present found in North-west Australia and might be available for exportation consist chiefly of timber, gum, lichens, and mimosa bark; all of which are abundant, and might be collected with a trifling degree of labour.

There are many varieties of useful timber. Among others, pine, fit for the purposes either of building or making spars for vessels, is abundant and good, and could be readily and cheaply exported if they were cut in the vicinity of the streams and floated down to the sea in the rainy season, whereby all land carriage would be avoided.

I sent to England specimens of five different gums in order that they might be examined. These consist of an elastic gum, closely resembling Indian rubber, gum tragacanth, another gum yielded by a sort of capparid and which I believe to be hitherto unknown, and two kinds of gum resin.

The mosses are of various kinds, many of which would afford useful dyes; and these, together with the gums, would probably be found valuable articles of export; for the collecting of them is a species of labour in which the native tribes would more willingly engage than any other I am acquainted with.

Immediately off North-West Cape is good whaling ground. The schooner employed on the expedition fell in with two vessels—the Favourite, Captain White, and the Diana, Captain Hamott, whalers belonging to Messrs. Bennett & Co., of London, and then fishing between North-West Cape and the position usually assigned to the Tryal Rocks. Both these vessels had been very successful.

### COMMERCIAL PROSPECTS. TRADE WITH THE ASIATIC ARCHIPELAGO.

With regard to the commerce that might be carried on by Northern Australia with the islands of the Indian Archipelago I have made many enquiries, and have gained from the most authentic sources some important facts.

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The points upon which I first endeavoured to obtain information were:

1. What desire was evinced by the inhabitants of the islands of the Indian Archipelago and the China Sea to become possessed of articles of British manufacture; and,
2. If they were able to pay a fair price, either in money, or by giving goods for which there would be a demand in European markets, in exchange for such articles of British manufacture as might be introduced amongst them.

Upon both of these points I received very satisfactory information. In some instances most respectable merchants detailed to me the result of speculations of this kind in which they had been engaged; in others mercantile letters were placed in my hands, fully corroborating what had been told me; but the information I thus obtained bore reference also to the following points:

1. The degree of labour necessarily required to transport articles of British manufacture to such a distant mart as the one here contemplated for their consumption.
2. The length of time during which wages must be paid to and food provided for the individuals engaged in this labour.
3. The duties to which the articles will become liable in the various ports; and,
4. The danger of loss or injury that may be incurred in their transport thither.

With regard to the two first of the above heads it appears that the profit that may be realized by the trader is so considerable as not only to cover the expenses that they would necessarily entail upon him; but after these expenses have been defrayed the residue of profit that would remain in his hands would be so large as to render this commerce one of the most lucrative in which capital could be embarked.

METHOD OF BARTER.

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This will be readily conceived when it is considered that the mode of barter is that which is most usual amongst the inhabitants, and that the trader puts his own valuation upon the articles he exchanges with them. One of the oldest and most respectable merchants at the Cape made a voyage through these islands for the purpose of procuring gold dust, and he detailed to me the mode in which he conducted the traffic. A Spanish doubloon was placed in one of the scales, and gold dust in the other; when the quantity of gold dust was equal in weight to the doubloon, he gave a doubloon's worth of goods they required, at his own valuation; the profit realized was large.

One great drawback to this commerce at present is the necessity of coasting from place to place in order to obtain a full cargo. The same inconvenience was felt along the coasts of Africa and Madagascar until some enterprising London and Liverpool mercantile houses established the system of receiving vessels, which remained stationary at one point whilst smaller vessels collected cargoes for them. Now a colony in some northern part of Australia would in the same manner totally obviate this inconvenience by affording a place in which cargoes could be collected from small vessels, and to which the British manufactures to be exchanged could be brought. Kupang in Timor at the present moment is used for this purpose by the Dutch.

### DUTIES LEVIED AT THE ISLANDS.

With regard to the third point I find that at the native ports, in general, no duty is required; but where there is a Rajah it is politic to make him a present in goods. The duties levied by the Portuguese at Dili in the month of June 1838 was 10 per cent. With regard to the duties levied by the Dutch on British merchant vessels I know but little; but the duty demanded at Kupang and Roti on each horse exported, or each musket imported, was six rupees, being almost equal to their original value. Arms or ammunition are no longer contraband either in the Dutch or Portuguese possessions.

In considering the danger of loss or injury that may be incurred in the transport of merchandise to these parts it is unnecessary to compute the ordinary dangers to which the merchant is more or less liable in all quarters of the world; but two distinct drawbacks to commercial enterprise at present exist in these countries, which are peculiar to them, these are the prevalence of piracy, and the constant

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occurrence of political commotions in the native states. The establishment of a settlement on the north or north-west coast of New Holland would have however the effect of diminishing both these evils in so great a degree that a very few years would probably suffice for their complete annihilation.

### SUCCESS OF AMERICAN VESSELS. CAUSES OF IT.

Notwithstanding the drawbacks occasioned to commercial enterprise by the circumstances above detailed, there at this moment exists a very considerable trade in the Indian Archipelago, which is, with the exception of the few vessels that sometimes bring ponies to the Isle of France and the British settlements, almost wholly in the hands of the Americans. Indeed no fact which I have met with has so much surprised me as the extraordinary diffusion of the American commerce, and the great spirit of enterprise exhibited by them. For in many places where the British merchants can find no commerce apparently worth their attention the Americans carry on a lucrative and prosperous trade, and in half-civilized countries, where the largest profits are always realized, the Americans are so eminently successful that the British merchant cannot attempt to compete with them.

This appears to arise from the following circumstance. The masters of the American vessels engaged in this kind of trade are, in many instances, whole, and in all other instances, part owners of the vessel and cargo; whereas masters of English vessels have frequently little or no interest in the vessel and cargo, and are moreover frequently tied down by directions issued from the firm for which they act.

The difference between these two cases is very great; the American can turn every circumstance that occurs to account: he can instantly enter into any speculation that holds out a prospect of success; and can act with rapidity and decision on his own responsibility. The English master, on the contrary, has usually a certain prescribed line of duty to fulfil, from which he cannot vary.

Hence it is that we often see the American whalers with arms, ammunition, and other articles for barter on board. They whale off Madagascar, and, whenever an opportunity offers, carry on a lucrative trade with the natives. From thence their course is directed to St. Paul's and Amsterdam, and afterwards along the coast of New Holland; and when it again becomes necessary for them to refresh



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they touch at some island in the Archipelago, and the scene of barter is once more renewed. Their cargo eventually consists of sperm oil, gum copal and other gums, ebony, tortoiseshell, gold dust, seal-skins, shells, and curiosities; yet they originally started upon a whaling voyage.

### INSTANCES.

During the years 1824 and 1825, when the port of Mombas upon the East Coast of Africa was temporarily ceded to the British Government, Lieutenant Emery, R.N., who was stationed there as commander, was witness to a curious instance of this nature.

Whilst this port was in the possession of the English but one British merchant vessel arrived there, yet three American vessels entered the harbour. The master of the English vessel was not a part owner; the American masters were all part owners and carried on a very lucrative trade, shipping a large quantity of ivory, whereas the English master was placed in a very unpleasant position, for, owing to the orders he had received from his owners (Messrs Tobin and Co. of Liverpool) he had not been able to ship a cargo suited to the market of Mombas, and if Lieutenant Emery had not kindly cashed a bill for him the speculation would have been a total failure.

The cargo these American vessels brought to Mombas was principally muskets and ammunition, which they bartered with the natives for ivory; and this is the cargo they always ship for trade with the inhabitants of the Indian Archipelago, and, as muskets and ammunition are there of great value, the profit they realize is enormous.

As an instance of the kind of persons these American masters often are I may state the following circumstance.

Captain Wickham, R.N., was at Valparaiso in South America in the year 1836, where he met a purser in the American navy who had realized about 3000 pounds sterling; this person here quitted the American service and laid out his capital in the purchase of a small vessel in which, having embarked a cargo suited to the trade of the country, he started for the coast of California; in a short period he returned to Valparaiso, having in this single trip more than doubled his capital; this Captain Wickham also stated was by no means a rare instance.

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### TRADING PRODUCTS OF THE SEVERAL ISLANDS.

Having bestowed some attention on the state of trade in the Indian Archipelago, and collected considerable information from various individuals who had been engaged in it, I shall here subjoin a summary of such of the principal facts as I think may be depended on.

### TRADE WITH TIMOR.

In all the ports of the natives, as well as those under the Dutch and Portuguese authorities, the produce is much the same. It consists chiefly of goats, pigs, poultry, maize, paddy, yams, plantains, fruit, sandalwood, beeswax, and tortoiseshell in small quantities.

At Dili duties of 10 per cent are exacted and produce is rather dear. Sandalwood is to be had at from 2 to 4 dollars the picul of 125 catties; wax is generally from 30 to 35 dollars (Spanish) the picul of 110 catties.

The ports of Timor furnish a little gold dust at times. Good water and firewood are to be had at most of them; that of Dili is a good and safe one.

Gold dust, I understand, is also procurable at Sandalwood Island and New Hebrides.

For vessels the good season on the coast is from about the 10th of April to the 15th of October.

Cootababa affords horses and all the produce of the other places. No duties are levied here, the place not being subject to the Portuguese. It is a small port and should be entered with caution.

The best ports of Timor for wax are Dili, Cootababa, Ocussi, Sitranny, Nilow, and Manatronto. It is gathered in June, cleaned in July, and sold principally in that and the two following months; but a vessel should be active, as enterprising people go along the coast and buy it up for the Kupang merchants, who send it to Batavia where it is said to sell for 120 rupees the picul; the price at Cootababa, being lately about 80 rupees at 2 1/2 to the Spanish dollar.

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Sandalwood can be had from March to October, the usual trading season; but from March to May is the best time as vessels from Kupang and Macao are on the coast early, buying it up in time to return to Macao and China in the favourable monsoon. The best ports for sandalwood are, Cootababa, Ocussi, and Sitranny, but it is to be had most abundantly at Ata-poopa.

### ARTICLES IN REQUEST.

Spanish dollars, muskets, and gunpowder are the essentials for procuring wax or sandalwood, but if you wish to have a greater assortment, small quantities may be added of any articles from the following list.

Doubloons (Spanish).

Sovereigns (English).

blue cloth of Pondicherry of good quality.

ditto English (if cheap) of dark colour for officers.

white shirting or good calico for men and women.

handkerchiefs of colours and sorts.

white cotton stockings.

men and women's gown pieces of sorts and colours.

silk stockings, plain and ribbed.

shoes for men and women.

brandy, rum, gin, lead and flints.

quart-glass decanters, cruet stands, dress swords, wine glasses and rummers, knives and forks, razors, needles, scissors, earrings, bracelets, shawls of sorts, mock jewellery, sugar, soap, biscuits.

Bally and Surabaya are good places for rice, but more especially the former, as it is to be had cheap, especially if bartered for opium. The rice can be carried to Macao where a good price can always be obtained for it.

Puloo, Batao, and Ocussi on the coast of Timor are good places for obtaining tortoiseshell at all times, as well as the islands in front of Timor, from October to December. The price is about 800 Spanish dollars per picul in cash; but in exchange for blue or white cloth, powder, arms, flint, etc., it would be obtained for much less.

Roti and Bally are both good places for ponies in exchange for cash or goods.

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The following is an account of our purchase and barter at the island of Roti in January 1838:

10 horses for 10 muskets (old).  
4 horses for 2 fowling-pieces (old).  
9 horses for 27 1/2 rupees each.  
3 mares for 22 rupees each.  
8 sheep for an old regimental breastplate.  
14 goats for a pair of pistols (old).  
The duty on each horse was six rupees.

In Mr. Earle's translation of the account of the voyage of the Dutch colonial brig *Dourga*, which, it is stated, left Amboyna May 26th 1825 and visited the islands of Kissa, Lettee, Mon, Damma, Lakor, and Luan,<sup>20</sup> it is said, in speaking of them:

The clothing of those who cannot obtain European or Indian cotton cloth is pieces of prepared bark fastened round their waists.

The productions of these islands are sandalwood, beeswax, pearls, tortoiseshell, trepang, edible birds' nests, Indian corn, rice, vegetables, with abundance of livestock. As the use of money is scarcely known these are only to be obtained by barter in exchange for cotton cloths, brass wire, iron chopping knives, and coarse cutlery. The first article, cotton cloth, is most in demand and M. Kolff suggests that a European merchant might carry on an advantageous trade here. The value of an ox is from 8 shillings and 4 pence to 10 shillings; of a sheep from 3 shillings and 4 pence to 5 shillings. Beeswax can be obtained in abundance at Roma at the rate of 2 pounds 7 shillings per hundredweight. The trade with the islands is carried on solely by natives, those of Macassar, Amboyna, and the Arru Islands being the chief purchasers; and Chinese brigs from Java occasionally visit Kissa.

\* \* \* \* \*

Geby, an island in the Gellola passage, has a fine harbour; a large quantity of tortoiseshell can be obtained there for trade with the natives. The Asia's Islands, lying a short distance to the northward, are not inhabited but abound in turtle.

TRADE WITH THE ISLANDS OF THE ASIATIC ARCHIPELAGO.

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The following points of information concerning the Indian Archipelago were furnished by Captain Brodie, formerly in command of a Dutch vessel of 326 tons:

In case of a necessity for repairing or coppering a vessel Surabaya is the best place as it can be done well and cheap. Wood for ship-building is abundant; and good carpenters can be had at the rate of 20 copper doits per diem, that is to say, three men for a rupee a day.

The Malaccas are under Dutch government, of which Ternate forms a part. It is said to be a good place to dispose of odds and ends,<sup>21</sup> and for getting a little shell. It is also a good place for refreshments.

Banda is not so good a place to go to, if another is at hand, as it is for a merchant vessel a strictly prohibited port. In fact the Spice islands, or Malaccas, can be entered for water and refreshments.

At Timor (Kupang) you can get sandalwood, wax, and a little shell, but dear.

At the north-east end of Celebes there are two other places, Monado and Keema, where the best gormootip or black coir rope can be obtained at about 7 rupees per picul. These two places are under the Dutch government. Some little business might be done there: stock in particular is cheap.

At the island of Ceram the inhabitants are said to be favourable to the English, but Dutch vessels of war cruise often about there, and are very jealous.

Bouton, a small island with a Rajah under Dutch protection, situate at the south-east end of Celebes, and off the bay of Boni, is a place where prows assemble and get vast quantities of shells and beche-de-mer. Nearly all these prows proceed with their cargoes to Singapore for a Chinese market.

Fine cattle are to be had at about four dollars a head at the town of Bally, in the Straits of Allass, between Lombok and Sumbawa.

New Guinea produces good beeswax, pearls, tortoise-shell, trepang, birds-of-paradise, etc.

\* \* \* \* \*

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### FIELD FOR ENTERPRISE.

I shall conclude this subject with some remarks of Mr. John Sullivan. R.N., a gentleman who possesses a vast fund of information regarding the Indian Archipelago, and to whom I am indebted for many details regarding its commerce. He says:

To suppose that the almost countless islands in the ocean before-named (the Pacific) do not give many valuable articles, and particularly tortoiseshell and pearl, would be no less an error than to doubt the existence of the islands altogether.

No, the case is otherwise; and it is needless to say that in the quarter alluded to there are already a few American merchants, who have discovered by their China, whaling, and sealing voyages many sources of wealth, and who are at this moment reaping rich rewards for their toil, while 999 out of every thousand of the European world know nothing at all about it. Nevertheless there is yet a vast field open to the speculator, which must ever promise ample recompense for his confidence and outlay.

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### CHAPTER 13. AT SWAN RIVER.

#### PLAN FOR RETURNING TO THE NORTH-WEST COAST. WHY ABANDONED.

On arriving at the Mauritius I found that my stay would be unavoidably protracted from the state of my wound, which the want of rest and attention had prevented from healing during the expedition, whilst my men were still suffering under the effects of the hardships and privations they had recently been subjected to; my first step therefore was to discharge the *Lynher*, and the next to consider a plan for future operations.

The rivers Fitzroy and Glenelg, simultaneously discovered by Captain Wickham and myself, although of considerable magnitude, were only sufficient to account for the drainage of a small portion of the vast continent of Australia, and this interesting question, far from being placed in a clearer point of view by our expeditions, was if possible involved in deeper obscurity than ever. I was therefore anxious to return to the north-west coast and solve the mystery that still hung over those regions; but, after considering various plans and suggestions, in which I was kindly assisted by the advice and opinions of Sir William Nicolay, then Governor of the Mauritius, I was induced to forego the intention of proceeding again direct to the north-west, and to bend my course in the first instance to Swan River. There I could consult Sir James Stirling, the Governor, who had been instructed on our departure from England to afford us every assistance; and, according to the means which could then be obtained, I might either proceed again by sea to the vicinity of the Glenelg or the Fitzroy; or, if a proper vessel and equipments could not be had, I might endeavour to pass the range to the north-east of that colony, ascertain the direction of the streams which must be thrown off by it to the interior, and trace the main river into which they fell (if such there was) to its outlet.

#### PROCEED TO SWAN RIVER.

I accordingly embarked my party and the stores in my possession at Port Louis on the 21st August 1838, and arrived on the 18th September at Swan River, where I lost no time in communicating my views to Sir James Stirling, who concurred in the plan for returning to the north-west; and it was arranged that as soon as the colonial vessel *Champion*, then absent on a voyage to St. George's Sound,

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should come back to the Swan, it should be prepared for the conveyance to Camden Bay of myself and party, reinforced by such additional persons as might feel disposed to proceed there at their own cost for speculative purposes.

### RETURN TO THE NORTH-WEST FRUSTRATED.

It was not however until the month of December following that the Colonial schooner became disposable, and then new impediments arose from her being found so much in want of repair as to be, in Sir James Stirling's opinion, scarcely in a condition to proceed on such a voyage as we contemplated, whilst the repairs required were of a nature which could not be effected in the Colony. From these and other considerations, more especially the danger and disappointment likely to be experienced for want of proper equipment, which it was found very difficult to supply at the Swan in an effective and satisfactory manner, the expedition to the North-west was deemed unadvisable and for the present given up.

It is unnecessary here to dwell on the mortification I felt at being obliged thus to abandon my long-cherished projects. The delays I had already experienced were sufficiently vexatious, but I had endeavoured to turn the time thus lost to some profit by endeavouring to acquaint myself with the resources of the country, as well as in acquiring information of a scientific nature, and I had attained such a knowledge of the language of the natives as enabled me to form a vocabulary of the different dialects spoken in these parts, which was printed and forwarded to England at the close of the year.

My excursions into the country from Perth whilst awaiting the arrival and fitting out of the *Champion* were necessarily short, but the journal of one to the northward, made in company with my young friend Mr. Frederick Smith, who afterwards fell a sacrifice in the expedition to Shark Bay, will I think be interesting enough to be inserted here.

### EXCURSION TO THE NORTH OF PERTH.

November 30.

Mr. Smith and myself started at noon this day, accompanied by Corporal Auger and two natives, upon a trip in a northerly direction;



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about 5 P.M. we reached a lake distant about fifteen miles from Perth, and called by the natives Mooloore: we halted here for the night.

The horses were scarcely tethered and our fire made when four more natives joined the party; their names were Noogongoo, Kurral, Jeebar, and Dudemurry; they brought us a present of twenty-seven freshwater tortoises, the average weight of each of which was half a pound. They said that, although the lake was called Mooloore, the name of the land we were sitting on was Doondalup.

### STORY-TELLING.

As soon as supper was finished they became very talkative, and, in a sort of recitative, recounted various adventures; and, when they conceived that they had sufficiently entertained me, they requested me to give them an account of my adventures in the northern part of the country, where they had heard from other natives that I had been for some time.

Having now acquired some knowledge of their language, I was able to make myself tolerably intelligible to them, and they listened with the greatest anxiety and interest to the various misfortunes that befel me. When they heard that I had been wounded by the natives to the north no persuasions or protestations upon my part could convince them that my object in now proceeding in that direction again was merely to gratify curiosity, and not from motives of revenge; but they kept continually requesting me not to attempt to kill anybody until I had passed a spot named Yalgarrin, about ten days journey to the north, and they then advised me indiscriminately to shoot everybody I saw; and were the more urgent in pressing the adoption of this course upon me from the fact of a quarrel existing between some of their relatives and the tribe dwelling there.

After I had exhausted the theme of my northern journey they desired me to give them some information with regard to England; I therefore related various circumstances which I thought would amuse them. Amongst other things I described the track of the sun in the heavens in those northern latitudes; this they fully understood, and it excited their most unqualified admiration. I now spoke to them of still more northern latitudes; and went so far as to describe those countries in which the sun never sets at a certain period of the year.

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### ITS IMPRESSION ON THE NATIVES.

Their astonishment now knew no bounds: "Ah I that must be another sun; not the same as the one we see here," said an old man; and in spite of all my arguments to the contrary, the others adopted this opinion. I wound up the night's conversation by an account of the diminutive Laplanders, clothed in skins of the seal instead of kangaroo; and amidst the shouts of applause that this account excited I laid down to rest. I this night observed a circumstance which had often before struck me, namely, that savages care but little for narratives concerning civilized man, but that anything connected with other races in the same state is most greedily received by them.

December 1.

Before sunrise this morning the two natives Yenmar and Nganmar, who had accompanied us from Perth, came to me and said that, from what I had told them last night, it appeared that some cause of quarrel existed between myself and the natives to the north; and that, however pacifically I might now express myself, they felt convinced that, if a fair opportunity offered, I should revenge myself upon some northern native. Now they, being southern men, had nothing whatever to do with these quarrels and disputes, and therefore they should at once return to Perth.

I did my utmost by means of protestations and promises to induce them to forego this resolution, but in vain; and the only boon I could gain from them was that they would accompany me to another tribe, distant about five miles, some of whom would probably go on with me; they, at the same time, assured me that they would preserve the most profound secrecy as to the fact of my having any cause of quarrel to the northward; and advised me to hold my tongue upon this point and quietly shoot the first man I saw there.

### MEETING WITH OTHER NATIVES.

Finding that the arrangement pointed out by these natives was the only one I could adopt I was obliged to follow their advice, and we accordingly moved off in a north-east, and then north-east by east direction. After travelling over about four miles of country we heard the distant cries of natives, and soon after came up with and found them engaged in the pleasant occupation of carrying two wounded men on their shoulders into Perth. These men had quarrelled and

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had settled the dispute to their mutual satisfaction, as well as to that of their friends, by spearing each other through their respective thighs. One of the poor fellows was very ill and told me that his intention was to sit down at my house in Perth until he was well—and he kept his promise.

I had many friends amongst these natives and soon selected four to accompany me, their names were Warrup, Jenna, Dwer, and Ugat. There were five northern natives with the tribe who had never seen white men; they seemed to view us with great suspicion at first, but the present of a little bread soon placed us on the most friendly terms; and, after about half an hour's halt, we separated, they proceeding to Perth whilst we pursued a northerly course. After having made about four miles in this direction we halted for the day at the head of the Lake Moolore.

### LAKE COUNTRY.

December 2.

We started before dawn, travelling in nearly a straight line across the country, our compass course being 329 degrees from the north. After we had made about three miles we reached a swampy lake, called Nirrooba, covered with wild-fowl. We here halted and prepared our breakfast whilst the natives went out to hunt. I soon shot a brace of wild ducks, and they speared nine; I now gave little Ugat my gun, and he brought in four more ducks, making a total of fifteen. Part of these we cooked, and kept the remainder for our dinner. I forgot to mention that we yesterday shot twelve parakeets.

I wandered for some distance about the eastern side of this lake and saw some very good land, I should say at least fifty acres; and, in addition to this land of the best quality, there was plenty of good feed for cattle all round the lake.

### DELAY, AND BIVOUACK.

At 2 P.M. we started again in a due north direction and, having proceeded about four miles, reached a lake called Nowoorgoop. We now changed our course to north and by west, and, after travelling six miles more, came to a lake called, by the natives, Beeulengurrinyup; the water was however so thick and muddy that I determined, although it was getting late, to proceed further; we

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therefore changed our course to north and by east, and after travelling for about four miles more reached another lake, called Maubeebee. This lake was about three-quarters of a mile long. Mr. Smith's feet had latterly become so sore that he had been compelled to tie pieces of kangaroo skin over them, and thus equipped to walk without his half-boots; and, on coming in to our bivouac, I had the mortification to hear that, having been put carelessly on the horses, one of these boots had fallen down; I saw therefore that it would be necessary to let him and a native go back the next day upon the two horses we had with us for the purpose of finding it. To Europeans it would seem rather a visionary task to travel twelve or fourteen miles in a trackless forest in the hope of recovering a boot, but the natives' eyes are so keen that their finding it amounted to a matter of certainty.

### LOVELY BIVOUACK.

Our bivouac this night had a beauty about it which would have made anyone possessed with the least enthusiasm fall in love with a bush life. We were sitting on a gently-rising ground which sloped away gradually to a picturesque lake surrounded by wooded hills, whilst the moon shone so brightly on the lake that the distance was perfectly clear, and we could distinctly see the large flocks of wildfowl as they passed over our heads and then splashed into the water, darkening and agitating its silvery surface; in front of us blazed a cheerful fire, round which were the dark forms of the natives, busily engaged in roasting ducks for us; the foreground was covered with graceful grass trees and, at the moment we commenced supper, I made the natives set fire to the dried tops of two of these, and by the light of these splendid chandeliers, which threw a red glare over the whole forest in our vicinity, we ate our evening meal; then, closing round the fire, rolled ourselves up in our blankets and laid down to sleep.

December 3.

At dawn this morning Mr. Smith and Warrup started on the horses in search of his boot; and I spent the day in shooting wildfowl and various kind of game, as well as in collecting words from the natives for my vocabulary. About 4 P.M. Mr. Smith returned with his boot and we all retired early to rest.

December 4.

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We started at sunrise and travelled about six miles in the direction of 17 degrees, and then halted for breakfast at a lake called Boongarrup. The whole of the country we passed over this morning was sandy and bad, being thinly clothed with *Banksia* trees; but immediately about the lake there was, as usual, good land. We started immediately after breakfast as the natives told us we had a long journey to make. Our course now lay in the direction of 13 degrees. The country we passed over was still of the same sandy nature; and after travelling about ten miles we made another lake.

### STRANGER TRIBE. NATIVE TOILETTE.

The natives here saw the recent signs of strange blacks and insisted upon my coming to a halt whilst they painted themselves and made sundry additions to their toilette. I urged my remonstrances upon this head, but it was in vain. They said that we should soon see some very pretty girls; that I might go on if I liked, but that they would not move until they had completed their preparations for meeting their fair friends. I therefore made the best of it and sat myself down whilst they continued adorning themselves. This being done to their satisfaction, they came and requested my opinion as to their appearance; and as I intimated my most unqualified approval they became in high spirits, and gave a very animated description of the conquests they expected to make.

This weighty affair having been completed we again moved on, the natives keeping a careful lookout for the friends they expected to see. They at length espied one sitting in the rushes looking for small fish; but no sooner did he see the approaching party than he took to his heels as hard as he could, and two others whom we had not before observed followed his example.

### MEETING WITH A NEW TRIBE.

Our native comrades now commenced hallooing to the fugitives, stating that I had come from the white people to bring them a present of rice and flour. Moreover Jenna shouted out to his uncle, "Am not I your nephew — why then should you run away?" This and similar speeches had, at length, the desired effect. First one of them advanced, trembling from head to foot, and when I went forward to meet him and shook hands with him it reassured the others, and they also joined our party, yet still not without evident signs of fear. An old man now came up who could not be induced to allow me to

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approach him, appearing to regard me with a sort of stupid amazement; neither horses or any other of those things which powerfully excited the curiosity of the others had the least charm for him, but his eyes were always fixed on me with a look of eagerness and anxiety which I was unable to account for.

We explained to the strange natives that we intended to halt for the night in this neighbourhood, and asked them to show us a good spot with plenty of water and grass. At the same time those I had with me stated to the others that unless the women and children came in I would give no rice or flour. This declaration was however wholly unauthorised by my sanction, and arose from their desire of exhibiting their personal attractions to the ladies of these parts; but, feeling rather disposed to see a little savage flirtation, I raised no objection to it.

The oldest of the natives, who appeared to regard me with so much curiosity, went off for the purpose of collecting the women whilst we proceeded to our place of halt. After going about three miles in a due north direction we made a river coming from an east and by south direction, and here called by the natives Goonmarrarup; it lies in rather a deep valley, and at this point consisted of large pools connected by a running stream about 20 yards wide. There was plenty of wildfowl upon these pools and Ugat soon shot some for us.

### SCENERY.

The scenery here was very picturesque: high wooded hills were upon each side of us, and the valley was open and rather thinly timbered; but the few trees it contained were of considerable size and beauty. Beneath one of these we prepared our bivouac, the strange natives doing their utmost to render themselves useful. They had never before seen white people, and the quickness with which they understood our wants and hastened to gratify them was very satisfactory.

### MEETING WITH NATIVE WOMEN.

After we had tethered the horses and made ourselves tolerably comfortable we heard loud voices from the hills above us: the effect was fine for they really almost appeared to float in the air; and as the wild cries of the women, who knew not our exact position, came by upon the wind, I thought it was well worth a little trouble to hear

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these savage sounds under such circumstances. Our guides shouted in return, and gradually the approaching cries came nearer and nearer.

### CURIOUS SUPERSTITION. CEREMONIES.

I was however wholly unprepared for the scene that was about to take place. A sort of procession came up, headed by two women down whose cheeks tears were streaming. The eldest of these came up to me and, looking for a moment at me, said, "Gwa, gwa, bundo bal," "Yes, yes, in truth it is him;" and then, throwing her arms round me, cried bitterly, her head resting on my breast; and, although I was totally ignorant of what their meaning was, from mere motives of compassion I offered no resistance to her caresses, however disagreeable they might be, for she was old, ugly, and filthily dirty; the other younger one knelt at my feet, also crying.

At last the old lady, emboldened by my submission, deliberately kissed me on each cheek, just in the manner a French woman would have done; she then cried a little more and, at length relieving me, assured me that I was the ghost of her son who had some time before been killed by a spear-wound in his breast. The younger female was my sister; but she, whether from motives of delicacy or from any imagined backwardness on my part, did not think proper to kiss me.

My new mother expressed almost as much delight at my return to my family as my real mother would have done had I been unexpectedly restored to her. As soon as she left me my brothers and father (the old man who had previously been so frightened) came up and embraced me after their manner, that is, they threw their arms round my waist, placed their right knee against my right knee, and their breast against my breast, holding me in this way for several minutes. During the time that the ceremony lasted I, according to the native custom, preserved a grave and mournful expression of countenance.

This belief, that white people are the souls of departed blacks, is by no means an uncommon superstition amongst them; they themselves, never having an idea of quitting their own land, cannot imagine others doing it; and thus, when they see white people suddenly appear in their country, and settling themselves down in particular spots, they imagine that they must have formed an attachment for this land in some other state of existence; and hence

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conclude the settlers were at one period black men, and their own relations. Likenesses either real or imagined complete the delusion; and from the manner of the old woman I have just alluded to, from her many tears, and from her warm caresses, I feel firmly convinced that she really believed I was her son, whose first thought upon his return to earth had been to re-visit his old mother, and bring her a present. I will go still farther and say that, although I did not encourage this illusion, I had not the heart to try to undeceive the old creature and to dispel her dream of happiness. Could I have remained long enough to have replaced this vain impression by a consoling faith I would gladly have done it; but I did not like to destroy this belief and leave her no other in the place of it.

The men next proceeded to embrace their relation Jenna in the same manner they had before done me; and this part of the ceremony was now concluded.

The women, who had retired after having welcomed me, again came in from behind some bushes, where the children all yet remained and, bringing several of them up to me, insisted on my hugging them. The little things screamed and kicked most lustily, being evidently frightened out of their wits; but the men seized on and dragged them up. I took the youngest ones in my arms, and by caresses soon calmed their fears; so that those who were brought afterwards cried to reach me first, instead of crying to be taken away.

### A POINT OF HONOUR.

A considerable time had been occupied by these various occurrences, which to me had been most interesting; but one of a more painful character was now to follow. It appears that a sister of the native Jenna had been speared and killed by a man who at present was resident with this tribe; and, although most of them were on friendly terms with this native, they conceived that Jenna was bound to revenge her death in fair and open fight. The old lady (my mother) went up to him and, seizing his merro, or throwing-stick, told him that the man who had killed his sister was at a little distance; "and if," said she, "you are not a man, and know not how to use this, let a woman's hand try what it can do," at the same time trying to force it from him. All the time that she was thus pretending to wrench his merro away she indulged in a most eloquent speech to endeavour to rouse his courage. I do not know enough of the language to translate it with proper spirit or effect, as I only caught the general meaning: it



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had however a great effect on Jenna; and some young ladies coming in at the conclusion, his mind was instantly made up; indeed the certainty that bright eyes were to look upon his deeds appeared to have much the same effect upon him that it had upon the knights of old and, jumping up, he selected three good spears (all the men being willing to lend him theirs) and hurried off to an open space where his antagonist was waiting for him.

### NATIVE MODE OF COMBAT.

The combats, one of which was now about to take place, much resemble the ancient tournaments. They are conducted with perfect fairness. The combatants fight in an open space, their friends all standing by to see fair play, and all the preliminaries as to what blows are to be considered foul or fair are arranged beforehand, sometimes with much ceremony.

Taking into account the fantastic ornaments and paintings of the natives, the graceful attitudes they throw themselves into either when trying to avoid the spears of their enemy, or about to throw their own; and the loud cries and wild motions with which they attempt to confuse and terrify their adversaries, I must confess that if any exhibition of this nature can be considered showy or attractive, this has no ordinary claims to admiration.

### NATIVE DUEL. REVENGEFUL COMBAT AND MURDER PREVENTED.

I am however not fond of shows in which the safety of my fellow-creatures is concerned, and on the present occasion was very anxious that nothing of the kind should take place; for before I could induce Jenna to come with me, I had passed my word for his safety, and I could not bear the thought of his being now either killed or wounded. When therefore the natives came to request our attendance at this spectacle, which they evidently expected would afford us great amusement, I intimated my decided disapproval of it: at first they imagined that this reluctance arose from some apprehension of a quarrel upon our parts, and to remove this the greater part of the men, who now amounted to sixteen, laid down their spears by our stores. I still however would not sanction the combat and, taking up my gun, intimated my intention of seeing that nothing was done to injure Jenna; upon this my brothers proceeded in a friendly way to hold me: which is exactly what one sees in

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England when two men, who have not the least intention in the world of hurting one another, declare in a loud tone their fixed determination of proceeding to the most desperate extremities; whilst mutual friends stand by and appear with the utmost difficulty to prevent them from putting their threats in execution. It was just in this manner that my soi-disant brothers held me, apparently not entertaining the least doubt but that I would easily allow myself to be persuaded not to interfere. I had now recourse to another expedient, and this was to declare to those about me that, if either of the combatants was wounded, I should instantly pack up the flour and rice and proceed to the white men's fires. This had the desired effect: those around me started off and put the holding system so effectually in force that the other natives and the two combatants soon came in.

Some of the natives who now approached told Mr. Smith that a cannon had been heard that morning in the direction of Fremantle; we therefore knew that a vessel had arrived, and this made me anxious to return to Perth; for, in the event of our obtaining canvas for the Champion's sails, I expected that vessel would be ready to take us in a few days to the north-west coast.

### RETURN TO PERTH.

My anxiety to return was also increased by other reasons. Mr. Smith had, with the exception of the first few miles, walked the whole distance from Perth in pieces of kangaroo skin, and his feet were now in a dreadful state from the joint effect of thorns and bruises; he however never complained, and so much did I admire the quietness and perseverance with which he had borne up against so serious an inconvenience, that I was the more anxious to put an end to it as soon as possible. Besides it was evident that very deadly feelings existed between Jenna and the murderer of his sister, for he (Jenna) came and requested me to call this native my friend, at the same time to give him plenty of flour and rice, "And," added he, "by-and-bye, ask him to sleep at your fire; then, in the night, whilst he is asleep, I can easily spear him; and I will off, and walk to Perth." I however cooled Jenna's ardour by whispering to him that, if any quarrel was brought about by his attempting to spear this native, I should instantly shoot him; as I had no idea of running a risk of losing all our lives through his imprudence. This declaration had a very salutary effect, and my now giving the promised present of rice and flour entirely put a stop to all further differences.

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The natives I had with me employed themselves in teaching the others, to whom flour was an unknown commodity, the art of making dampers; whilst Mr. Smith and myself, having arranged to start for Perth early the next morning, mixed with the groups and visited their fires; the little children now crawled to our feet and, all fear being laid aside, regarded our movements with the greatest curiosity. After various amusing conversations and recountals of former deeds the natives gradually, one by one, dropped off to sleep; and we in turn, one always remaining on the watch, followed their example.

### INVITATION TO A NATIVE FEAST.

December 5.

I should have stated, in justice to the natives, that they last night brought me the head and forequarters of a kangaroo, being the only game they had with them; and of this they offered to make me a present, which however I did not accept. They were again this morning very anxious that we should delay our journey for a day or two, promising upon their part, if we acceded to the request, to give us a grand entertainment at which all their young men would dance, and that we should have abundance of kangaroos if we would give flour in return. I deemed it however most prudent to hasten my return to Perth to see what vessel had arrived; therefore, after taking a cordial farewell of our friends, we moved off on our homeward route and reached Boongarrup about the middle of the day following, by a route rather to the westward of that by which we had come out.

December 6.

This morning we started at daybreak and breakfasted at Manbeebee, and immediately after breakfast resumed our route. I left the main party with two natives and travelled up a swampy valley running nearly in the same line as the chain of lakes we had followed in going. The natives insisted on it that these lakes were all one and the same water; and when, to prove to the contrary, I pointed to a hill running across the valley, they took me to a spot in it, called Yundelup, where there was a limestone cave, on entering which I saw, about ten feet below the level of the bottom of the valley, a stream of water running strong from south to north in a channel worn through the limestone. There were several other remarkable

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caves about here, one of which was called the Doorda Mya, or the Dog's House. Probably therefore the drainage of this part of the country is affected by the chain of lakes, which must afterwards fall into the river I saw to the northward. We slept at Nowoorgoop.

### RETURN TO PERTH.

December 7.

We slept at Mooloore, and on the morning of the 8th we entered Perth and found that the native's information was true, for the Britomart had arrived from England.

I have already stated that on the arrival of the *Champion* her condition did not enable us to proceed in her, and all prospect of being able to conduct another expedition to the north-west coast being, for the present, abandoned, I could only await further instructions from the Government at home, and in the meantime resolved to employ the interval in some scheme of exploration from the Swan which did not present the same obstacles. Having again consulted Sir James Stirling, it was first arranged that I should endeavour to explore overland in the direction of Shark Bay; but this was soon abandoned on account of the difficulty of procuring horses; and, to enable me to attempt this scheme with any hope of success, I should consequently be obliged to incur a much greater expense than I felt warranted in doing.

The same objection did not however exist to the plan of exploring the coast towards Shark Bay in boats; and I imagined, if I could obtain two good ones qualified for the purpose, that I might at a small expense have some chance of making a successful trip. But there still existed a difficulty in getting boats which occasioned a further delay.

Sir James Stirling had now (January 1839) quitted the colony, having been succeeded in the government by John Hutt, Esquire, and, as no immediate prospect was apparent of accomplishing my present design, I readily acceded to a request made to me which led to another excursion to the southward of Perth, the principal circumstances of which are narrated in the following short journal.

### EXCURSION IN SEARCH OF MR. ELLIOTT. CAUSE OF IT.

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In consequence of a conversation I had with his Excellency the Governor on the morning of the 8th of January I received, in the afternoon of that day, a letter from the Colonial Secretary stating that:

From accounts which had been received from the Williams and Leschenault, there appeared every reason to believe that Mr. George Elliott, who left the former place for the latter on the 17th December, had lost his way, as no accounts of his arrival have been received from the Leschenault, the Williams, or any other place.

Under such circumstances His Excellency the Governor is anxious that a party in search of him should be despatched from Perth, and he has instructed me to inform you that, if you could form such a party from your own establishment, you would be rendering a service to the local government, etc. etc.

\* \* \* \* \*

As I had at this moment no matter of importance to occupy the party I resolved to follow that course which the calls of humanity pointed out to me, and within an hour from the receipt of this letter Mr. Walker, myself, and the two non-commissioned officers of the Sappers and Miners were ready to proceed. It was found however impossible to procure the necessary horses for us before the next day, and our departure was consequently delayed until the morning of the 9th.

Before entering into the details of this expedition it is requisite to give a short outline of the circumstances under which we started. The Williams River, from which Mr. Elliott had proceeded, is distant about seventy miles from Leschenault in a direct line. The Williams is in the interior, and the Leschenault on the sea-coast, and between the two places lies the Darling Range, a high chain of mountains which had never before been crossed at this point. Now, under ordinary circumstances Mr. Elliott might have been expected to have reached Leschenault in three or four days. He had therefore only carried with him a supply of provisions calculated to last for that period. His party consisted of two men besides himself, and he had with him a mare and filly.

His absence had however now unaccountably extended to a period of twenty days; and the only rational conclusion that could be

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arrived at was that he had either been murdered by the natives or had lost his way.

The Williams is distant from Perth in a direct line about one hundred and twenty miles, and I had thus a considerable journey to perform before I could get upon Mr. Elliott's tracks; and as this was the bad season of the year there was but little hope that we should be able to follow them for any great distance, if we ever succeeded in finding them.

Notwithstanding these various discouraging circumstances I still however felt warm hopes for his ultimate safety. He was well acquainted with the bush, having been ten years in the colony; and the same articles of food which formed the subsistence of the natives would at least enable him to maintain life for a considerable period. He had moreover with him two horses, which past experience had taught me not only to be a nutritious, but even an agreeable article of food. I imagined therefore that no immediate danger of starvation need be apprehended; and in order that I might have the best possible chance of finding his traces three intelligent natives, Miago, Denmar, and Ninda, were engaged to accompany me.

On the morning of the 9th however, when the party were all ready to start, these natives were not forthcoming. The length of the journey and the danger of falling in with hostile tribes had frightened them, and they therefore kept themselves aloof from us; but Kaiber, one of the most intelligent natives of these parts, volunteered to supply their place. Our three horses were soon swum across the estuary of the Swan; and with no slight anxiety I started on an expedition upon the proper conduct of which would probably depend the lives of three of my fellow-creatures.

### ROUTE TO THE MURRAY.

Our proceedings until we had reached Pinjarra on the banks of the Murray offer little or no interesting matter; I shall therefore pass them over in silence. We arrived in Pinjarra on the morning of the 11th, having been somewhat delayed by the weakness of a young horse; as there was however no possibility of obtaining another in its place I was obliged to take it on with us. On the afternoon of the 11th we made little more than four miles in a southerly direction along the banks of the Murray.

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### THE MURRAY RIVER.

On the 12th we started before dawn and travelled about eight miles in a south by east direction; we then halted for breakfast on the banks of the same river, which here issues out of the Darling Range after having found a passage through that chain of mountains. Whilst breakfast was preparing I walked up into the mouth of the gorge, which was replete with most wild and beautiful scenery at this point. The river comes streaming out from a rocky mountain pass, forming in its course a series of small cataracts. The vale in which it runs offers an interesting specimen of woodland scenery, and the high, bold, and partially bare granite mountains which rear their heads above it differ much in character from the tame mountain scenery that lies between Perth and York: this place is a favourite resort of the wild cattle, and we saw everywhere numerous recent traces of them.

### WILD CATTLE.

In the afternoon we again started in a south by east direction. About a mile after leaving the Murray we came suddenly upon four head of wild cattle; two, which were distant from us, made off to the mountains, but a noble white bull and a cow followed a line lying exactly in the course we were pursuing. As we had one saddle-horse, which I was then on, I could not resist having a gallop after them. I soon brought the bull to bay, but when he had taken breath he turned and made off again and, as I had no time to spare, I gave him no further interruption; on however wishing to ascertain the hour I found that my watch had fallen from my pocket during the course of the gallop.

### NATIVE TRACKING.

I now waited until the party came up, when I requested Kaiber the native to walk back and find the watch. This he assured me was utterly impossible, and I really at the time agreed in this opinion; however as it was a watch I much valued I determined to make one effort. "Well, Kaiber," I said to him, "your people had told me you could see tracks well, but I find they are mistaken; you have but one eye, something is the matter with the other (this was really the case) no young woman will take you, for if you cannot follow my tracks and find a watch I have just dropped how can you kill game for her." This speech had the desired effect, and the promise of a shilling

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heightened his diligence, and I returned with him. The ground we had passed over was badly suited for the purpose of tracking and the scrub was thick; nevertheless, to my delight and surprise, within the period of half an hour my watch was restored to my pocket. This feat of Kaiber's surpassed anything of the sort I had previously seen performed by the natives.

We completed about eight miles and then halted for the night on the banks of a running stream issuing from a gorge in the hills. There was a considerable portion of good land in its neighbourhood and the horses appeared not a little pleased with the excellence of the feed.

The 13th we spent in passing a portion of the Darling Range. After travelling for eleven miles over a hilly country we came upon a beautiful valley between two steep and high hills. Two streams poured down into this valley and there formed a small freshwater lake. The scenery here was so green and verdant, the tranquil little lake was so covered with broad-leaved waterlilies, and the whole wore such an air of highland mountain scenery that I could readily have imagined I was once more in Scotland. About this lake there was also much good feed.

### CROSS THE DARLING RANGE.

In the course of the afternoon we travelled eight miles further in an easterly direction, and were then obliged to halt without water, which we did not again succeed in finding after we left the lake.

### TO THE HOTHAM RIVER.

On the morning of the 14th we had only travelled six miles in a due easterly direction when I found we had crossed the Darling Range; our course now lay along a level fertile plain, well fitted for pastoral purposes. We travelled across this a distance of about five miles when we came upon the river Bannister, which here was nothing but a series of large pools with good feed for cattle about them. We halted for breakfast and afterwards continued in an easterly direction, when, after travelling for another six miles, we reached the Hotham. The land we passed over between the Bannister and Hotham was equal in goodness to any I have seen in Western Australia.



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The circumstance of both water and feed abounding at the Hotham induced me to halt here for the night, and on the morning of the 15th we commenced our toilsome march from the Hotham to the Williams; the distance is about twenty-eight miles in a direct line; the country consisting of rocky hills, difficult to cross; and throughout the whole of this distance we could find no water: we were thus for eleven hours exposed to the sun in one of the hottest days I have ever felt, and we were not a little glad when just at sunset we found ourselves on the banks of the Williams.

### CONDITION OF DISTANT SETTLERS.

We here found the establishment of an out-settler, of which it would be difficult to convey an adequate idea: the house consisted of a few upright poles, one end of each resting on the ground, whilst the other met a transverse pole, to which they were tied; cross-poles then ran along these, and to complete the building a sort of rude thatch was tied on it. It was open at both ends and exposed to the land wind, which, as the situation was high, I found a very unpleasant visitor during the night. Here we found a very large flock of sheep in fair condition, also a well-supplied stockyard, and cattle in beautiful order; upwards of twenty kangaroo dogs completed the establishment.

These settlers were, at the time I visited the Williams, four in number; consisting of one young man, two youths, and a little boy. Four soldiers were quartered about sixteen miles from them, and there was no other European within fifty miles of the spot. The distance they had to send for all stores and necessaries was one hundred and twenty miles, and this through a country untraversed by roads and where they were exposed to the hostility of the natives in the event of any ill-feeling arising on their part.

Nothing can give a more lively notion of the difficulties and privations undergone by first settlers than the fact that, when I left this hut, they had no flour, tea, sugar, meat, or any provision whatever except their livestock and the milk of the cattle, their sole dependence for any other article of food being the kangaroo dogs, and the only thing I was able to do in order to better their situation was to leave them some shot.

All other circumstances connected with their position were on the same scale. They had but one knife, an old clasp one; there was but

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one small bed for one person, the others sleeping on the ground every night, with little or no covering; they had no soap to wash themselves or their clothes, yet they submitted cheerfully to all these privations, considering them as necessary attendants upon their situation. Two of these out-settlers were gentlemen, not only by birth but also in thought and manner, and, to tell the truth, I believe they were far happier than many an idle young man I have seen lounging about in England, a burden to himself and his friends; for it must be borne in mind that they were realizing a future independence for themselves.

### THEIR PRIVATIONS.

Many of the ills and privations which they endured were however unnecessary, and were entailed upon them by the mistaken system that has been pursued at Swan River of spreading to the utmost their limited population. I trust however that a wiser line of policy will now be pursued, and that settling will consequently become an easier, less dangerous, and far more agreeable task.

### ROUTE ALONG MR. ELLIOTT'S TRACKS. TRACKING MR. ELLIOTT.

On the morning of the 16th Mr. Walker went to the Upper Williams, where the soldiers were quartered, for a further supply of provisions, whilst the native and myself tried to make off Mr. Elliott's tracks, in doing which we were not however successful. The next morning, previous to Mr. Walker's return, I renewed my search with Kaiber for the tracks with a little more success, as amidst the numerous traces of cattle and horses along the bed of the river the native was able by his acute eye to discover the footsteps of a colt. When Mr. Walker returned the little boy belonging to the establishment came back with him. He had seen Mr. Elliott start and assured me that he had heard him express his determination of keeping the bed of the river for eighteen miles. With this piece of information we moved on down the river on the tracks which we were able to distinguish for about two miles and a half, when they quitted it in a south-south-west direction; and from the hard nature of the ground the tracking from thence became excessively difficult. If the colt had traversed this route, its little foot had made no impression on the soil; and when we got on the ironstone hills, we altogether lost the traces of the horse. Both the native and myself imagined, from our seeing no tracks of the colt, from the

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indistinctness of those of the horse, and from the circumstance of the boy's telling us that Mr. Elliott intended to proceed eighteen miles down the river, that we had followed the wrong marks; just therefore as night began to fall I moved back to the river.

January 18.

We started at dawn, following down the river, but could see nothing of Mr. Elliott's tracks: and our evening journey was equally unsuccessful. I now became very anxious and indeed rather alarmed for the safety of the missing party, but resolved, as the best plan I could pursue, to strike across the mountains to Leschenault, making a due west course my true line of route, but constantly diverging two or three miles to the south of this, and again returning to it by another route. I should thus have every chance of falling in with the track I wished to find; and in the event of my not succeeding I should be certain, if on my arrival at Leschenault no tidings had been received of Mr. Elliott, that his party must be somewhere to the southward and eastward of the course I had taken, and that I might still, by the assistance of the Leschenault natives to whom this country was known, succeed in finding him before such a period had elapsed as would render assistance useless.

### KILLING A KANGAROO.

On the 19th, in pursuance of this determination, we made a rapid push of nearly twenty miles in a westerly direction without reckoning our divergencies to the southward. Nothing however but toil and disappointment rewarded our exertions. We killed a large Boomer, or old male kangaroo, the largest indeed I had ever seen; the dogs were unable to master him he fought so desperately, and it was not until after he had wounded two of them that I succeeded in dispatching it by a sort of personal encounter in which a club was the weapon I used. The native who was carrying my gun had dropped it the instant the kangaroo was started, and I was thus unable to shoot it. We cut off as much of the flesh as the dogs and ourselves required for two days and left the rest in the forest. We halted for the night on a small stream, the only one I had seen since we quitted the Williams.

### COUNTRY UPON THE HARVEY RIVER.

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Our departure was delayed on the morning of the 20th for about an hour from being unable to find one of the horses which had strayed away in the night, but, the fugitive being at length discovered and brought back, we started and made nine miles before breakfast. We then travelled nine and a half miles more, when we came upon the river Harvey near its source. The character of the country we had travelled over since entering the mountains was monotonous in the extreme. It consisted of an elevated tableland composed of ironstone and granite occasionally traversed by veins of whinstone. On this tableland there was little or no herbage; the lower vegetation consisting principally of a short prickly scrub, in some places completely destroyed by the native fires; but the whole country was thickly clothed with mahogany trees, so that in many parts it might be called a dense forest. These mahogany trees ascended, without a bend or without throwing off a branch, to the height of from forty to fifty feet, occasionally much more, and the ground was so encumbered by the fallen trunks of these forest trees that it was sometimes difficult to pick a passage between them. Even at midday the forest wore a sombre aspect, and a stillness and solitude reigned throughout it that was very striking. Occasionally a timid kangaroo might be seen stealing off in the distance, or a kangaroo-rat might dart out from a tuft beneath your feet; but these were rare circumstances. The most usual disturber of these wooded solitudes were the black cockatoos; but I have never in any part of the world seen so great a want of animal life as in these mountains.

Upon our gaining the Harvey however the scene somewhat changed; the river here bore the appearance of a mountain trout-stream, sometimes gurgling along with a rapid current, and sometimes forming large pools. The tableland could no longer be distinguished as it here changed to a broken chain of hills traversed by deep valleys; the scrub was higher and entwined by a variety of climbing plants, which rendered it very difficult to traverse; the mahogany trees became less frequent, and various others were mingled with them, whilst on the banks of the river good forage abounded. We made about five miles more through a country of this description and then halted for the night.

LOSE THE TRACKS. NATIVE GRAVE.

January 21.

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We did not make more than seven miles before breakfast this morning, being embarrassed both by high and tangled underwood and rocky hills. We then halted on the banks of the Harvey, where there was some beautiful grass. We had still been able to find nothing of Mr. Elliott's tracks, and had in vain looked for natives: but this evening, soon after starting again, for the first time signs of them appeared, for we found a newly-made grave, carefully constructed, with a hut built over it to protect the now senseless slumberer beneath from the rains of winter. All that friendship could do to render his future state happy had been done. His throwing stick was stuck in the ground at his head; his broken spears rested against the entrance of the hut, the grave was thickly strewed with wilgey or red earth; and three trees in front of the hut, chopped with a variety of notches and uncouth figures and then daubed over with wilgey, bore testimony that his death had been bloodily avenged.

### KAIBER'S FEARS.

The native Kaiber gazed with a degree of concern and uneasiness on this scene. "A man has been slain here," he said. "And what, Kaiber," I asked him, "is the reason that these spears are broken, that the trees are notched, and that wilgey is strewed on the grave?" His answer was, "Neither you nor I know: our people have always done so, and we do so now." I then said to him, "Kaiber, I intend to stop here for the night, and sleep." "You are deceiving me," he said: "I cannot rest here, for there are many spirits in this place." I laughed at his fears, and we again moved on.

### WANT OF WATER.

We now soon got clear of the hills and came out upon a plain of good land, thickly covered with grass-trees. This plain was about three miles in width and, having traversed it, we found ourselves in a sandy country abounding with Banksia trees. We crossed several swamps, now completely dried up, and having made ten miles halted for the night without water. Mr. Walker scraped a hole in one of these swamps and obtained a little putrid and muddy water which, not being very thirsty, I did not drink, more especially as we had now, or indeed for several days, had no tea or anything else to mix with it.

January 22.

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We started again at dawn this morning and travelled rapidly, for we were anxious to obtain water. In six miles we came out upon the sea. If my reckoning was right we ought now to have been about ten miles to the north of Leschenault; I therefore turned due south. Kaiber however now came up and remonstrated against this, assuring me that I was wrong and that we were, at this moment, two or three miles to the south of Leschenault, and that if I persisted in going on in this direction we should all die for want of water. As I put great faith in his knowledge of the country I halted and ascended a hill to try and get a view along the coast; I could not however succeed on account of the haze; and believing then that I must be in error I turned north. We trudged on, hour after hour; the sun got higher and more intensely hot, whilst, having been four-and-twenty hours without water, the greater part of which time had been spent in violent exercise under a burning sun, the pangs of thirst became very annoying. A short period more convinced me that I was right, and that Kaiber was in error; and, as we soon after fell in with two native wells now dried up, we dug another in a promising-looking spot near them, and obtained a little water, very muddy and stinking; but I never enjoyed a draught more in my life. We here halted for breakfast and by degrees obtained water enough for the horses as well as ourselves.

### ESTUARY OF THE LESCHENAULT.

The evening was consumed in retracing our steps of the morning, and at night we halted near the head of the Leschenault estuary, being again without water.

January 23.

Our route this morning was along the estuary of the Leschenault. About five miles from this place we fell in with a party of natives, who informed us that a few days before Mr. Elliott and those with him had arrived there in perfect safety, and my anxiety on this point was therefore set at rest. We passed the mouth of the river Collie at the bar, which was almost dry, and halted for breakfast on the banks of the Preston, about one mile from the house where I expected to find Mr. Elliott.

### MEET WITH MR. ELLIOTT. MR. ELLIOTT'S ADVENTURES.

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No sooner was breakfast despatched than I set off to see Mr. Elliott in order to hear the history of his adventures, which were not a little surprising. He had, as I before related, started on the 17th of December from the Williams, with only three days' provisions and, owing to some mistake, had taken a south-south-west course and gone off in the direction where we first saw his tracks, and had pursued this route for three days, when, seeing nothing of the coast, he suspected he must be wrong, and endeavoured to make a due west course; but from the impassable nature of the mountain range at this point was unable to do so. About this period also, owing to his powder-horn having been placed too near the fire, it was accidentally blown away, and he was thus left totally without protection in the event of any attack being made on them by the natives. His own courage and resolution however never failed, and he still made the best of his way to the southward, seizing every opportunity of making westing. For twelve days he pursued this course, subsisting on native roots and boiled tops of grass trees. About the sixth day he fell in with some natives; but they ran away, being frightened at the appearance of white men, and he thus could obtain no assistance from them. At this period the filly strayed away from the mare and was lost. His men behaved admirably; and on the fourteenth day the party succeeded in reaching Augusta, having previously made the coast at the remarkable white-sand patch about fifty miles to the eastward of it.

Notwithstanding the hardships and sufferings they had undergone this party were but very little reduced in strength and, after recruiting for a few days at Augusta, returned along the coast to Leschenault, where I had the pleasure of seeing them all in good health and spirits.

### THE VASSE DISTRICT.

January 21.

Whilst the party reposed themselves this day at Leschenault I hired a horse and rode along the shores of Geographe Bay for the purpose of seeing the Vasse district. The country between Leschenault and the Vasse differs from those other parts of Western Australia that I have yet seen in the circumstance that in several parts, between the sea and the recent limestone formation, basaltic rocks are developed. A long chain of marshy lakes lie between the usual coast sandhills and the ordinary sand formations, about which there is some good land

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and good feed. About the river Capel also there is a great deal of good land. The mouths of two estuaries that occur between the inlet of Leschenault and the bottom of Geographe Bay are both fordable. The district near the bottom of Geographe Bay contains much good land, consisting of level plains thickly covered with wattle trees; there are also at this season of the year extensive plains of dry sand, which bear exactly the appearance of a desert.

I passed the night at the house of Mr. Bussel, a settler who has the best and most comfortable establishment I have seen in the colony, and returned the next day to Leschenault with the intention of starting the following one for Perth.

### RETURN TO PERTH. RIVER ABSORBED IN SANDY PLAINS.

January 26.

Mr. Elliott this day joined us on our route to Perth, which was attended with no circumstance worthy of notice until our arrival at Pinjarra. We travelled over extensive plains which in the rainy season of the year must be completely flooded, but in vain looked for the Harvey River and the other stream which flowed from the hills to the sea. I could find no watercourse in which they might probably flow, yet we had left them both running strongly at not more than ten miles from the point where we then stood. The truth was that they were absorbed in these marshy plains before they came within several miles of the sea; and what threw a still further light upon the subject was that, although these marshes were perfectly dried up and had a hard-baked appearance at the surface, yet if a hole about two or three feet deep was scraped in them water directly came pouring into it.

On the morning of the 29th we reached Pinjarra; on the 30th Mr. Elliott and myself rode as far as the Canning; and early on the 31st we had the pleasure of entering Perth together.



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### CHAPTER 14. FROM SWAN RIVER TO THE SHORES OF SHARK BAY.

#### PLAN OF EXPEDITION.

At length, in the middle of February, after a mortifying delay of nearly five months, an opportunity occurred which held out every prospect of enabling me to complete the examination of the most interesting portion of the north coast, together with the country lying behind it.

Three whale-boats having been procured, an engagement was made with Captain Long of the American whaler *Russel*, of New Bedford, to convey my party and the boats to some point to the northward of Shark Bay, and there land us, together with a supply of provisions sufficient for five months. My intention was to form a provision depot in some island, and from that point to commence operations by the examination of the undiscovered portions of the bay; and, should circumstances occasionally render it desirable, I proposed to explore more minutely parts of the country as we coasted along, or to make excursions to such a distance inland as we might be able to penetrate.

Having completed the examination of the bay as far as we could with the provisions we carried from the depot, I intended to return to it and, after recruiting our stock, to make my way along the coast in the direction of North-West Cape; making excursions inland as before at such points as might seem to merit attention, and thus to continue to go northward until our provisions were so far exhausted as to compel us to return again to the depot; whence I finally proposed to continue my examination to the portion of the coast left unvisited to the southward of the depot, as far as Gantheaume Bay.

Several of the individuals who were to compose my party being now much experienced in the difficulties that attend explorations both on the coast and in the interior of the country, I felt that our enterprise was not so hazardous as at first it might appear to be, especially as Mr. Hutt had arranged with me as to a spot, to which, in the event of our not returning to Swan River within a certain period the Colonial schooner would be sent to look for us; and moreover the captain of another American whaler had promised to visit North-West Cape at the end of July, as it was his intention to remain in Exmouth Gulf during the season of the bay fishing. We had thus two chances of

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being discovered in case of any accident preventing us from effecting our previous return to the Swan River.

The unfortunate occurrence which frustrated my expectations of completing this design, and which threatened the eventual destruction of the whole party, will be narrated in its place.

FROM SWAN RIVER FOR SHARK BAY.

I had taken three whale-boats in order to have a spare one should any accident reduce the number; and everything being arranged I sailed in the Russel from Fremantle on Sunday February the 17th 1839 at 3 P.M. with the following party:

Mr. Walker, the Surgeon of the former expedition.

Mr. Frederick Smith, the young gentleman who had accompanied me on a former tour.

Corporal Auger and Corporal Coles, Sappers and Miners.

Thomas Ruston, Sailor.

The last three, together with Mr. Walker, had been with me on the first expedition, and to these were added:

H. Wood and C. Wood, Seamen.

Clotworthy, Stiles, and Hackney, taken as volunteers at Swan River.

And lastly, Kaiber, an intelligent native of the Swan.

Making in all twelve persons.

Our time during the voyage was occupied principally in getting the three whale-boats in order and making other similar preparations. Poor Kaiber the native was dreadfully sick from the first.

Sunday February 24 1839.

This evening we Sighted the centre of Dorre Island, and stood in to within about two miles of the shore, which we found steep and

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rocky with a heavy surf breaking on it; we then tacked and stood off for the night.

### LAND AT BERNIER ISLAND.

February 25.

Soon after daybreak we made the north-western part of Bernier Island and, doubling the point at Kok's Island, stood in to Shark Bay. Kok's Island is very remarkable: it is nearly a tableland, about a quarter of a mile in length, terminating in low cliffs at each extremity; and on the summit of this tableland are several large rocks which look like the remains of pillars. The land is low. By noon we were all disembarked on Bernier Island. The point I had selected for landing on was a sandy beach in a little bay, the southern extremity of which was sheltered from the south-east by a reef running off the point. Captain Long of the Russel made the shore rather to the northward of the point I had chosen and, owing to his boat getting broadside on whilst they were landing the goods, he was knocked down under it and nearly drowned.

He had scarcely left us (though the Russel was then more than six miles off) when we found that our keg of tobacco had been left on board; the vessel was soon out of sight, and this article, so necessary in hardships where men are deprived of every other luxury, was lost to us. Everything else was however found correct. Whilst the men under Mr. Walker's direction were arranging the stores Mr. Smith, Kaiber, and myself started to search for water but were unsuccessful. Whilst on our return we saw three large turtles among some seaweeds in shoal water; and, after a good deal of floundering about and some tumbles amongst the breakers, we succeeded in turning them, and then brought a party armed with axes, etc. and cut them up. One part we immediately converted into soup, and the remainder was immersed in a cask of pickle as a store against unforeseen misfortunes. When these portions of the turtle were put into the brine long after the death of the animals, they quivered for several minutes, as if still endowed with the sense of feeling.

### DESCRIPTION OF IT.

Bernier Island consists of recent limestone of a reddish tinge, containing many recent fossil shells, and having a coating of sand and sandy dunes which are arranged in right lines, lying south-east

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and north-west, the direction of the prevailing winds. The island does not afford a tree or a blade of grass, but only wretched scrubby bushes. Between the dunes regular beds of shells are forming which, when dried and light, are drifted up by the wind. The only animals we saw were kangaroo-rats, one pigeon, one small land- and many seabirds, a few lizards, mosquitoes, ants, crabs, oysters and turtle.

### BURY THE STORES. INEFFECTUAL SEARCH FOR WATER.

February 26.

Early this morning we had finished burying our stores. The wind had freshened considerably about daylight, and throughout the day it blew nearly a gale from the south-east; it now looked so foul that I feared a long period of bad weather was about to commence. My own party, as well as the crews of the boats which came off from the whaler, had during the hurry and confusion incident on landing made very free with our supply of water, and as, from the appearance of the island, I felt very doubtful whether we should find any more, I put all hands on an allowance of two pints and a half a day, and then employed the men thus: one party under the direction of Mr. Walker worked at constructing a still, by means of which we might obtain fresh water from salt; another made various attempts to sink a well; whilst the native, another man, and myself traversed the island in search of a supply from the surface.

At night the result of our efforts were recounted, when it appeared that Mr. Walker had, by an ingenious contrivance, managed to have such a still constructed that we might hope, by means of it, if kept constantly working, to obtain just water enough to keep us alive. The party who had tried to sink a well had invariably been stopped by hard limestone rock in every place they had tried, and all their attempts to penetrate it by means of a cold chisel and pickaxe had proved abortive. The party which had been out with me searching for water had not seen the slightest sign which indicated its presence on the island: we had taken a spade with us, but wherever we dug had come down upon the solid rock. Under these circumstances I reduced the allowance to two pints a day.

February 27.

This morning it still blew nearly a gale of wind from the south-east. The men were occupied in the same manner as yesterday; but

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towards noon the wind moderated a little, and as we could find no water I resolved to make an effort to creep along shore to the southward.

### LOSS OF A BOAT IN REEMBARKING.

My boat was soon launched in safety, but the Paul Pry, Mr. Walker's boat, was not so fortunate; the water in the bay deepened rapidly from the steepness of the bank, and the steersman, who was keeping her bow on whilst the crew were launching, got frightened from the depth of water and the violence of the surf, and let go his hold; when the next surf threw the boat broadside on to the sea and, there being nearly half a ton weight of stores in her, and the wind at this juncture unfortunately freshening, she was in the course of two or three minutes knocked completely to pieces. By this mischance all the stores in the boat were lost, and nothing but a few planks and some articles of clothing were recovered. I placed my own boat at anchor in a little cove for the night and, leaving two men in her as keepers, the rest of us swam ashore through the surf to render what assistance we could.

The loss of this boat was a very heavy misfortune to commence with; but as I had taken the precaution in case of such an accident to provide a spare one it was by no means irremediable; the other boat was all ready for launching within half an hour, for by not allowing the men to remain in a state of inactivity, and by treating the matter lightly, I hoped to prevent their being dispirited by this unlucky circumstance.

The wind however continued freshening rapidly, and during the evening and night we had heavy squalls accompanied by rain from all quarters, and much thunder and lightning. During the night we collected a few quarts of water in the sails.

February 28.

About ten A.M. the wind moderated so much that we ventured to launch our remaining boat, now become the second, and in a few minutes both were riding alongside one another in the little cove. We then commenced pulling along the shore of the island, making about a south by east course. Having the wind very nearly right ahead, and a heavy head-sea, and about half a ton of stores in each of the boats, it was no very enviable position that we were in; but anything

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appeared preferable to dying of thirst on Bernier Island; my dislike to which was much increased from the fact of Mr. Smith and myself, who slept side by side, having been nearly tormented to death in the night by myriads of minute ants crawling over us, by mosquitoes stinging us, and by an odious land-crab every now and then running over us and feeling with his nippers for a delicate morsel.

### PULL FOR DORRE ISLAND.

It was nearly three P.M. when we reached the north-eastern extremity of Dorre Island and found a most convenient little boat harbour, sheltered by a reef from all winds. We therefore stepped out from the boats upon the reef and left them lying comfortably at anchor: a search for water was instantly commenced; Mr. Walker's party brought some in and we were not a little glad to get it, although we heard that it had been collected by suction from small holes in the rock and then spitting it into the keg. I laid up in store this precious draught, and those who had been otherwise employed now accompanied me, in order that each might suck from the holes in the rock his own supply of water. The point on which we had landed was a flat piece of land covered with sandy dunes which appeared to have been recently gained from the sea, and on all the landward sides of the flat rose steep rocky cliffs, which is the character of the shores of this island. After climbing these cliffs you arrive at a flat tableland which forms the general level of the surface. It was evident that at no very distant time the sea had washed the foot of these cliffs.

### DORRE ISLAND. ITS CHARACTER.

This island is exactly of the same nature as Bernier Island, the only difference being that the land here was rather higher than on the former. From the top of the cliffs the prospect was not at all inviting; to the westward lay the level and almost desert land of Dorre Island, which we were on; we had the same prospect to the southward; to the northward we looked over a narrow channel which separated us from the barren isle of Bernier and was blocked up by fearful-looking reefs, on which broke a nasty surf; to the north-eastward lofty bare sandhills were indistinctly visible on the main; whilst to the eastward we could see nothing but the waters of the bay, which were tossed wildly to and fro as if by a coming storm; yet the wind had fallen perceptibly, and the only alarming sign was the peculiar look of the sky. After having made these observations, and sucked

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up as much bitter dirty water as I could contrive to do, I returned with the others to the boats.

### WANT OF WATER.

The holes we found the water in were so small that we could only dip a spoon into a few of them; the men however got plenty to drink and then commenced hunting a small species of kangaroo-rat which is found on these islands, and searching for turtle's eggs, in both of which pursuits they were very successful. We then made blazing fires from driftwood which we found about, and retired early to rest.

### A HURRICANE.

About eleven o'clock I heard a cry of one in great distress, "Mr. Grey, Mr. Grey!" I instantly sprung up and answered the call, when Ruston, the boatkeeper in my boat, said, "I must heave all overboard, Sir, or the boat will be swamped." "Hold on for a minute or two," was my answer, whilst I stripped my clothes off. I found that it was blowing a terrific gale of wind which increased every moment in a most extraordinary manner; the wind was from the south-east, and the breakers came pouring over the reef as if the bay was going to empty bodily all its waters into the little cove in which the boats were anchored. I now called Mr. Walker and Mr. Smith and desired them to follow me off to the boats with two or three hands, and then swam out to my own, which I found nearly full of water, and it was all that the boat-keeper could do to keep her head on to the sea. In a minute or two Mr. Walker and Mr. Smith, who were ever foremost in difficulties and dangers, swam off to assist me, but they could not induce any of the men to face the sea and storm, which was now so terrible that they were all quite bewildered. Mr. Walker swam to his own boat; Mr. Smith came to mine. We made fast a line to all the stores, etc. and Mr. Smith boldly plunged in again amongst the breakers and returned ashore with it, a service of no ordinary danger, for the shore was fronted with a sharp coral reef, against which he was certain to be dashed by the waves, and, after having got on it, the breakers would keep knocking him down and thus cutting his legs to pieces against the rocks. Mr. Smith however reached the shore with the line, receiving sundry severe cuts and bruises; and, to my great surprise, in a few minutes more he was again by my side in the boat, baling away: it was still however all we could do to keep the boat afloat.

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### BOATS DRIVEN ASHORE.

Mr. Walker now called out to me that his boat was drifting, and in a moment more she went ashore. For one second we saw her dancing wildly in over the breakers, and then she disappeared from us, and we were left in uncertainty as to her fate; for, although we were close to the beach, it was impossible, amidst the din of elements, to hear what was taking place there. An occasional vivid flash of lightning showed us dark figures hauling about some huge object, and then again all was wrapped in roar and darkness. Mr. Smith and myself in the meanwhile were baling away, and Ruston was striving with the steer oar to keep her head to sea, for the instant she got the least broadside on the waves broke over her and she filled again.

### SERIOUS DANGER OF LOSING THE BOATS.

Mr. Walker, nothing daunted by the conduct of the men, having had his own boat hauled up, again swam off to us, and for the next hour or two we kept the other one not more than half full; but the gale, which had been gradually increasing, now became a perfect hurricane, and it was evident that this boat must also go ashore. We imagined that Mr. Walker's must be stove in several places; and, as to have been left without a boat would have been certain destruction to us, I swam ashore to have the party ready to try and save mine by hauling her over the reef the instant she grounded.

I arrived there with a few cuts and bruises, and found the men on shore in a most miserable state; many of them were perfectly appalled by the hurricane, never having seen anything of the kind before, and were lying under the lee of the bow of Mr. Walker's boat, which, although he had drawn it up high and dry upon the sandhills, far above the usual high-water mark, was again more than half full of water and seaweed from the waves every now and then breaking over her stern. It was with great difficulty I roused the men and got them to clear out the seaweed, which lightened her somewhat; we then hauled her up a little at a favourable opportunity, and advanced her so far that we rather gained upon the water by baling, and thus, by degrees, got her quite on land. But as the storm continued the waves still continued to encroach upon the shore, and we were obliged to repeat this operation of hauling up three successive times in the night, which was one of the most fearful I have ever passed. I lay drenched through, my wet shirt sticking close to me and my blanket soaked with water, for I could not find



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my clothes again after I came ashore. Whenever a flash of lightning broke I looked if the boat was drifting in, and there I saw it still dancing about upon the waves, whilst the elements were so mighty in their power that I felt shrunk up to nothing, and tremulous in my own insignificance.

The grey dawn stole on and the boat gradually became visible; she had drifted somewhat nearer shore, but there still were the three figures discernible in her, Ruston working away at the steer-oar, and Mr. Smith and Mr. Walker alternately baling. The storm now appeared to lull a little and in a few minutes (about half-past five A.M.) it suddenly dropped. The men now looked out again and I could hear Ruston saying, "I believe we are now safe, Sir;" and I immediately ordered that two men should go off and relieve Mr. Smith and Mr. Walker. They evidently feared to make the attempt and said they could not swim, which was true as far as some of them were concerned. I then ordered successively three men who I knew could swim to take advantage of the lull and gain the boat: they all attempted it, but before they got clear of the reef their hearts failed them, and they declared they could not contend with the waves.

### RENEWAL OF THE STORM.

Just as the last man had failed, the wind, which had hitherto been from the south-east, shifted instantaneously to the north-west. We all quailed or fell before it, for it came with sudden and indescribable violence; the boat appeared to hesitate for one moment, in the next she came dancing wildly in on the shore. The men reached her as well as they could and we dragged her up. The storm now became so violent that even Mr. Walker, who was a heavy man, was blown about by it like a child; there was not a tree on the island, but the bushes were stripped from the ground, and I found it impossible to keep my legs.

The sea all this time kept rising, being heaped up by the wind against the shore, but whenever a momentary lull came we took advantage of it to drag the boat a little further up; indeed the sea gained on us so much that I had made up my mind it would sweep away the intervening sandhills and once more wash the face of the cliffs. In this case we should to a certainty have all perished.

### DISTRESS FOR WATER.

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At two P.M. the storm lulled considerably, and I immediately despatched men in all directions to collect water from holes in the rocks, and made the native and an old bushman try to light a fire; for those of us who had been all the night and morning in the pelting rain, with nothing but our shirts on, were benumbed and miserable from cold.

March 1.

The men who had gone out for water soon returned and reported that they had been able to find very little which was not brackish from the spray having dashed over the island; I therefore again reduced the allowance to one pint a day and proceeded to inspect damages. Yesterday we had started in good boats, with strong men, plenty of provisions, everything in the best order; today I found myself in a very different position, all the stores we had with us, with the exception of the salt provisions, were spoilt; our ammunition damaged; the chronometers down; and both boats so stoved and strained as to be quite beyond our powers of repairing them effectually. Moreover from want of water we were compelled to make for the main before we could return back to Bernier Island to recruit from our ample stores there.

### REPAIR OF THE BOATS.

Nothing however could be done but to have the boats rendered as seaworthy as possible and, having given this order, the want the men experienced for water was the best guarantee that they would execute this task with the utmost diligence. As soon as I saw them at their work I started with a party in search of water whilst another party under Mr. Smith dug for it; and Mr. Walker superintended the rearrangement of the stores and the digging up the seaweed for the purpose of recovering lost articles. I returned just before nightfall from a vain search; Mr. Smith had been equally unsuccessful in his digging operations, and we thus had to lie down upon the sand parched with thirst, our only chance of forgetting our misfortunes being a few minutes sleep.

### THE BOATS NEARLY READY.

March 2.

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The men continued working hard at the boats, and it appeared that their task would be concluded this day. I once more started to look for water and to examine the island; but our search was again unsuccessful. On measuring the distance that the sea had risen I found that it had spread up in the direction of our boats fifty-three yards above high water mark; but what will give a better idea of the hurricane is the circumstance of my catching a cormorant on the beach, about seven o'clock on the morning of the 1st, and during the height of the storm, the bird not even attempting to fly, being in appearance completely appalled at the violence of the wind. It was reported to me at night that another hour's work in the morning would render the boats fit for sea.

Sunday March 3.

The men had slept but little during the night for they were oppressed with thirst; and when I rose in the morning I saw evident symptoms of the coming of another roasting day. They were busy at the boats as soon as they could see to work, whilst Mr. Smith and myself ascended the cliffs to get a view towards the main. When I looked down upon the calm and glassy sea I could scarcely believe it was the same element which within so short a period had worked us such serious damage. To the north-east we could see the lofty white sandhills in Lyell's Range; to the eastward nothing was visible; yet this was the point to which I had determined to steer, for several reasons. In the first place, the land in that direction had never been visited; and secondly, I had found the shores of Dorre Island covered with great forest trees, which must have been washed across the bay, and which from their size could only have been brought out from the continent by some large and rapid stream, which we at this moment would gladly have seen as there was only about a pint and half of water per man left.

SAIL FOR THE MAIN.

When we returned to breakfast I found the boats nearly ready for sea, and about eleven o'clock they had been all hauled down, the stores stowed away, and everything made ready for launching, and off we went, not a little rejoiced at the prospect of soon having an abundant supply of that liquid on which our lives depended. There was scarcely any wind but that little was right aft so that between sailing and pulling we made about five knots an hour. The boats were however so heavily laden that the men found it very laborious

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work, for they were exposed to the rays of a burning sun and had nothing to drink but half a pint of water, which was all I could allow them.

We however persevered from soon after eleven A.M. until five P.M., when the men began to get disheartened from seeing no signs whatever of land, and I ordered my boat's crew to knock off pulling for a little, and in Mr. Walker's boat, which was about a mile astern, they did the same. In twenty minutes time I made my crew again take to their oars, but the other boat did not in this instance follow our example, so that we kept dropping her rapidly astern. This was very annoying; but as I was anxious at all events to get a glimpse of the land before sundown we still pulled away, trusting that the other boat would soon follow in our wake.

### GROUND ON A SANDBANK.

About half an hour before sunset we sighted the land: several low rounded hills were the first things seen; then what I conceived to be very lofty trees rose in sight, and almost at the same moment the boat grounded on a sandbank.

### EXTENSIVE SHALLOWS.

I had observed this shoal several miles before we came to it and it appeared to extend as far as I could see both north and south, but, as I had no doubt that we should find sufficient water on it to enable us to cross, I had given it no attention. I now however on looking more carefully could perceive no limit to its extent in those directions and, as I thought I saw deep water immediately to the eastward of us, I ordered the men to jump out and track the boat over. This they did; but on coming to what appeared to be deep water we found it was only a continuation of the same sandbank, covered with seaweed, which gave the water a darker appearance. The men now alternately tracked or pulled the boat for about five miles over a continuation of the sandbank; a work very fatiguing to those who were already exhausted by several days' continuous exertion on a very short allowance of water in a tropical climate. It had now been for some time night, and we had taken a star for our guide which just before sunset I had seen rising over the main. I thought we had at last gained the shore, at least the boat was close to a dark line rising above the water which appeared like a wooded bank; two of the men now waded onwards to find out the best place for landing and to

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light a fire that the crew of the other boat might know where we were. I saw them to my surprise not ascend a wooded bank but disappear amongst the trees; and still through the silence of the night I heard the splash of men walking through water, and in a minute or two afterwards the cries and screams of innumerable startled waterfowl and curlews, who came flying in flocks from amongst the mangrove trees.

### FAIL IN MAKING THE LAND.

The men returned and reported that there was no land or any sign of land hereabouts; that the mangroves were a belt of trees upon a sandbank and that the water deepened inside; that the tide evidently rose very high, from the tufts of seaweeds in the bushes; that it was then rapidly coming in (which was evident enough, for the boat was afloat) and that the other side of the mangrove bushes was an open sea.

This was unpleasant intelligence. That it was untrue I felt assured; but one man, who certainly could not have seen more than a hundred yards ahead of him on so dark a night, spoke as confidently as if he had seen fifty miles, and this discouraged the others: so by way of keeping their minds occupied I got under weigh again and stood off a little to the southward in the hopes of falling in with the other boat. We cheered at intervals of a few minutes, and fired a gun, whereupon ensued a great screaming, whistling, and flapping of wings amongst the waterfowl, but no human voices were heard in reply.

### ANCHOR OFF MANGROVE CREEK FOR THE NIGHT.

When we had gone as far to the southward as I thought prudent I stood out from the shore for about a mile so as to have a good peep in amongst the mangrove bushes in the morning for the other boat, and having dropped our anchor we laid down as we best could for the night; and, speculating upon what explanation the native wise men would give to their fellows of the unknown and novel sounds they had this night heard upon the coast, I soon fell asleep.

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### CHAPTER 15. THE GASCOYNE RIVER.

#### REACH AND ENTER A MANGROVE CREEK.

March 4.

Early in the morning I had a good lookout kept for the other boat, which I was very anxious to see in order that I might have a sufficiently numerous party for the purpose of landing and looking for water; as I always held it to be better, upon first appearing amongst natives who had never before seen Europeans, to show such strength as might impress them with a certainty that we were well able to resist any attack which they might naturally feel inclined to make on such strange and incomprehensible intruders as white men must necessarily appear to them. Soon after the sun rose we descried the other boat about three miles to the southward of us; and I despatched two men to wade along the flats and communicate with Mr. Walker: they were to direct him to get under weigh and to make the best of his course, either by tracking, pulling, or sailing, until he reached the point where I might land.

The men whom I sent quickly made his boat, which I perceived moving slowly up the flats; and as soon as the men rejoined me we started. The wind was fair, being from the southward, and I wished to reach some gently elevated hills which I saw about eight miles to the north by east of our present position.

#### SEARCH FOR AND COMPLETE OUR WATER.

We soon came to a very promising opening which proved to be a creek, with a mouth of about two hundred yards wide, running up in a north-east direction, and having five fathoms of water inside, but with a bar entrance. When we had proceeded up it about two miles it became so narrow that there was not sufficient space left for the men to use their oars; therefore, making fast the two boats, I landed with a party to look for water.

I stepped very gingerly and cautiously on the mud, for shore there was none; and I had the satisfaction of descending at once, mid-leg deep in the odious slime; but this being endured the worst was over, and, at the head of my sticking and floundering party, I waded on, putting to flight whole armies of crabs who had taken up their abode in these umbrageous groves, for such they certainly were. The life of

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a crab in these undisturbed solitudes must be sweet in the extreme; they have plenty of water, mud, and shade; their abodes are scarcely approachable by the feet of men, and they can have but little to disturb their monotonous existence save the turmoils of love and domestic war.

After about two miles of wading of this description, which we considerably increased by turning and winding about to avoid soft places, we at length fairly stepped on terra firma and found ourselves at the base of some almost imperceptibly-sloping ground which gradually rose into low, red, sandy, loamy hills, thinly covered with grass, bushes, and stunted trees. Across these we bent our steps in a south-east direction, no change whatever taking place in the character of the country as far as we went or as far as we could see. But our travels in this line only extended for about three miles, when we suddenly came upon a lagoon of fresh water lying between two of the hills. All bent the knee at once, at this discovery, to plunge their faces deep in the pool, and, presently raising them up again, a black watery line, extending round the countenance, showed plainly how deeply each one had dipped.

Mr. Smith and myself laughed heartily at our dirty-faced companions, who knelt on their hands and knees round the pool; and whilst they were filling the beakers with water we rested under the shade of the bush for a few minutes, and then walked off towards the interior; but from the undulating low nature of the ground our view was very limited, and as far as we could see there was no sign whatever of any change in the character of the country. On returning again to the party we found the beakers and men equally full of water and ready for a start to the boats.

### WADING THROUGH THE MUD.

When we reached again the mangrove flats a most amusing scene commenced; wading through the mud was bad enough before, but now that each man had a heavy keg of water upon his shoulders the movements became truly ludicrous, more especially as both landsmen and sailors were equally out of their element. Each desperate plunge elicited from the sufferers oaths and expressions which only those who have seen sailors completely at a nonplus on shore can conceive. They were half humorous, half pathetic, and never did I see men more thoroughly woebegone and bedaubed with mud than the party when we made the boats again.

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Those whom I had left behind now greedily drank the water of which they were so much in want, and, as it was necessary to complete our stock of it here, after we had dined I despatched all hands but Mr. Smith and one man back to the lagoon. Mr. Smith was too unwell to go again and I remained with him. This party took their rations with them as they were to remain by the lagoon all night in order, as they termed it, "to have a good bouse out of water, and a good wash," and were to return to the boats as soon after daylight as possible.

We had remarked tracks of natives on shore but, as I saw by their fires that they were now at least eight or ten miles from us, I was under no apprehension of an attack from them. The mosquitoes however threatened to be very troublesome, and when I say that just about sunset we were completely blackened from the numbers that covered us I do not in the least exaggerate; we could not make a fire to keep them away, and I therefore quietly resigned myself to my fate. Poor Smith, who was already very feverish, passed a night of perfect torment, and awoke in the morning seriously ill. We soon heard the voices of the party returning and, having helped them and their loads of water out of the mud, we returned down the creek.

### COAST THE LAND TO THE NORTHWARD.

March 5.

On standing out there was a fresh breeze blowing from the south-east, and when we were about half a mile from the shore the water to the northward deepened a great deal, for although it was now nearly low tide we had here two and a half fathoms with sandy bottom. All along the shoals we had met with abundance of shell and other fish, and the pearl oyster was very abundant; indeed the shellfish along these banks were more numerous and varied than I had ever before found them. I saw but few shells which I recognised as belonging to the southern portions of Australia, whilst many were identical with those which occur to the north-west.

### EXAMINE ANOTHER MANGROVE CREEK. CHARACTER OF THEIR SCENERY.

There was no high land whatever in sight; but one low hill, which just appeared above the mangrove tops, bore north by east. After running north-east for about two miles with the same depth of water



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we came to another opening in the mangroves of a more promising character than several small ones which we had previously passed, and as, from the greater depth of the water, the extraordinary low character of the coast, and the circumstance of the driftwood upon Dorre Island, I expected to find a large river hereabouts, I determined to examine even the smallest openings most narrowly; we therefore ran straight for this one, and found that it had a shoal mouth with only four feet water at the entrance. The opening ran east  $1/2$  north, and after we had followed it up for about half a mile it became very narrow and shoaled to two feet, so we turned about and again pulled away to sea. This opening, as well as the first we had entered, appeared rather like a canal running through a woody grove than an arm of the sea; the mangrove trees afforded an agreeable shade, and were of the most brilliant green, whilst the blue placid water not only washed their roots but meandered through the sinuosities of the forest like a quiet lake till sight of it was lost in the distance.

We now stood north-north-west parallel to the shore, which was fronted by mangroves; and here we again had only two and a half feet of water. A very low chain of hills extended parallel to the shore and about two miles behind the mangroves. We thus continued running along the coast until we made a large opening which was about three-quarters of a mile across at the mouth. On either side of the entrance was a sandy point, covered with pelicans and wild-fowl who seemed to view our approach with no slight degree of surprise. As yet we did not know the proper entrance to the river (for such it was) so that where we ran into it we had only two feet of water. Three low hills were immediately in front of us, and I afterwards ascertained that the proper course for entering was to steer so as to keep the centre of the opening and the middle hill in the same line.

DISCOVER ONE MOUTH OF THE GASCOYNE RIVER, AND EXPLORE THE COUNTRY IN ITS VICINITY.

The opening now widened into a very fine reach, out of which the water was running rapidly, and when we had ascended about a mile I saw large trees, or snags (as they are called by the Americans) sticking up in the bed of the river; as these trees were of a very large size, and evidently had come from a different country to the one we saw upon the river banks, I felt assured that we had now discovered a stream of magnitude, and, the eager expectations which these thoughts awoke in our breasts rendering us all impatient, we hauled

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down our sail and took to the oars. The bed of the river however became choked with shallows and sandbanks, and when we had ascended it about three miles, the water having shoaled to about six inches, I selected a suitable place for our encampment and prepared to start and explore the country on foot.

### SURVEY OF MOUTHS OF THIS RIVER AND BABBAGE ISLAND.

As soon as all had been made snug I moved up the river with three men. Its banks were here about five feet high; the bed of white sand, and about half a mile across; the centre of the channel was full of salt water, and in breadth about a quarter of a mile. We had not proceeded more than a few hundred yards when we unexpectedly came upon another mouth of the river as large as that upon which we stood, and which ran off nearly west. The river itself appeared to come from the north-east, and we saw salt water still further up than where we were.

### NATIVES AND A SHARK.

Just on the eastern bank of the stream was a clump of small trees and reeds which I walked up to examine with a desire to recognise any trees belonging to known species, but to my horror, on looking into the reeds, I saw what appeared to be a huge alligator fast asleep. The men now peeped at it and all agreed that it was an alligator. I therefore retreated to a respectful and suitable distance and let fly at it with a rifle; it gave, as we thought, a kind of shake, and then took no further notice of us. I therefore took a double-barrelled gun from one of the men and drove two balls through the beast, and now feeling sure it must be dead (for it never moved) I walked up to it, when, upon examination, it turned out to be a huge shark, of a totally new species, which had been left in some hole by the tide where the natives had found and killed it, and, being disturbed by our approach, had run away, first hiding it in this clump of reeds. There were two natives and they had made off right up the bed of the river, taking the precaution to step in one another's tracks so as to conceal if possible their number.

### CHARACTER OF THE RIVER.

To those who have never seen a river similar to the one we were now upon it is difficult to convey a true idea of its character. It consisted of several channels or beds divided from each other by long strips of

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land, which, in times of flood, become islands; the main channel had an average breadth of about two hundred and seventy yards; the average height of the bank at the edge of it was about fifteen feet, and the bed of the river was composed of porous red sand apparently incapable of containing water unless when previously saturated with it. After passing the highest point reached by the sea this huge river bed was perfectly dry, and looked the most mournful, deserted spot imaginable. Occasionally we found in this bare sandy channel waterholes of eighteen or twenty feet in depth, surrounded with tea trees and vegetation, and the driftwood, washed high up into these trees, sufficiently attested what rapid currents sometimes swept along the now dry channel. Even the waterholes were nearly all dried up, and in the bottom of these the natives had scooped their little wells.

The river channel ran up in a due north-east direction for about four miles without in the least altering its character. It was in vain that we walked over the intervening slips of land into the side channels; these in all respects except in being narrower exactly resembled the main one; and, after ranging across from bank to bank in this way, the only general conclusion I could arrive at was that the country upon the northern bank of the river appeared scrubby and covered with samphire swamps, whilst that upon its southern bank seemed rich and promising.

### EXPLORE THE COUNTRY INLAND TO THE NORTH OF THE RIVER.

The river now made a sudden turn to the east by north, and we followed it in this direction for three miles and a half without finding the slightest change in its character or appearance. No high land whatever was in sight, and from a low rounded hill, which was the highest point we could see, the rise of the country towards the interior was scarcely perceptible; indeed it presented the appearance of being a vast delta; and such I then and subsequently conjectured it to be.

During our walk up the bed of the river we had seen many cockatoos, some wildfowl, and numerous tracks of natives; these all appeared to me to be indications of a well watered and fertile tract of country.

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I now turned off west by south, quitting the bed of the river, which I named the Gascoyne in compliment to my friend, Captain Gascoyne, and found that we were in a very fertile district, being one of those splendid exceptions to the general sterility of Australia which are only occasionally met with: it apparently was one immense delta of alluvial soil covered with gently sloping grassy rises, for they could scarcely be called hills; and in the valleys between these lay many freshwater lagoons which rested upon a red clay soil that tinged the water of its own colour and gave it an earthy taste.

The country here was but very lightly timbered and well adapted for either agricultural or pastoral purposes, but especially for the growth of cotton and sugar, should the climate be sufficiently warm; and of this I think there can be no doubt whatever. I was so won by the discovery of this rich district that I wandered on unconscious of the fatigue of the party, roaming from rising ground to rising ground, and hoping from each eminence to gain a view of high land to the eastward, but on all sides I could see nothing but the same low fertile country. I however felt conscious that within a few years of the moment at which I stood there a British population, rich in civilization and the means of transforming an unoccupied country to one teeming with inhabitants and produce, would have followed my steps and be eagerly and anxiously examining my charts; and this reflection imparted a high degree of interest and importance to our present position and operations.

### RETURN TO THE RIVER.

The darkness of night was now closing round us and Kaiber the native, with his long thin legs, put himself at the head of the party and, taking a star for his guide, led us with rapid and lengthy paces across the plains to the encampment, where we found the party anxiously waiting to hear what success we had met with. Poor Mr. Smith was very unwell tonight with a feverish attack. Mr. Walker had prescribed for him and ordered him to be kept quiet. I got a meridian altitude of Procyon which put us in 24 degrees 56 minutes 57 seconds south latitude.

March 6.

Mr. Smith was if anything worse this morning, and I learned from some of the men that he had been wandering about all night, and had bathed several times in the river. I remonstrated with him about

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having done so, but he excused himself, and I determined to remain stationary at this point for a day or two to give him plenty of rest before we again started on our cruise along the coast.

### PLAN OF FUTURE PROCEEDINGS.

After the discovery of the Gascoyne the plan I made up my mind to follow was to examine rapidly the coast as far as Cape Cuvier, to return from that point to Bernier Island and refit; then once more to visit the Gascoyne properly equipped, and thoroughly explore the adjacent district to the distance of fifty or sixty miles inland; and lastly to examine the unknown portion of Shark Bay which lay to the southward of us.

At 6 A.M. the thermometer stood at 76 degrees Fahrenheit in the shade, and this and the temperature during our stay in Shark Bay proves that the climate there is very warm. Before breakfast I had wells sunk in several places at some little distance inland in order to ascertain the nature of the subsoil, for we were abundantly supplied with water from the lagoons. In every instance, after digging down to the depth of from six to seven feet through a rich loam, we reached a regular sandy sea beach and salt water (it must however be recollected that we dug in the deepest hollows) so that it appeared as if the whole of this flat country was a formation left upon the shoals with which the coast is bounded; and it almost seemed as if the sea still flowed in upon its old bed and under this recent freshwater deposit.

Directly after breakfast I got ferried across the river to the island lying between its two mouths, which I called Babbage Island after C. Babbage, Esquire. This island is low and sandy in all parts except where it fronts the sea; but on that side a row of high sandy dunes have been thrown up. There is no very good land on it, it being almost covered with samphire swamps and intersected by deep channels into which the sea runs; these are nearly concealed in some places by the vegetation, which rendered it impossible to avoid sundry falls and wettings in crossing it. It bears a few mangroves but I saw no other trees.

The men throughout the day were occupied in watering and in making canvas cloths for my boats to prevent the water from pouring in over the gunwales, which were very low; and my own time was sufficiently occupied in surveying. On my return in the

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evening I found Mr. Smith so much more cheerful and so much better that I determined to start about noon the next day for the northward.

### EXCURSION TO THE NORTH OF THE RIVER.

March 7.

I went off with a party before dawn to explore the country to the northward of the Gascoyne. We crossed the river just above the point where it separates into two mouths, and then struck off in a north by east direction. Travelling about a mile after we had crossed the river we came to seven native huts, built of large-sized logs, much higher and altogether of a very superior description to those made by the natives on the south-western coast. Kaiber examined them very carefully and then proposed that we should go no farther, as he thought that the natives must be very large men from their having such large huts. We however pushed forward and, as I had none but good walkers with me, we made about nine miles in two hours and a half: throughout the whole of this distance we saw nothing that could be called a hill, the whole country being evidently at times flooded up to the foot of a gently-rising land which we distinguished to the eastward. We did not notice a single tree but plenty of low prickly bushes, samphire, and a small plant somewhat resembling the English heath. The weather was very hot, and at the end of the nine miles we reached a saltwater inlet so broad and deep that we could not cross it. We here halted and rested a little and then made our way back to the boats.

### APPROACH OF NATIVES.

I found Mr. Smith much better and, there being now nothing to delay us, we started. When we had got about half a mile down the river we saw two natives following us along the shore, jumping about in the most extraordinary way, and, from their gesticulations and manner, evidently ordering us to quit the coast. From the mountebank actions of these fellows I guessed that they were two of the native sorcerers, who were charming us away but, as I was not disposed to be so easily got rid of, we pulled near the shore and lay upon our oars to give them an opportunity of coming up to us.

### ATTEMPT AT A CONFERENCE. INTERVIEW WITH NATIVES.

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Upon this they mounted a little eminence, blew most furiously at us, and performed other equally efficacious ceremonies. I however felt just as well after we had been subjected to this dire sorcery as I did before; and we continued to pull gently along the shore, still trying to induce them to approach, which they at last did, having nothing but a fishing-spear in their hands. To entice them towards us I had made Kaiber strip himself and stand up in the boat; and now that they were near enough to us I told him to call out to them and say that we were friends. He hereupon shouted out, "Come in, come in; Mr. Grey sulky yu-a-da;" by which he intended to say, "Come here, come here; Mr. Grey is not angry with you." The two sorcerers, utterly confused by this mode of address, committed more overt acts of witchcraft towards us than they had even hitherto done; and Kaiber, turning round to me, said, "Weak ears have they and wooden foreheads; they do not understand the southern language." But as I was dissatisfied with his proof of their knowledge of the southern language I desired him to wade ashore and speak to them.

### KAIBER'S DREAD OF THEM.

This order of mine was a perfect thunderbolt to Kaiber. He, in common with all the aboriginal inhabitants of Australia, had an utter aversion to all strange natives; and to this he joined a sort of religious horror of witches, buck-witches, warlocks, and uncanny persons generally. King James the First could never have found a more zealous and participating partner of his fears than Kaiber; he gave me a blank look of horror and assured me that these were actual sorcerers, "northern sorcerers;" and as he repeated these last words there was a mysterious, deep meaning in his tone, as if he expected to see me thrill with terror.

From his earliest infancy he had been accustomed to dread these men; every storm that occurred he had been taught to consider as arising from their incantations: if one of his friends or relatives died a natural death he had attributed that death to the spells and unholy practices of these very people with whom he was now directed to go and hold converse. I thought of all this and pitied him; for even for a native he was excessively superstitious. But I was extremely anxious to establish friendly relations with them; therefore I was positive and repeated to him my former directions that he should wade ashore, coax them up, and speak to them.

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In as far as a native can turn white from fear Kaiber did turn white, and then stepping into the water he waded ashore and the two natives cautiously approached him. As soon as they were close to him I joined the party with a large piece of damper in one hand and a piece of pork in the other. The natives were dreadfully frightened; they stood in the presence of unknown and mysterious beings. No persuasions could induce them to take my hand or to touch me; and they trembled from head to foot.

### FRIENDLY COMMUNICATION ESTABLISHED.

For a time they were nearly unintelligible to Kaiber and myself, but as they gained confidence I found that they spoke a dialect very closely resembling that of the natives to the north of the Swan River. They addressed many questions to us, such as, Whence we had come? where we were going to? was the boat a dead tree? but they evaded giving any direct answers to our questions. Being anxious to start I now left them to bear to their companions the strange food I had bestowed, and to recount to eager listeners the mysterious tale of their interview with beings from another world, and who were of an unknown form and colour.

### SAIL FROM THE GASCOYNE.

Whilst they hurried off with some such thoughts passing through their minds we pulled down the Gascoyne in search of new lands and new adventures.

### AFFINITY OF DIALECTS.

The result of this conference affords an example of the grounds upon which any similarity of the language in different portions of the continent of Australia has been denied. In this instance, had I at first taken the word of Kaiber for it, I should have left the Gascoyne with a firm conviction that the natives of that part of Australia spoke a radically different language from the natives near the Swan River; and this would have been proved by the fact of a native from the south not understanding them: whereas there is a great affinity between the two dialects, to discover which requires however an acquaintance with the general principles of language, some knowledge of the one in question, and due patience. I can only say that wherever I have been in the southern portions of the continent I could soon understand the natives.



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### CHAPTER 16. TO KOLAINA AND BACK TO THE GASCOYNE.

#### EXAMINE THE COAST TO THE NORTH OF THE GASCOYNE.

March 7.

When we got outside the mouth of the Gascoyne a fresh breeze was blowing from the south-east. We ran along the shore west by north, keeping about a quarter of a mile from it; and after having made about three miles and a half we reached the southern extremity of the other mouth of the river. The mean depth in our course along Babbage Island had been from two and a half fathoms to three fathoms; and this opening had a bar which we then conceived to run right across the mouth of the river. The northern extremity of Babbage Island is a very remarkable low point of land which I called Mangrove Point. It cannot fail to be recognised for it is the first point from the northward along the eastern shores of Shark Bay where mangroves are found, and from that point they extend almost uninterruptedly down the eastern coast of this bay to the south, as far as I have seen it.

#### CONTINUE THE COURSE TO THE NORTHWARD.

The coast now trended north by west and we continued to run along it. After passing Mangrove Point the sandy dunes along the shore ceased, and the land appeared to be scarcely elevated above the level of the sea: not a hill or tree could be perceived, and a low black line almost level with the water's edge was the only indication that we had of being near land.

#### LYELL'S RANGE.

This kind of shore continues for about nine miles, when low sandhills begin to rise parallel to the coast, and these gradually increase in altitude until they form that remarkable range of dunes which I have called Lyell's Range. When it wanted about an hour to sunset we had made about twenty-five miles, and then ran in closer along the coast to look either for a boat harbour or some spot at which we could beach them. But nothing suited to our purpose could we see: the coast was straight, sandy, exposed and lashed by a tremendous surf; the wind now freshened considerably and the sky looked very threatening; we had therefore no resource left but either to run to the northward before the breeze or to beach the boats. I

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chose the first alternative; and we coasted within about a quarter of a mile of the shore, just outside the surf, looking out for any spot which gave us the least hope of beaching in safety.

### BEACH THE BOATS.

As the sun sank so freshened the breeze, until it blew a good half gale of wind, and everything gave indications of approaching foul weather. This was no coast to be on during a stormy night in heavily laden whale-boats; and as it now began to grow dark I determined at all hazards to beach rather than be driven out to sea in a gale of wind. I accordingly ran my boat in through the surf, leaving the other one outside to see what success we had before they made the attempt.

### BOAT SWAMPED IN BEACHING.

The surf was very heavy but the men behaved steadily and well; and through it we went, dancing along like a cork in a mill-pond; at last one huge roller caught us, all hands gave way, and we were hurried along on the top of the swelling billow, which then suddenly fell under us and broke; in a moment after we had grounded, and although still upwards of two hundred yards from the shore, we all jumped out to haul the boat up, but ere we could move our heavily laden whaler beyond a few yards breaker after breaker came tumbling in and completely swamped it. We continued to haul away and presently found ourselves swimming. In fact the whole coast hereabouts was fronted by a kind of bar of sand, distant about two hundred yards from the shore, with not more than two feet water on it. Between this and the shore the water was tolerably smooth and two fathoms deep. It was upon this outer bar that we had struck, and the other boat experienced the same fate as ourselves. We of course passed a miserable night in our drenched and wretched state; but it was at all events some comfort, when we heard during the night the boisterous wind blowing outside, to feel that we were safe ashore.

### DAMAGE TO OUR PROVISIONS.

March 8.

As soon as we had sufficient light for the purpose I proceeded to examine the stores. The flour was not very good at starting; it had been packed in small bags, that being the most convenient form to

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have it in both for stowing and transporting it on men's shoulders; and in the hurricane which we had experienced on Dorre Island this flour had got thoroughly soaked: from that period to the present time it had been constantly wet with salt water; last night's adventures completed its disasters and it was now quite spoilt and an unwholesome article of food; but having nothing else to eat we were forced to satisfy ourselves with it, and I directed it to be dried in the sun and then carefully repacked. The wind was from the south-south-west, about half a gale, and there was such a tremendous surf on the shore that to launch the boats was impossible. I therefore started to look for water and to explore the country.

### SEARCH FOR WATER.

The point we had landed at was immediately at the base of some bare sandhills, about four hundred feet high. These are the hills which are visible from the high land of Dorre Island on the opposite side of the bay: it struck me that from their great height and their porous nature there was a probability of our finding water by digging, even in this apparently sandy desert; I therefore selected a spot at the foot of the highest hill, in the bare sand, and ordered a well to be opened. Our efforts were crowned with success; the well had not been sunk more than four or five feet when we came to a coarse gravelly sand, saturated with water, which was perfectly sweet and good; and when the well was sunk about two or three feet deeper the water poured in so fast that there would have been no difficulty in watering a ship at this point.

### APPEARANCE OF A LAKE. EXAMINATION OF IT.

Whilst the men were engaged in filling the water kegs I ascended the highest sandhill, the summit of which was not distant more than a mile from the well. When I gained this a most splendid sight burst upon my view: to the westward stretched the boundless sea, lashed by the wind into white and curling waves; whilst to the east of me lay a clear calm unruffled lake, studded with little islands. To the north or north-east I could, even with a good telescope, see no limits to this lake, and, with the exception of the numerous beautiful islands with which it was studded, I could, even from the commanding position which I occupied, distinguish nothing like rising land anywhere between north by east and south-east. The lake had a glassy and fairy-like appearance, and I sat down alone on the

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lofty eminence to contemplate this great water which the eye of European now for the first time rested on. I looked seaward, and it appeared as if nature had heaped up the narrow and lofty sandy barrier on which I stood to shut out from the eyes of man the lovely and fairy-like land which lay beyond it.

At length I rose and returned to the party. The news of my discovery filled all with hope; and, our miserable breakfast having been hurriedly despatched, I selected three men to accompany me in my first examination of the shores of this inland sea. When we had gained the top of the sandhills the surprise of these men was as great as my own, and they begged me to allow them to return and endeavour by the united efforts of the party to carry one of the whale-boats over the intervening range, and at once to launch it on this body of water.

I however deemed it more prudent in the first instance to select the best route along which to move the whale-boat, as well as to choose a spot which afforded facilities for launching it. In pursuance of this determination we descended the eastern side of the sandhills which abruptly fell in that direction with a slope certainly not much exceeding an angle of 45 degrees. I now found that the water did not approach so near the foot of the hills as I had imagined, but that immediately at their base lay extensive plains of mud and sand, at times evidently flooded by the sea; for on them lay dead shells of many kinds and sizes, as well as large travelled blocks of coral. The water here appeared to be about a mile distant; it was also apparently boundless in an east and north-east direction: and was studded with islands.

### REMARKABLE PLAINS. DELUSION FROM MIRAGE.

We still all felt convinced that it was water we saw, for the shadows of the low hills near it, as well as those of the trees upon them, could be distinctly traced on the unruffled surface. As we continued to advance, the water however constantly retreated before us and at last surrounded us. I now found that we had been deceived by mirage; the apparent islands being really such only when these plains are covered by the sea. In many places the sandy mud was so moist that we sank deeply into it, and after travelling for fifteen miles on a north-east course I could still see no limit to these plains in that direction, nor could I either then or on any subsequent occasion find the channel which connected them with the sea. The

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only mode of accounting for their being flooded is to suppose that the sea at times pours in over the low land which lies to the north of the Gascoyne, and flows northward through channels which will be seen in the chart of this part of the country; but I then believed, and still consider, that there is hereabouts a communication with some large internal water.

We saw no tracks of natives and only a few of emus and native dogs. The few portions of rising ground which lay near the edge of these extensive plains were sandy, scrubby, and unpromising; but what we saw was so little that no opinion of the country could fairly be deduced from it. We dug in several places on the flats and in their vicinity but all the water we could find was salt; whereas in the narrow range of sandhills separating them from the sea we had discovered abundance of fresh water only four or five feet below the surface of the valleys lying between these hills. As this range of more than thirty miles in length offered many geological phenomena I called it Lyell's Range in compliment to the distinguished geologist of that name; the plains themselves I named the Plains of Kolaina (Deceit).

### INDISPOSITION OF SEVERAL OF THE PARTY. SICKNESS FROM DELAY AND DISAPPOINTMENT.

On my return to the boats I found that Mr. Smith was still unwell; several other men were also complaining; I myself was wearied from exertion and disappointment that my great discovery had dwindled away: the place where we were was infested by land-crabs who kept running over us continually, and the sand which drifted before the wind got into the pores of the skin, and kept most of us in a constant state of painful irritation. The night was therefore not a pleasant one.

March 9.

Throughout the night the winds had howled loudly and the surf broke hoarsely upon the shore. The grey dawn of morning brought no comfort with it: far out to seaward nothing but broken water could be seen, and half a gale of wind blew from the south by east. The bad and insufficient food I had been compelled to eat had brought on violent sickness and other evil effects, and I found myself very ill. As the daylight advanced report after report came to me that some one of the party had been attacked by the same diseases experienced by Mr. Smith and myself.

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### EXAMINATION OF THE SHORE TO THE NORTHWARD, AND OF THE COUNTRY TO THE SOUTH-EAST.

I was only well enough to write and survey a little, but I sent off a party to a point which lay about six miles to the north of us, and they on their return reported that there was a continuation of a similar shore for the next fourteen or fifteen miles, bordered in like manner by sandy muddy plains similar to those behind the hills where we were.

This party found one of the yellow and black water-snakes asleep upon a piece of dry seaweed on the beach and killed it. The fact of this animal being found on shore proves its amphibious character. I saw them in one instance, in December 1837, so far out at sea as to be distant 150 miles from land.

Sunday March 10.

I spent a wretched night from illness and foul weather; the roaring of the surf on the shore was so loud and incessant that to one feverish and in want of quiet and rest it was a positive distress, and both Mr. Smith, myself, and half the men were at this time seriously indisposed. We had strong gales of wind all day from south by east, but in the afternoon I walked out for five miles in an east-south-east direction with such of the men as were able to move; nothing however could be seen but a continuation of the same barren, treeless country; we observed no signs of natives except tracks in the mud of a single man who had passed some months ago.

It annoyed me now to find that the silvering of the glasses of my large sextant was so much injured from the constant wettings it had experienced that this day it was almost useless. I had hoped in the course of our walk to have fallen in with some game, but we did not see a single bird with the exception of some small ones, about the size of tomtits, which flew from bush to bush along the sandhills.

### SUFFERINGS FROM HEAT AND PRIVATION.

We had a small quantity of portable soup with us, nearly all of which we used, and it in some degree restored us, but another miserable night was passed by us all and in the morning I was grieved to see how ill many of the men looked. Their situation was really deplorable and I had with me neither medicines nor proper food to

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give them. Abundance of these lay at our depot not more than forty miles from us, yet to reach it was impossible; and dawn this morning had only revealed to us a heavier surf and stronger gale from the southward than we had yet experienced. None of the men were well enough to undergo the fatigue of another day's walking, so I busied myself with making observations and taking bearings, and thus the forenoon wore away. The point of the coast on which we were lay in 24 degrees 30 minutes south latitude, and the mean temperature up to this period had been:

6 A.M. 76.

12 M. 83.

3 P.M. 87.

6 P.M. 78 degrees.

At noon a portion of some disgusting damper and a small piece of pork was served out to each of us and, having soon disposed of this, the men lay down under the side of the boats, seeking some shelter from the burning rays of a tropical sun which, being reflected back from the white sand, were very oppressive.

### AFFRAY WITH THE NATIVES.

I was occupied in sketching in a portion of the coastline, and whilst thus engaged I thought I saw the figures of two natives moving upon a hill a few hundred yards to the north of us; they appeared to me to be behind some low bushes which were close to the summit of this hill. I watched the bushes narrowly and felt nearly confident I saw them; but however to be sure beyond a doubt I got up and took my eyes from the spot for a few seconds whilst I walked to get my telescope. I then carefully examined the hill with the glass and could see nothing but the low bushes on it. "A pretty bushman I am," I thought to myself, "to be thus deceived with two old shrubs; I should have known a native better;" and with a feeling almost of annoyance at my mistake I resumed my seat on an inverted water-keg and went on with my drawing. Within a minute's time an alarm of natives was given, and starting up I saw from twenty to thirty on some sandhills to the north of us, distant about two hundred yards; their spears were fixed in their throwing-sticks and they evidently were prepared for a fray. I therefore ran to the boat for my gun, which Ruston tried to get out for me; and at this moment, on casting my eyes upwards, I saw a native start up on the sandbank not more than fifteen yards from Ruston and myself; he poised his spear for

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one second, and it then came whistling at us. I dodged and the spear flew past without my seeing what became of it. I instantly gave the order to watch the bank and to fire at anything that showed itself above it; and Mr. Walker now had got hold of his gun and very gallantly ran up the bank and occupied it: in the meantime the native who had thrown the spear caught up a bag in each hand and ran off. Several shots which were fired at the distant natives scraped up the sand so near them that they found it prudent to decamp as speedily as they could.



Drawn on Stone by Geo. Barnard from a Sketch by Fred. C. Smith Esq.

M & N Hambart Lith. Printers, 64, Chancery St. Finsbury St.

### ATTACK OF NATIVES NEAR KOLAINA PLAINS

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### CHASE AFTER STOLEN GOODS.

I found that Ruston was wounded slightly in the knee by the spear which the native had thrown, and we had also sustained a severe loss in the bags which they had carried off as one of them contained fourteen fishing-lines and several other articles of great value to us in our present position. I therefore determined upon a pursuit in the hopes of recovering these, and taking four or five men I gave chase. The long-legged natives had however considerably the advantage of



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us both in bottom, wind, and cunning; and whenever they found we gained at all upon them they strewed a few articles out of the bags upon the ground, and these it took us some time to collect; and in this manner, alternately running and stopping to pick things up, I continued the pursuit until near sunset. At this time three of us had completely outrun the rest of our party, who were far behind; the natives had also latterly made great headway, so that they were rapidly dropping us astern; we also had recovered everything but the fishing-lines (which however we could but ill spare). I therefore determined to collect my forces and return to the boats. In the ardour of pursuit I found we had come five or six miles, and it had been for some time dark when we again reached the encampment.

The natives in this attack were far too few in number to render it a very formidable affair for from five-and-twenty to thirty savages, armed alone with spears, could have availed very little against eleven resolute Europeans with fire-arms in their hands. The native who had stolen so near us was however most decidedly a noble and daring fellow: their object evidently was to possess themselves of our property; and we had had one man wounded in the fray, and had lost some fishing-lines, without gaining any reparation. I therefore felt well assured that they would pay us another visit; and thus, to the misfortunes we were already suffering under, we had the new one added of being on hostile terms with the surrounding aborigines. It moreover set in to rain hard and to blow fresher than ever just as we reached the boats. I saw that all that could be done for Ruston had been attended to, and then, lying down, tried to forget my troubles in sleep.

### CONTINUED DETENTION FROM FOUL WEATHER. DESOLATE AND GLOOMY SITUATION.

From this period up to Friday the 15th of March the wind blew strong from the southward, accompanied with such a heavy sea and tremendous surf that to move was impossible. Our position was very trying; inactivity, under the circumstances in which we were situated, was most difficult to support; for the mind, ever prone to prey upon itself, does so far more when you are compelled to sit down and patiently submit to misfortunes against which there are no means of resistance. Such was the state to which we were now reduced, on a barren and unknown coast which the foot of civilized man had never before trodden: many of my party were suffering acute bodily pain from the badness of the provisions on which they

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were compelled to subsist; the weakness of most of them, and myself amongst the number, precluded the possibility of any distant explorations being made, and we were kept in a constant state of watchfulness in order to prevent the natives from again surprising us; for they repeatedly showed themselves in our vicinity, hovering about with no friendly intentions. All that was left therefore for us was to sit upon the lonely beach, watching the winds and the waters until some favourable moment might enable us to get off and once more engage in that task of which so small a portion was as yet accomplished.

Day after day did we sit and wait for this favourable moment until the noise of the hoarse breaking surf had become a familiar sound to our ears; but the longer the men watched the more dispirited did they become; each returning day found them more weak and wan, more gloomy and petulant, than the preceding one; and when the eighth day of constant and fruitless expectation slowly closed upon us I felt a gloomy foreboding creeping over me.

By making observations, drawing, writing up my journal, etc. I had managed hitherto to keep my mind employed. I had also tasked my ability to the utmost to constantly invent some occupation for the men, but my resources of this nature were now all exhausted; and on Friday night I stretched myself on the sand, not to sleep, but to brood, throughout the weary night, on our present position.

### CONSOLATIONS OF RELIGION.

It may be asked if, during such a trying period, I did not seek from religion that consolation which it is sure to afford? My answer is, Yes; and I farther feel assured that, but for the support I derived from prayer and frequent perusal and meditation of the Scriptures, I should never have been able to have borne myself in such a manner as to have maintained discipline and confidence amongst the rest of the party: nor in all my sufferings did I ever lose the consolation derived from a firm reliance upon the goodness of Providence. It is only those who go forth into perils and dangers, amidst which human foresight and strength can but little avail, and who find themselves, day after day, protected by an unseen influence, and ever and again snatched from the very jaws of destruction by a power which is not of this world, who can at all estimate the knowledge of one's own weakness and littleness, and the firm reliance and trust upon the goodness of the Creator which the

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human breast is capable of feeling. Like all other lessons which are of great and lasting benefit to man this one must be learnt amid much sorrowing and woe; but, having learnt it, it is but the sweeter from the pain and toil which are undergone in the acquisition.

PUT TO SEA.

March 16.

A great portion of Friday night was passed by me in walking up and down the beach, anxiously looking out seaward; and it appeared to me about three o'clock that the wind had much abated; from this period until dawn it continued gradually to subside: and as daylight stole in I saw that the surf had somewhat fallen. I resolved at all events to lose no single chance that offered itself in our favour, so I turned all hands out, and in a few minutes the boats rode triumphantly beyond the surf, which was indeed much heavier than I expected to have found it, and my boat was nearly filled in passing the outer bar: but now the surf was behind us, and it is the nature of man to laugh at perils that are past. Our thoughts too were soon called to present difficulties, for a tremendous sea was running outside, the wind directly in our teeth, and every moment freshening again. Throughout the whole of Saturday the men toiled incessantly at their oars, and when it wanted about an hour to sunset we had only made about seven miles and a half of southing.

COMPELLED AGAIN TO BEACH THE BOATS.

The wind had again increased to such a degree as to endanger our safety, and it appeared to freshen as the night came on. I therefore had no resource left but again to beach the boats on this dangerous coast. Once more, then, was the scene repeated of dancing in a boat with maddening speed upon furious rollers, until these break and it is borne in, followed by a mass of foam far higher than the stern, which appears eagerly to pursue for the purpose of engulfing it.

BEACHING BOATS.

There is no scene in nature more exciting or which in a greater degree calls forth one's energy than the beaching of a boat in a dangerous surf. Never did I on such occasions take the steer-oar for the purpose of running the boat in but many contending feelings rushed through my mind, and after a few moments settled down

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into the calm which springs from the conviction that the general safety in coming dangers depends altogether upon the coolness and resolution with which they are met, and never more so than in beaching a boat when once you are among the foaming waters; in you must go; to retreat is impossible, and nothing is left but that each one silently and steadily do his duty, regardless of the strife and din of raging waves around. The only plan to adopt is for all to give way strongly and steadily, let what will take place, whilst the boat-steerer keeps her head straight for the beach. A huge roller breaks right into the boat and almost swamps it, a man is knocked over and loses his oar, heed not these things; let each man mind his own oar and nought else, and give way give way strongly, until the boat grounds, then in a moment each quits his oar and springs into the water, and ere the wave has retired the boat is partially run up; another wave succeeds, and the operation of running up is repeated until she is high and dry. Had our boats been swamped in the surf, even if we had escaped with our lives, our position would have been fearful; left without food or resources in an unknown and savage country so far beyond the reach of man's assistance. When therefore I again saw the boats safely beached, and my little party drying themselves over a fire, my breast filled with thankfulness to that Providence who had again watched over our safety.

### ADJACENT COUNTRY EXPLORED.

Sunday March 17.

It blew half a gale of wind from the southward all night, and next morning such a surf was breaking upon the beach that to have attempted to move would have been madness. Here we were therefore once more kept prisoners upon this dreary coast; the country was exactly similar to that lying immediately to the north of it, with these two exceptions, that the range of sandhills was less elevated, and that we could not here find fresh water. The morning was passed in searching for it; in the middle of the day I read a few appropriate chapters in the Bible to the men, and in the afternoon I explored the country but discovered nothing whatever of an interesting nature.

### LAUNCH THE BOATS, AND ENTER NORTHERN MOUTH OF THE GASCOYNE. CHARACTER OF THE COUNTRY.

March 18.

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The wind was much lighter this morning and the surf not so heavy; we made a successful attempt to launch the boats just before sunrise. The wind still blew from the southward, and we found a heavy sea running outside. The men however exerted all their energies and just before sunset we reached the northern mouth of the Gascoyne, and found a very good passage into it with twelve feet water at low ebb-tide; but the other boat, not following our track, stuck fast on a sandbank, where she was soon left high and dry, and the tide fell so fast that we had a great deal of trouble in getting her afloat again.

### BABBAGE ISLAND.

The bar once passed there are three and three and a half fathoms in this land-locked creek even at low water; the portion of Babbage Island which is between it and the sea appears to be nothing but a shifting bed of sand, and the mainland a delta, covered with mangrove swamps and brackish lagoons, at least for about a mile back.<sup>22</sup> We lay down upon the sand close to the boats, which were left at anchor with a boat-keeper in each, and found great difficulty in collecting driftwood enough to make our fires.

March 19.

The wind still blew pretty fresh from the southward; we however had no surf to impede us and therefore got under weigh soon after dawn. The men pulled away cheerfully and, although this was very hard work on account of the headwind and sea, we experienced no great difficulty until we had rounded Point Whitmore, at the north of Babbage Island, where we all at once found ourselves in broken water, so very shoal that between each breaker the boat was bumped with great violence against the bottom, and must have been very soon stove in had we not speedily got into deeper soundings.

### ANCHOR IN SOUTHERN ENTRANCE OF THE RIVER.

About 2 P.M. we neared the southern mouth of the Gascoyne, pulled two miles up it, and anchored about a mile and a half to the south of our former position. The men, although it was very warm and they had been pulling hard all day, had as yet only had about a wine-glass full of water each, I therefore lost no time in sending off a watering party; and the remainder of us collected samphire which grew abundantly hereabouts and forms a fair article of food for hungry men.

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The remainder of the evening was occupied in completing our water and in endeavouring to get a shot at some pelicans, but although numerous they were too wary, and my feet were covered with such dreadful sores from bad diet and being constantly in the salt water that I could not walk to any great distance in search of game.

### COMPLETE OUR WATER.

The completion of our supply of water was a very great matter and, as we had now got so far to the southward as to make our fetching the northern extremity of Bernier Island almost a matter of certainty, however strongly it might blow, I determined to effect the passage the next day. Indeed I could not have delayed it for our provisions, bad as they were, were almost exhausted, and the men were already much reduced from the scarcity and bad quality of their food.

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### CHAPTER 17. FROM THE GASCOYNE TO GANTHEAUME BAY.

#### SAIL FROM THE GASCOYNE.

March 20.

When we pulled out of the Gascoyne this morning the first streak of dawn had not lit up the eastern horizon, we however managed by creeping along the southern shore to get out to sea, and there anchored until it was light enough to see the compass. I found a very heavy sea running outside and a strong breeze blowing from the southward; at this time however there was nothing which in my opinion rendered it too hazardous to risk the passage, more especially being pressed as we were by the want of food. The distance across to Bernier Island from the point of the main where we were was about ten miles further than it is from Dover to Calais. Our boats were in very bad repair, and the landing on the other side was by no means good. I therefore certainly would not have ventured to make the passage in a gale of wind; but the weather did not seem threatening and it had been for many successive days blowing as hard as it was when we started.

#### CAUGHT IN A GALE OF WIND.

We might have gone nine or ten miles when the wind suddenly increased, and ere we had made five more it had become a perfect gale and we were obliged to keep the boats close hauled, for had we run ever so little before the wind we should not have fetched Bernier Island, and consequently should have been blown right out to sea. We had nothing therefore now to do but to struggle for it, and to use every energy to save ourselves. Sea after sea broke into the boat but the water was as rapidly baled out: none could have behaved better than the crews of both boats did, and the whole scene was one of such constant, cheerful, and successful exertion that, great as our danger was, I do not recollect ever having a keener perception of the pleasure of excited feelings, or a more thorough revelry of joyous emotions, than I had during this perilous passage.

#### REACH BERNIER ISLAND.

Bernier Island at last rose in sight and amidst the giant waves we occasionally caught a peep of its rocky shores; but we were so tossed to and fro that it was only now and then that from the summit of

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some lofty sea we could sight a high shore which was not more than four or five miles from us. We had made the island about five miles from its northern extremity, and I ran along the shore until I found a convenient landing-place about a mile and a half to the south of our old one.

### CHANGE IN THE LAND.

It was perfectly sheltered by reefs and an island, but it surprised me that I had not remarked this cove on my previous visit to the island, and I was still further astonished to see now three new small rocky islands, of which I had no recollection whatever. Indeed the men all for a long time stoutly denied that this was Bernier Island and, had we not now sighted Kok's Island, I should have doubted my skill in navigation and made up my mind that I had fallen into some strange error; but as it was forebodings shot across my wind as to what pranks the hurricane might have been playing upon the island, which consisted of nothing but loose sand heaped upon a bed of limestone rock of very unequal elevation.

I ran in my own boat upon a convenient point of the beach and the other boat followed in safety, for I did not like, in such foul weather, to leave them at anchor on a lee shore, which had previously proved so unsafe a position. A most awkward question now presented itself to my consideration: from the altered appearance of the coast I felt very considerable doubts as to the state in which the depot might be found; supposing anything had occurred to it I felt that it would be unadvisable that such a discovery should be made in the presence of many persons; as future discipline would in a great measure depend upon the first impression that was given. Who, then, had I better select for the purpose of visiting the depot in the first instance? After some deliberation I made choice of Mr. Smith and Corporal Coles, in the courage, disinterestedness, and self-possession of both of whom I placed great confidence. I directed Mr. Walker to see certain little alterations made in the boats before the men were allowed to straggle; these I knew would occupy them for some time and leave me therefore during this interval free to think and act according to circumstances. I now called Mr. Smith and Corporal Coles to accompany me, and told Coles to bring a spade with him.

### DESTRUCTION OF THE DEPOT OF PROVISIONS. SYMPTOMS OF CALAMITY.



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Before we had gone very far alarming symptoms met my eyes in the form of staves of flour casks scattered about amongst the rocks, and even high up on the sandhills. Coles however persisted that these wore so far inland that they could only have come from the flour casks which we had emptied before starting. I knew they were far too numerous for such to be the case, but I suppressed my opinion and made no remarks. We next came to a cask of salt provisions, washed high and dry at least twenty feet above the usual high-water mark: the sea had evidently not been near this for a long period as it was half covered with drift sand which must have taken some time to accumulate. This Coles easily accounted for, it was merely the cask which had been lost from the wreck of the Paul Pry. I still thought otherwise but said nothing.

At length we reached the spot where the depot had been made: so changed was it that both Mr. Smith and Coles persisted it was not the place; but on going to the shore there were some very remarkable rocks, on the top of which lay a flour cask more than half empty, with the head knocked out, but not otherwise injured; this also was washed up at least twenty feet of perpendicular elevation beyond high water mark. The dreadful certainty now flashed upon the minds of Mr. Smith and Coles, and I waited to see what effect it would have upon them. Coles did not bear the surprise so well as I had expected; he dashed the spade upon the ground with almost ferocious violence, and looking up to me he said, "All lost, Sir! we are all lost, Sir!" Mr. Smith stood utterly calm and unmoved; I had not calculated wrongly upon his courage and firmness. His answer to Coles was, "Nonsense, Coles, we shall do very well yet; why, there is a cask of salt provisions and half a cask of flour still left."

I now rallied Coles upon his conduct; compared it with that of Mr. Smith, and told him that when I had taken him on to the depot in preference to the other men it had been in the expectation that, if any disaster had happened, he would, by his coolness and courage, have given such an example as would have exercised a salutary influence upon the others. This had the desired effect upon him; he became perfectly cool and collected and promised to make light of the misfortune to the rest, and to observe the strictest discipline. I then requested Mr. Smith to see the little flour that was left in the barrel and on the rocks carefully collected by Coles, and, leaving them thus engaged, I turned back along the sea shore towards the party; glad of the opportunity of being alone as I could now commune freely with my own thoughts.

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### ALARMING POSITION AND PROSPECTS. REPAIR DAMAGES, AND RETURN TO THE MAIN.

The safety of the whole party now depended upon my forming a prompt and efficient plan of operations, and seeing it carried out with energy and perseverance. As soon as I was out of sight of Mr. Smith and Coles I sat down upon a rock on the shore to reflect upon our present position. The view seawards was discouraging; the gale blew fiercely in my face and the spray of the breakers was dashed over me; nothing could be more gloomy and drear. I turned inland and could see only a bed of rock, covered with drifting sand, on which grew a stunted vegetation, and former experience had taught me that we could not hope to find water in this island; our position here was therefore untenable, and but three plans presented themselves to me: first, to leave a notice of my intentions on the island, then to make for some known point on the main and there endeavour to subsist ourselves until we should be found and taken off by the Colonial schooner; secondly, to start for Timor or Port Essington; thirdly, to try to make Swan River in the boats.

### CONSOLATIONS OF RELIGION.

I determined not to decide hastily between these plans and, in order more fully to compose my mind, I sat down and read a few chapters in the Bible.

By the influence these imparted I became perfectly contented and resigned to our apparently wretched condition and, again rising up, pursued my way along the beach to the party. It may be here remarked by some that these statements of my attending to religious duties are irrelevant to the subject, but in such an opinion I cannot at all coincide. In detailing the sufferings we underwent it is necessary to relate the means by which those sufferings were alleviated; and after having, in the midst of perils and misfortunes, received the greatest consolation from religion, I should be ungrateful to my Maker not to acknowledge this, and should ill perform my duty to my fellow men did I not bear testimony to the fact that, under all the weightier sorrows and sufferings that our frail nature is liable to, a perfect reliance upon the goodness of God and the merits of our Redeemer will be found a sure refuge and a certain source of consolation.

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In pursuing my route along the beach I carefully examined every heap of seaweed which the waves had thrown up, and was fortunate enough to find a bag of flour which had been washed up by the tide and held there by some rocks; though from daily soaking in salt water for several weeks it was quite spoilt and fermented, and smelt like beer; yet this, under present circumstances, was more valuable than its weight in gold. Just after I had found this bag, I met Ruston and another man coming from the boats to the depot; I at once told them exactly how matters stood; they bore the announcement better than I could have hoped for, and when I showed them that their safety altogether depended on their good conduct they promised the most implicit obedience and a ready cheerful demeanour. I must do Ruston the justice to say that under every trial he most scrupulously adhered to the promise he then made, and never infringed upon it in the slightest degree.

### CONDUCT OF THE MEN.

When I reached the party and told the tale of the total disappearance of all we had left at the depot blank and dismayed faces met me on all sides. Mr. Walker and Corporal Auger set an excellent example to the others; but two men, of the names of Harry and Charley Woods, seized the first convenient opportunity of walking off to the place where our miserable remnant of damper was deposited with the intention of appropriating it to themselves. I only waited till they actually laid their hands upon it, when I stopped them, placed a sentry over what provisions were left, ordered a survey of all stores to be held, and a report to be made to me; and then went off with a party to search the shore in the hope of finding any other things which might have been washed up: our search however proved quite unsuccessful.

### CHOICE OF PLANS.

I had warned the men that at sunset I would inform them what my intentions were with regard to our future movements; and in the meantime all hands were employed in searching for provisions or in preparing the boats for sea. A very gloomy prospect was before us: the men were already much reduced from illness, from using damaged provisions, and from hard work and exposure combined: our boats were in a very leaky unsound state, whilst all means of efficiently repairing them had been swept away in the hurricane. Add to this that the only provisions we had left really fit to eat were

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about nine days' salt meat, at the rate of a pound a man per diem, and about sixty pounds of tolerably good flour.

It would be useless to detail the different reasons which induced me to adopt the plan of endeavouring to make Swan River in the whale boats; this was however the course I resolved to pursue. Its principal advantages were that we should be constantly approaching home; and that if any accident should happen to the boats we might always hope to reach Perth by walking: the principal objection to it was the prevalence of strong south-east winds. At sunset the party assembled. I detailed to them at considerable length the three most feasible plans which had offered themselves to me, the reasons which had made me reject two of them, as well as those which led me to adopt the third; and as I knew that there were two or three insubordinate characters amongst the men, whom I had picked up at Fremantle, I further told them that, if a sufficient number to man one of the boats objected to follow me, they could go their own way; as the success of my scheme would altogether depend upon the courage and subordination with which it was carried out. No dissentient voice was however raised, but they all promised to follow me wherever I might lead. We now made arrangements for searching for turtle during the night, and then stretched ourselves on the sand to try and sleep.

March 21.

We were unfortunate in not catching a turtle during the night; the season for them had however now passed away, so that we could only hope to cut off a stray one which might have lingered behind its fellows. The next day was occupied in sticking up a steer-oar with a tin canister attached to it, containing a letter in which was detailed the plan I intended to follow, so that in the event of any accident occurring, and our remaining on the coast, we might still have the chance of a vessel being sent to search for us. The men were occupied in looking for shellfish, drying the flour, and preparing the boats. It blew nearly a gale of wind from the south throughout the day.

RETURN TO THE MAIN.

March 22.

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This day at two P.M., all our preparations having been completed and the wind somewhat moderated, we stood across the bay, and soon after nightfall made the main about twelve miles to the north of the northern mouth of the Gascoyne. The wind freshened a great deal during the night; but as it was impossible to beach boats on so dangerous a coast in the dark we were obliged to trust to the goodness of our anchors, and they did not disappoint us.

March 23.

Before dawn this morning we were under weigh and pulling dead to windward against a strong breeze and heavy sea; the men rowed almost without intermission until noon when, finding them completely exhausted, I made sail and stood in towards the shore. When we had approached the land about four miles to the north of the Gascoyne a party of natives came down, without their spears, in the most friendly manner, making signs to us to land. We had however but little time to spare, and could not afford to give them any provisions: knowing also the small dependence that can be placed upon them in a first interview, I thought it most prudent to decline their invitation.

COMPLETE OUR WATER.

We accordingly continued our route and in the course of the evening made the river, where we completed our water, and halted for the night. We saw nothing more of the natives here, but I feel convinced that in the event of a settlement being formed at this point no difficulty would be found in establishing and maintaining the most friendly relations with them.

ANCHOR TO THE NORTH OF THE GASCOYNE.

March 24.

The morning did not promise very well, but soon after sunrise the wind shifted so much to the westward that we were able to run along shore, and in the course of the day we made altogether about forty-five miles, tracing the greater part of the remaining unknown portion of the shores of Shark Bay. On leaving the Gascoyne, a low point bore due south of us, distant about twelve miles, which I named Point Greenough after George Bellas Greenough, Esquire, the president of the Royal Geographical Society; and between this point

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and the river lay a deep bay, the shores of which were low and thickly studded with mangroves, through which many saltwater creeks ran up into the country. Two of these creeks I had examined on a previous occasion, and therefore now paid no attention to them.

### EXAMINE THE COAST TO THE SOUTHWARD. ITS CHARACTER.

After passing Point Greenough the shore trended south by east and for the next eight miles preserved its low character, being still thickly wooded with mangroves; but at this point a remarkable change takes place as the mangroves suddenly cease, and the low range of hills which extends southward along the coast parallel to the shore increases a little in height. In about another mile the mangroves again commence, the coast now trending south-east; and about five miles further it runs south-east by east, forming a bay about four miles deep, the bottom of which is tolerably clear of mangroves.

### CONTINUE OUR COURSE TO THE SOUTHWARD.

Having crossed this bay we ran south-east by south parallel to the shore; the mangroves now became less continuous and numerous, at least they appeared to us to be so, and the range of hills seemed also to approach much nearer to the sea. We continued on this course until sunset, when I selected a snug little bay in the mangroves, where we anchored at the distance of a few yards from the shore and made ourselves as comfortable as we could for the night.

### CHARACTER OF THE COAST AND SEA.

There was great beauty in the scenery which we saw during the day's sail; the waters and the sky had that peculiar brilliancy about them which is only seen in fine weather and in a tropical climate. To the west of us lay an apparently boundless expanse of sea, whilst to the eastward we had a low shore fringed with trees, not only down to the water's edge but forming little green knolls of foliage in the ocean itself; behind these trees lay low wooded hills, and in front of them stalked and swam about pelicans and waterfowl in countless numbers. We had only about three feet depth of clear transparent water, through which we saw that the flats beneath us were covered with vivid coloured shells of many genera, some of which were of a very large size; strange-looking fish of a variety of kinds were also sporting about; more particularly sharks of a new species (of that kind which I shot at in mistake for an alligator) and stingrays.

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Whenever a lull occurred the men, unable to resist the chance of getting a meal, would jump out of the boat, and give chase to one of these sting-rays, boat-hook in hand, and then loud peals of laughter rose from the others as the pursuer, too anxious to attain his object, missed his stroke or, stumbling, rolled headlong in the water. The fineness of the day, the novelty of the scenery, and the rapid way we were making made the poor fellows forget past dangers, as well as those they had yet to undergo. My own meditations were of a more melancholy character, for I feared that the days of some of the light-hearted group were already numbered and would soon be brought to a close. Amidst such scenes and thoughts we were swept along, whilst this unknown coast, which so many had anxiously yet vainly wished to see, passed before our eyes like a panorama or a dream, and, ere many years have hurried by it is probable that the recollection of this day will be as such to me.

### BOAT LEFT AGROUND BY THE TIDE.

March 25.

This morning I was up early in order that we might lose no time in getting under weigh; I was much surprised however to find both boats aground, and when the day had dawned sufficiently to enable me to distinguish surrounding objects I could not make out the sea, but found that we were lodged in a regular mangrove bush. I walked a few yards to get a clear view to the westward and found that we were at least a mile inland, so far does the tide run in over this low level shore. My eyes were so sore that I could scarcely see and I therefore did not attempt to make an excursion into the country, but sent a party for this purpose, who ascended the first low range of hills and reported that the country as far as they could see to the eastward was a succession of low mud flats subject to the overflowings of the sea. There was a promising-looking creek immediately to the south of us.

The tide came very slowly in until ten o'clock, which was about the time of high-water: but here it had only half risen and remained stationary for some time, when it began to ebb again, but soon meeting the second flood, now came pouring rapidly in, and just before sunset there was water enough for us to get off. We pulled to a low point, distant about two miles, and which bore south by east from us; and having anchored off this waited for the morning dawn to pursue our voyage.

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### CONTINUE A SOUTHERLY COURSE.

March 26.

In the morning I found that the point we were anchored off ran south-east and north-west: it was about two miles long and formed a low spit of land whence the coast trended due south. I debated for a few minutes whether I should explore the creek which lay to the south of us, but decided in the negative. Had I followed my own wishes I should have done so, but the lives of others now depended on my incurring no unjustifiable delay, and it did not therefore appear to be of importance; besides, as we had now traced the unknown portions of this great bay, and had moreover discovered in it a country in every way fitted for immediate occupation, and which indeed appeared from its soil and position to be one of the most valuable portions of the western side of the Continent, I thought that everything worthy of any great risk or danger had been accomplished, and resolved to hurry homewards.

### STEER FROM THE MAIN.

After following the coast for a few miles further to the south I considered we were now far enough to windward to fetch somewhere near the centre of Perron's Peninsula; I therefore made sail and steered for that point.

### ANOTHER GALE OF WIND.

Our passage across was a long and tedious one, and when at last towards evening we sighted Perron's Peninsula it was very evident that my boat would not do more than fetch the very northern point, but the other boat, which was a much better sailer, was nearly a mile to windward of us. The weather had been for the last hour or two very threatening, and we had reached to within two miles of the shore when the wind suddenly shifted to the south-west and began to blow a terrific gale. We had just time to down sail and take to the oars, and as every one of the crew saw that his life depended on it they gave way strenuously. We were under the lee of the Peninsula and had it not been for this circumstance must undoubtedly have been lost. That gale of wind was a terrible and magnificent sight. I stood at the steer oar; the waves lifted the boat each time nearly broadside on, and it was all I could do to bring her head round in time to meet the next sea, but the men pulled steadily. "Now men,



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give way for your lives," I called out if they flagged, and renewed energy was instantly infused into all of them. At times we could not hold our own against the wind and waves, and at the most favourable moments seemed merely to stand still. I looked at the shore until my eyes ached; but no nearer did it appear to be than at first, and gradually grew less distinct as the daylight faded. We could only see the other boat now and then; but although she was evidently in imminent peril they were much nearer in shore than we were. The danger we underwent on this occasion was great; but the excitement of so wild and grand a scene was highly pleasurable, and when success at last crowned our exertions, and we went dancing wildly in through the surf and spray upon a rocky unknown shore, and found the other crew on the beach ready to help us in hauling up, I felt that there is a charm attached to scenes like these which can only be fully estimated by those who have experienced it. Having in our turn assisted to haul up the other boat we lighted our fires and laid down for the night.

### PERRON'S PENINSULA.

March 27.

This morning I found that all our hands were so fatigued by the exertions of the previous day that a few hours of comparative rest was absolutely necessary. I therefore directed them to stroll about the beach for an hour or two and to collect oysters or shellfish. The part of Perron's Peninsula which we were on consists of abrupt cliffs of the height of about two hundred feet; at the base of these and between them and the sea there is a narrow strip of sandy land and dunes, and at their summit is a barren sandy tableland, gently sloping away to the southward and appearing to extend throughout the whole length of the peninsula.

As soon as I thought the men were sufficiently rested we launched the boats, but on rounding the northern extremity of the peninsula met a heavy sea running from the southward and were obliged to take to the oars. We had not got more than two miles to the southward of Cape Leseuer when I saw so many indications of an approaching gale that I ran in again and beached the boats; and this operation was hardly accomplished ere it blew with terrific violence from the south-south-west. Both here and at our last night's encampment we saw numerous signs of natives, and now found several native wells in the sandhills, but had no occasion to use them

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as we had regular tropical rain for the rest of the day. The men here brought me the bones of a very large marine animal which they had found at the natives' fire, but I could not recognise them as belonging to any that I was acquainted with. At this period, from bad food and being constantly wet with salt water, we were all afflicted with sores of the most painful and annoying character, and these much increased the unpleasantness of our situation.

### ANOTHER GALE.

March 28.

This morning the weather looked tolerably fine; I therefore ordered the boats to be launched and, after pulling a few miles to windward along Perron's Peninsula, we struck across for Dirk Hartog's Island; our former ill-luck however still attended us, for just as we were making the land another fearful gale from the south-south-west came on, and had we not had the good luck to have got under the lee of the Coin de Mire of the French we must infallibly have been wrecked; as it was we pulled along under this promontory and beached the boats in a little bay at its north-west extremity. Nothing but absolute necessity could however have induced me to take such a step, for the place was rocky and difficult of access, with a heavy surf breaking on the beach. The rain fell in torrents during the greater part of the evening, and the men spent the time in searching for oysters and shellfish with which to appease their hunger. The rain which had fallen during the last two days had a very injurious effect upon some of us, for, our clothes having been lost with the other things which were swept away from the depot during the hurricane of the first of March, we were very insufficiently clad.

### DIRK HARTOG'S ISLAND.

March 29.

The weather this morning being very foul I occupied myself in making a survey of a portion of Dirk Hartog's Island, which is of a very barren nature, though rather better than either Bernier or Dorre Islands, but for many years to come it must be utterly useless. It looks exactly like a Scottish heath; and I have no doubt whatever that water would be found by digging on it; but as we could have obtained plenty from large holes in the rocks we did not make the attempt. Whilst I was occupied in this examination of the island the

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wind shifted suddenly to the north-west and I hurried back to the party in order not to lose so favourable an opportunity.

On arriving at the boats I found that the water had not been completed, nor had three days' provisions (such as they were) been cooked, although I had left orders when I went away that these necessary preparations for our moving should immediately be made; this gave me another reason to suspect that, during my temporary absence from the party, discipline was now altogether neglected, and indeed treated as an unnecessary restraint under existing circumstances. Mr. Smith had warned me that such was the case, and I therefore never separated myself from any portion of the party without great anxiety; for I well knew that the safety of all depended upon preserving the strictest subordination.

In this instance however I merely ordered the boats to be instantly launched; for I knew that to lose a fair wind in our present situation would be rashness; and we were soon bounding before the breeze. The wind now continued fair and at nightfall we landed on the main in such a position as to look out to the open sea, through the passage between Steep Point and Dirk Hartog's Island.

### PERILOUS COASTING.

March 30.

This morning we pulled up the opening and found a perfect bubble of a sea running into it and breaking on the various reefs which lie in its mouth. We then made an attempt to pull round Steep Point and succeeded in getting out to sea; but there was a formidable swell setting dead on the shore and drifting us rapidly in towards it, whilst in the event of being stranded nothing could have saved our lives for the surf was so tremendous that the boat must instantly have gone to pieces, and the lofty limestone cliffs were perfectly inaccessible, being hollowed out into deep caverns by the action of the waves. The attempt to get along this coast appeared indeed to be so hazardous that even the old sailors who were with me begged me not to risk it, but rather to allow them to endeavour to walk overland to Perth. I was well aware that had I attempted to do this at least half the party would have been lost; for but few men can support the fatigue of making long and continuous marches in a very warm climate in which a great scarcity of water prevails.

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### SHELTER UNDER A REEF.

I however humoured them so far as to put back for the mouth of the opening, where, under the shelter of a reef, we could lie at anchor for a few hours in the hope that the sea would lull a little; we however only just cleared Steep Point, and whilst doing so I felt certain for two or three minutes that we must have gone ashore, for each breaker lifted the boat bodily towards the cliffs; as it was however it pleased Providence to bring us safe to our anchorage.

We were now about to enter on the most perilous part of our journey homewards. For the next one hundred and twenty miles along the coast I could not hope to find a place whereon to beach the boats, in the event of our meeting with those unfavourable winds which we had hitherto found so prevalent. It would, in the present weak state of the party, take us many successive days to make this passage; and, should the weather be really foul, accompanied by strong gales from the south-west, our fate would soon have been decided. Nevertheless our hope of ultimate safety rested altogether upon the accomplishment of the difficult task we were about to commence.

### INSUBORDINATION CHECKED.

I soon found that remaining in a state of inactivity would but increase our difficulties; for as the men talked over them to one another, they grew wore and more gloomy, and when at length I gave a particular order to a man of the name of Woods he quietly refused to obey it, saying that he now considered that his life was altogether lost, and that he would therefore knock off work. I was rather puzzled for a minute or two as to how I ought to act under these circumstances, for such an example as he had set necessarily exercised a bad influence over the others; yet there was no use in threatening to punish where I had not the means to do so; I therefore merely turned round to the man who had the charge of sharing out our scanty allowance of provisions and desired him to divide Woods' portion of water and provisions amongst the rest of us today, as I intended for the future that he should have none, at all events not until he did his fair share of work. This had the desired effect; he soon came to his senses and told me that I might as well throw him overboard at once as starve him, to which I replied that unless he overcame his cowardice and bore his proportion of the toil we all had to go through I should in no way whatever interfere with his starving, being thrown overboard, or anything else; but that I

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would take very good care that he had neither a morsel to eat or a drop of water to drink; whereupon he again resumed his duty and from that time forward proved to be one of the best men I had with me; indeed I never again had occasion to find fault with him.

Seeing however what a pernicious effect this delay was likely to produce I determined at once to cope with those difficulties, which we must either overcome or perish; and accordingly round Steep Point we again went, and for the rest of this evening and night contended with the heavy sea as well as we could, keeping about a mile from the shore, sometimes pulling and sometimes getting a favourable slant of wind.

March 31.

This day we continued our course, tracing out the shore. A small piece of raw pork was served out to each man; and I found this to be a very nice and palatable morsel; it however increased our thirst, which, as we were upon very short allowance of water, was rather a disadvantage; but it was absolutely necessary that we should take some nourishment.

### CHARACTER OF THE SHORE.

The country hereabouts is very uninviting, consisting of a high range of barren limestone hills, ascending gradually from steep cliffs which form the coastline. These hills are of such equal elevation that they have a monotonous as well as barren appearance, and are rent in places by deep rocky gullies which run down into the sea. No change whatever took place in the character of the coast throughout our day's run, nor did I see a spot where a boat could land. I did not close my eyes during Sunday night, for we were still in a most perilous position, and I felt that whilst we were on so dangerous a coast with a foul wind it was my duty to keep upon the alert as long as wearied nature would admit of my so doing.

As soon as there was sufficient light for me to distinguish the coastline I found that it was somewhat losing its monotonous character by breaking into more detached hills; and about ten A.M., we reached the northern extremity of Gantheaume Bay.

### TO GANTHEAUME BAY.

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The men being now completely worn out by want of rest, incessant exertion, and the mental anxiety they had undergone in the last fifty-six hours, during the whole of which time they had been in actual danger, I determined to attempt a landing in Gantheaume Bay, and therefore pulled along shore with the intention of finding a spot where we could easily land and yet be near a place likely to afford us water; for notwithstanding the economy we had practised none now was left. I soon came to an opening in the bay which I thought would suit our purpose, but Ruston, on whose opinion in such matters I placed great reliance, reported it to be utterly impracticable; we still therefore pulled along the shore, and found it lashed throughout its whole extent by a fearful surf. The south end of the bay, although protected by a reef, had just as heavy a surf breaking on it as any other part of the shore and was also very rocky, we therefore turned back to a sandy beach which we had passed in pulling round the bay and, having carefully examined this, it appeared in every way suited to our purpose, so we committed ourselves to the mercy of the breakers and in we went. As I stood at the steer-oar I saw that this was a heavier surf than we had ever yet been in. We were swept along at a terrific rate, and yet it appeared as if each following wave must engulf us, so lofty were they, and so rapidly did they pour on.

### WRECK OF ONE OF THE BOATS.

At length we reached the point where the waves broke; the breaker that we were on curled up in the air, lifting the boat with it, and when we had gained the summit I looked down from a great height, not upon water, but upon a bare, sharp, black rock. For one second the boat hung upon the top of the wave; in the next I felt the sensation of falling rapidly, then a tremendous shock and crash which jerked me away amongst rocks and breakers, and for the few following seconds I heard nothing but the din of waves whilst I was rolling about amongst men, and a torn boat, oars, and water-kegs, in such a manner that I could not collect my senses.

END OF VOLUME 1.

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### VOLUME 2.

#### CHAPTER 1. FROM GANTHEAUME BAY TO THE HUTT RIVER.

##### WRECK OF THE SECOND BOAT IN GANTHEAUME BAY.

A few moments were sufficient to enable us all to recollect ourselves: two men endeavoured to keep the boat's stern on to the sea, whilst the rest of us lightened her by carrying everything we could on shore, after which we hauled her up. The custom had always been for the other boat to lie off until I made the signal for them to run in, and it accordingly was now waiting outside the breakers. Her crew had not seen our misfortunes owing to the height of the surf, which, when we were under it, shut us out from their view, and now perceiving that we were on shore and the boat hauled up, they concluded all was right; and notwithstanding I made every possible sign to them not to beach, running as far as I could venture into the sea and shouting out to them, my voice was drowned by the roar of the surge, and I saw them bounding on to, what I thought, certain destruction. We of course were all turned to render assistance. They fortunately kept rather to the south of the spot on which we had beached, and where it was much less rocky, so that the danger they incurred in reaching the shore was slight in comparison to ours; yet some of the planks of this boat were split throughout their entire length.

##### EXPLORE IN ITS VICINITY. COUNTRY ABOUT GANTHEAUME BAY. GEOLOGICAL REMARKS. CROSS A DISTRICT OF RED SANDSTONE.

Whilst all hands were employed in endeavouring to repair damages I ascended a hill to reconnoitre our present position and found we were in a country of a pleasing and romantic appearance, and although the land was not good the nature of the soil made me aware that we were most probably in the vicinity of a large tract of better quality; indeed this was the only part of South-west Australia in which I had met with the ancient red sandstone of the north-west coast; immediately behind the sandhills on which I stood was a thick Casuarina scrub which sloped down into a deep valley, and beyond this rose lofty and fantastic hills. After I had for some time looked round on this scene I returned to the party and received the report of the carpenters, who, having examined the boats, stated their inability to render either of them fit for sea. To this I had already made up my

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mind; and even if the boats had been uninjured I doubt whether we could ever have got them off again through the tremendous surf which was breaking on this part of the shore; whilst to have moved them to any distance would, in our present weak and enfeebled state, have been utterly impossible.

### ESTUARY AND LANDING-PLACE AND SCENERY ABOUT IT.

No resource was now left to us but to endeavour to reach Perth by walking; yet when I looked at the sickly faces of some of the party and saw their wasted forms I much doubted if they retained strength to execute such a task; but they themselves were in high spirits and talked of the undertaking as a mere trifle. I gave orders for the necessary preparations to be made and then started with two or three hands to search for water. On reaching the valley I have before mentioned we found a small stream, and following this to the northward for about a mile came out upon one of the most romantic and picturesque-looking estuaries I had yet seen: its shores abounded with springs and were bordered by native paths, whilst the drooping foliage of several large sorts of *Casuarina*, the number of wild swans on its placid bosom, and the natives fishing in the distance, unconscious of our presence, imparted to the whole scene a quiet and a charm which was deeply felt by those who had now for so many days been either tossed about by the winds and waves or had long been wandering over barren and inhospitable shores. We did not indeed find much good land about this estuary, but there were rich flats upon each side of it, whilst the nature of the rocks and the lofty and peculiar character of the distant hills gave promise of the most fertile region I had yet seen in extra-tropical Australia.

We followed the shores of the estuary to the northward and eastward until we saw a point where it appeared to separate into two branches. The natives decamped as soon as they observed us coming, and Kaiber, who watched them with the most intense interest, indulged in various speculations as to the number they would bring back when they returned. We joined the party and traced the shores of the estuary to its mouth, which turned out to be the opening we saw in the morning: this mouth is completely sheltered by a line of breakers and reefs, which, although they present a most formidable appearance from the sea, can be doubled by keeping pretty close along the shore in approaching the mouth of the river. Owing to this reef there are no breakers on the bar, but its mouth is very narrow and so shoal that I doubt if a boat could be got



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in at any other time than high water: some of the sailors with me however thought otherwise; but there is at all events convenient landing at this point under the shelter of the reef.

### FERTILE COUNTRY.

April 2.

The men not having quite completed their preparations for starting, I moved off at dawn to resume the survey of Gantheaume Bay and its vicinity. The estuary appeared this morning even more lovely than yesterday, and as the heavy morning mists arose, unfolding its beauties to our view, all those feelings came thrilling through my mind which explorers alone can know; flowering shrubs and trees, drooping foliage, a wide and placid expanse of water met the view; trickling springs and fertile flats were passed over by us; there was much barren land visible in the distance, though many a sign and token might lead the practical explorer to hope that he was about to enter upon a tract of an extent and fertility yet unknown in south-west Australia. A total change had taken place in the geological formation of the land: a rock as yet unobserved in the south-west portion of the continent occupied the principal place here; and with this rock was associated limestone; the springs had a strong sulphureous smell, and the lofty broken character of the distant mountains had an almost grand appearance to those who had so long wandered through low and level countries.

Each step I took rendered my spirits more buoyant and elastic, and each hill, the position of which I fixed, gave me, from its appearance, renewed hopes. Under such agreeable circumstances the morning wore rapidly away, and, having rendered my survey as complete as I could, we returned to the boats.

### COMMENCE THE MARCH TO PERTH. PROVISIONS DIVIDED.

We were now all ready to commence our toilsome journey; the provisions had been shared out; twenty pounds of flour and one pound of salt provisions per man, being all that was left. What I have here designated by the name of flour was quite unworthy of being so called. It was of a dark yellowish brown colour, and had such a sour fermented taste that nothing but absolute necessity could induce anyone to eat it. The party however were in high spirits; they talked of a walk of three hundred miles in a direct line through the country

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(without taking hills, valleys, and necessary deviations into account) as a trifle, and in imagination were already feasting at home and taking their ease after the toils they had undergone.

I gave them all warning of the many difficulties they had yet to encounter, and did this not with the intention of damping their ardour but in the hope of inducing them to abandon some portion of the loads they intended to carry. I entrusted a small pocket chronometer to Mr. Walker, and another to Corporals Coles and Auger; and to Ruston I gave charge of a pocket-sextant which belonged to the Surveyor-General at Perth. Coles and Auger also undertook to carry a large sextant, turn about; all my own papers, such charts as I thought necessary, and some smaller instruments I bore myself; but Kaiber, in order to relieve me, took charge of my gun and some other articles. Mr. Smith carried his sketchbook and box of colours. I ought here to state that, in all the difficulties which beset those individuals to whom I entrusted anything, they never, except on one occasion, and by my orders, abandoned it: indeed I do not believe that there is a stronger instance of fidelity and perseverance than was evinced by some of the party in retaining, under every difficulty, possession of that which they had promised to preserve for me.

### PICTURESQUE HALTING-PLACE.

Our loads having been hoisted on our shoulders away we moved. I had before chosen my line of route, and the plan I had resolved to adopt was to walk on slowly but continuously for an hour, and then to halt for ten minutes; during which interval of time the men could rest and relieve themselves from the weight of their burdens whilst I could enter what notes and bearings I had taken during the preceding hour.

We were embarrassed for the first portion of our journey this afternoon by a thick scrub, through which we could only make our way with great difficulty, but on coming to a watercourse running into the southern part of Gantheaume Bay from the south-east I turned up its bed, and we were then able to move along with tolerable facility. This watercourse ran at the bottom of a red sandstone ravine resembling the old red sandstone of England; and the remainder of the evening was spent in clambering about the rocks and endeavouring to avoid such natural obstacles as impeded our route. Our progress was slow, and just before nightfall I turned

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up a branch ravine trending to the southward, when we soon found ourselves at the foot of a lofty cascade down which a little water was slowly dropping; and on climbing to its summit it appeared to be so well adapted for a halting-place for the night that I determined to remain here. The men made themselves comfortable near the waterholes, and Mr. Smith and myself crept into a little cave which occasionally served as a resting-place for the natives, the remains of whose fires were scattered about. A wild woodland and rocky scenery was around us; and when the moon rose and shed her pale light over all I sat with Mr. Smith on the edge of the waterfall, gazing alternately into the dim woody abyss below, and at the red fires and picturesque groups of men, than which fancy could scarcely image a wilder scene.

### NATIVE PATH AND WELL.

April 3.

Before the day had fully dawned we were under weigh. Our course for the first mile or two was embarrassed by ravines and scrub similar to that we had yesterday met with; our progress was therefore very slow, but we at length emerged on elevated sandy downs, thickly clothed with banksia trees, and across these we came upon a well-beaten native path running to the south by east, which was exactly our line of route. We had not followed this path for more than four miles when we found a most romantically-situated native well, surrounded by shrubs and graceful wattle trees, and of a depth and size such as we had never before observed. Here then we seated ourselves, and upon such scanty fare as we had made a sparing breakfast. This however but very insufficiently supplied our wants; and as we sat at this little well, thus surrounded with such fairy scenery, a variety of philosophic reflections crossed our minds and found vent in words. Nothing could be more delightfully romantic than our present position. Both as regarded danger, scenery, savages, and unknown lands, we were in precisely the situation in which Mr. Cooper and other novelists delight to depict their travellers, with this one woeful difference—our wallets were empty. It was in vain I fumbled about in mine; I could neither find the remains of a venison pasty, a fat buffalo's hump, or any other delicacy: indeed I had not the means of keeping life and soul together for many days longer. Deeply did we regret that we were not favoured for a few days with the company of Mr. Cooper, that he might in our present difficulties fully initiate us into the mysterious,

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nay, almost miraculous means by which his travellers, even in the most dreary wilds, always contrived to draw forth from their stock of provender such dainties that the bare recollection of them made our mouths water; but the necessities of the moment would not permit me for more than a few minutes to indulge in these speculations, and we turned therefore from seductive travels of the imagination to the more stringent ones of reality.

### HEAVY LOADS CARRIED BY THE MEN.

I now entreated the men to disencumber themselves of a portion of the loads which they were attempting to carry. Urged by a miscalculating desire of gain, when the boats were abandoned they had laid hands upon canvas and what else they thought would sell at Perth, and some of them appeared to be resolved rather to risk their lives than the booty they were bending under. The more tractable threw away the articles I told them to get rid of; but neither entreaties nor menaces prevailed with the others.

For the next three miles we still followed the native path which continued to run south by east. The whole of this distance was over open sandy downs, abounding in kangaroos; but we now suddenly emerged into a rich limestone country of gently sloping hills and valleys, affording, even at this season of the year, fair feed for sheep or cattle, and we found springs of water at every few hundred yards, generally situated at the edge of a large clump of trees.

After having for some time rested here I quitted the native path, which trended too much to the eastward, and, leaving also the direction of the limestone country which ran inland, we continued a south by east course over a gravelly tableland in places covered with beds of clay on which rested ponds of water. The country here was perfectly open, with clumps of trees to the eastward. Emus and kangaroos were wandering about the plains.

### DIFFICULT SCRUB.

Two miles more brought us to an almost impenetrable belt of scrub which lay east and west, directly athwart our path, so that we were obliged to face it; and in two hours and a half I had forced my way through it. The others followed, slowly emerging from the bush after me and, as we were all totally exhausted, as well as dreadfully torn and bruised, we halted at its edge for the night, and lighting our fires

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lay down to court that repose we had so fairly earned. We had however only walked fifteen and a half miles today.

April 4.

I again this morning used every effort to induce some more of the men to abandon a portion of their loads. I represented to them their weak state, the small supply of provisions they had with them, and the difficulty they already found in keeping up with the party; but all these arguments and every other I could make use of were unavailing; the tenacity with which they clung to a worthless property, even at the risk of their lives, is almost incredible, and it is to be borne in mind that this property was not their own, but what they had taken from the wreck of the boats. Did I even induce one to throw anything away another avaricious fellow would pick it up; and their thoughts and conversation, instead of running upon making the best of their way home and saving their lives, consisted in conjectures as to what they would realize from their ill-gotten and embarrassing booty.

### SUPERIOR NATIVE PATH AND WELLS.

The course I pursued was one of 180 degrees and we soon fell in with the native path which we had quitted yesterday; but it now became wide, well beaten, and differing altogether by its permanent character from any I had seen in the southern portion of this continent. For the first five miles we traversed scrubby stony hills, thickly wooded with banksia trees; but the limestone here again cropped out and we entered a very fertile valley, running north and south and terminating in a larger one which drained the country from east to west. This valley is remarkable as containing one *Xanthorrhoea* (grass-tree) being the farthest point to the north at which I have found this tree. In it also was a gigantic ant's nest, being the most southerly one I had yet seen. All these circumstances convinced me that we were about to enter a very interesting region. And as we wound along the native path my wonder augmented; the path increased in breadth and in its beaten appearance, whilst along the side of it we found frequent wells, some of which were ten and twelve feet deep and were altogether executed in a superior manner.

### NATIVE WARRAN GROUND. PLAINS ABOUNDING IN THE WARRAN PLANT.

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We now crossed the dry bed of a stream and from that emerged upon a tract of light fertile soil, quite overrun with warran plants,<sup>23</sup> the root of which is a favourite article of food with the natives. This was the first time we had yet seen this plant on our journey, and now for three and a half consecutive miles we traversed a fertile piece of land literally perforated with the holes the natives had made to dig this root; indeed we could with difficulty walk across it on that account, whilst this tract extended east and west as far as we could see.

It was now evident that we had entered the most thickly-populated district of Australia that I had yet observed, and moreover one which must have been inhabited for a long series of years, for more had here been done to secure a provision from the ground by hard manual labour than I could have believed it in the power of uncivilised man to accomplish. After crossing a low limestone range we came down upon another equally fertile warran ground, bounded eastward by a high range of rocky limestone hills, luxuriantly grassed, and westward by a low range of similar formation. The native path about two miles further on crossed this latter range, and we found ourselves in a grassy valley, about four miles wide, bounded seawards by sandy downs. Along its centre lay a chain of reedy freshwater swamps, and native paths ran in from all quarters to one main line of communication leading to the southward.

### DANGERS OF DELAY.

In these swamps we first found the yunjid, or flag (a species of typha) and the sow-thistle of the southern districts; one we came to was a thick tea-tree swamp, extremely picturesque, and producing abundance of these plants, some of which were collected by the men to eat in the evening. To my surprise Mr. Walker here came up to me and asked if I did not think it would be better to halt for a day or two at places of this kind to allow the men to refresh themselves. The idea of men halting and wasting their strength and energies in searching for native food whilst they had so fearful a journey before them, and no supplies, appeared to me to be preposterous in the extreme: to obtain a sufficiency of food, even for a native, requires in Australia a great degree of skill and knowledge of the productions of the country; but for a European, utterly unaccustomed to this species of labour and totally unacquainted with the productions of the land, to obtain enough to support life for any period, whilst at the same

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time he has to search for water, is quite impossible. Even Kaiber, from his ignorance of the roots, declared that he should starve in this country. I saw therefore that did I adopt the proposed plan of travelling only a few miles a day, and occasionally halting for a day or two to refresh ourselves upon some thistles and periwinkles, I should infallibly sacrifice the lives of the whole party; and under this impression I declined to accede to the suggestion. Amongst indolent and worn-out men however it subsequently became an extremely popular notion, and, as future events clearly showed, a fatally erroneous one. I from the first opposed it both by my words and example; and in this instance, as soon as I conceived that the men were sufficiently rested, I moved on.

### PICTURESQUE ESTUARY.

After travelling another mile we found ourselves at the head of a large and picturesque estuary which lay north and south; the native path ran along its shores, which were of great richness and beauty, and the estuary itself lay to our west and was about two miles across; on the east a series of rich undercliff limestone hills gradually rose into lofty and precipitate ranges, between which and the estuary was the fertile valley along which we wound our weary way; while groups of graceful acacias with their airy and delicate foliage gave a great charm to this beautiful spot. We moved slowly along, and ere we had made two miles more the shades of night began to fall and I halted the party.

### RICH AND FERTILE DISTRICT.

The abundance of grass which grew around enabled us to enjoy the almost unknown luxury of a soft bed, yet as I lay down my thoughts were far from pleasant when I found that we had only walked twelve miles today, and this distance had been accomplished by several of the party with the greatest difficulty. Three of them were the men who carried those heavy loads which I could not yet induce them to abandon; now I could not but reflect that, if their difficulty was so great in walking in a country abounding with water, that it would be almost impossible for them to get along in one where it was scarce; moreover the mere physical exertion of getting unwilling men to move by persuasions and entreaties was harassing in the extreme, and indeed had so agitated me that the night had nearly worn away ere I closed my eyes. The rich flats we were on today

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have apparently at no distant period formed part of the head of the estuary.

April 5.

Such a heavy dew had fallen during the night that when I got up in the morning I found my clothes completely saturated, and everything looked so verdant and flourishing compared to the parched up country which existed to the north of us, and that which I knew lay to the south, that I tried to find a satisfactory reason to explain so strange a circumstance, but without success. It seemed certain however that we stood in the richest province of South-west Australia, and one which so differs from the other portions of it in its geological characters, in the elevations of its mountains which lie close to the sea coast, in the fertility of its soil, and the density of its native population, that we appeared to be moving upon another continent. As yet however the only means I had of judging of the large number of natives inhabiting this district had been from their paths and warran grounds, but it was most probable that we should ere long fall in with some of them.

We started at dawn pursuing a south-south-east direction, and at the end of one mile rounded a bluff point; the limestone hills to the eastward gradually decreased in elevation and we ascended one of them to gain a view of the surrounding country. I found that the summit of this range consisted of a terrace about half a mile wide, richly grassed and ornamented with clumps of mimosas; to the eastward rose a precisely similar limestone terrace, whilst to the westward lay the estuary with its verdant and extensive flats.

### APPEARANCE OF NATIVES.

As we wound our way along this terrace a large party of natives suddenly appeared on the high ground to the eastward of us. They evinced no fear whatever but advanced to within about two hundred yards, when I went forward with Kaiber to induce them to hold an interview with us; this however I could not bring about, for whenever I advanced they retreated, and when I retired they advanced; they also now began to shout out to their distant fellows, and these again cooeed to others still farther off, until the calls were lost in the distance, whilst fresh reinforcements of natives came trooping in from all directions.



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### INDICATIONS OF HOSTILITY. PROGRESS OPPOSED BY NATIVES.

Our situation was growing critical for had any of the party been wounded we could not attempt to save his life by remaining with him without the almost certain danger of losing our own, whilst on the other hand to have abandoned him under such circumstances would have been impossible. I was most anxious to get rid of these natives in peace, as they now could not be induced to come to us, being most probably fearful of our numbers. I hoped therefore they would let us go quietly on our way and moved the party forward; but they now followed us with loud shouts, whilst those in the distance came running up. I again halted but they would hold no communication, and when in despair I again moved the party on we saw a number hastening to occupy a thick scrub through which we had to pass. The men now became so dissatisfied and alarmed that I found I should be unable much longer to restrain them from firing if I did not disperse the natives.

I therefore halted the party, and cocking my gun moved rapidly towards them, motioning them away; they retired as I advanced, but directly I turned they again followed us; I now ran towards them with my gun pointed, when they made off before me once more, and in order to complete their dispersion I had intended to fire over their heads; but to my great mortification and their intense delight, my gun snapped, and, as they found the weapon I had with me, and with which I had menaced them in so authoritative a manner, appeared to produce no effect, they took courage, and, turning about, made faces at me and an insulting noise which was meant to imitate the snapping of the gun. Their inimical intentions now became more manifest; I however ran at them again, and fired my second barrel over their heads, which caused a rapid retreat; but they halted on a rising ground about three hundred yards from us, and finding on the muster of their forces that they had sustained no damage, they made preparations, as if resolved to commence hostilities in earnest.

### NATIVES DISPERSED.

As these natives had now unfortunately learnt to despise our weapons I was compelled to act promptly, or blood would undoubtedly have been shed. I therefore took my rifle from Coles and, directing it at a heap of closely matted dead bushes which were

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distant two or three yards to the right of their main body, I drove a ball right through it: the dry rotten boughs crackled, and flew in all directions, whilst our enemy, utterly confounded at this distant, novel, and unfair mode of warfare, fled from the field in confusion, the majority of our party rejoicing at the bloodless victory: we then wended our way along the native path which led us down to the flats bordering the estuary, and finding there an underground stream of water bubbling along through a limestone cavity and having several openings upwards, we halted to refresh ourselves.

I had hoped that finding hostile natives in our vicinity would have made the stragglers keep up better with the party, but they would neither hasten on nor throw away their loads, so that my patience was sorely tried; a man of the name of Stiles was the worst; nothing could induce him to move along, and even the threat of leaving him behind produced no effect; I however kept pushing steadily onwards, for I never thought of the length of the journey we had to perform without trembling for the result. We were now walking on a course of 180 degrees, and followed this line for two miles and a half through a similar country. We still found many native paths running along the estuary, and saw the natives fishing, but they carefully avoided us, making off for the high lands as fast as they could.

### ESTUARY OF THE HUTT RIVER. DESCRIPTION OF THE COUNTRY AND SCENERY.

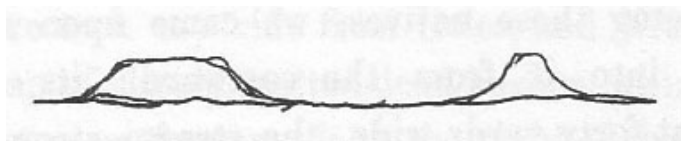
The estuary became narrower here, and shortly after seeing these natives we came upon a river running into it from the eastward; its mouth was about forty yards wide, the stream strong, but the water brackish, and it flowed through a very deep ravine, having steep limestone hills on each side: many wild-fowls were on the river, but we could not get a shot at them. Being unable to ford the river here we followed it in a south-east direction for two miles, and in this distance passed two native villages, or, as the men termed them, towns, the huts of which they were composed differed from those in the southern districts in being much larger, more strongly built, and very nicely plastered over the outside with clay and clods of turf, so that although now uninhabited they were evidently intended for fixed places of residence. This again showed a marked difference between the habits of the natives of this part of Australia and the south-western portions of the continent; for these superior huts, well marked roads, deeply sunk wells, and extensive warran grounds, all spoke of a large and comparatively-speaking resident population,

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and the cause of this undoubtedly must have been the great facilities for procuring food in so rich a soil.

### MOUNT VICTORIA AND MOUNT ALBERT.

We now came to two very remarkable hills bearing north-east of us and distant about three miles, which I have named Mount Victoria and Mount Albert. They lay about one mile apart, and were of the form shown in Illustration 2, which will give a good idea of the flat-topped hills hereabouts.



### THE HUTT RIVER.

The river still ran in a deep wooded valley bordered by rich flats, high hills lying both to the right and left of our line of route. Two miles and a half more on a course of 135 degrees brought us out on some gravelly barren plains, and just before coming to these, and in passing through a scrub, we raised a flight of white cockatoos, of a species new to me. One of the men got an ineffectual shot at them.

### FIRST HILLS OF THE SOUTHERN IRONSTONE FORMATION.

After traversing these plains for two miles in a south-east direction we came upon a valley through which flowed a branch of the river we had this day discovered, running in a bed of fifty yards across, and having in its centre a rapid stream falling in small cascades; it appeared at times subject to extensive inundations, and here its course was through barren plains covered with rocks piled up in strange fantastic masses, and the bed was composed of that kind of red sandstone which at Perth is called ironstone; this being the farthest point north at which I have remarked it.

A number of grass-trees (*Xanthorrhoea*) grew near the spot where we had halted; they appeared unhealthy and stunted, but indeed I suspect they are a new and undescribed variety. Being desirous of procuring anything I could for the men to eat I had the tops of some of these trees cut off and boiled, they were however still so hard that

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to chew them was impossible, and it was evident that we had not yet reached a parallel of latitude calculated to produce tender-topped grass trees.

I knew our latitude and position this night exactly, as I had seen Mount Naturaliste of the French in the course of the day. There could be no doubt whatever that we were in a very remarkable district, for we stood upon the point where the geological formations of the north-western and south-western portions of the continent were associated together, and the flora of which was so made up of those of both that it was impossible to tell which predominated. There were many other interesting circumstances connected with the surrounding country, some of which have been already mentioned. I named the river and estuary now discovered the Hutt after William Hutt, Esquire, M.P., brother of His Excellency the Governor of Western Australia.

### INDISPOSITION OF MR. SMITH.

Mr. Smith this day complained of weakness, not sufficiently however in the least to alarm me. He had hitherto been nearly always in the rear of the party without lagging, but I thought two of the men in a much weaker state than he was.

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### CHAPTER 2. FROM THE HUTT RIVER TO WATER PEAK.

#### WILD TURKEYS SEEN.

April 6.

We moved off this morning on a course of 180 degrees. The first mile of our journey was over low scrubby ironstone hills. We then came down upon rich flats through which the main branch of the Hutt ran; and followed the course of this branch for about two miles. It was not running but there were many pools with water in its bed: the flats were rich and grassy and on the hills to the westward (the Menai Hills) we descried wild turkeys, being the farthest point north at which I had seen this bird.

As I saw that the ground in front of us was very steep and abrupt, so that the weak and weary would have found it a difficult task to master such an ascent, I turned off on a course of 168 degrees, ascending a sandy tableland covered with scrub. When we had walked three miles in this direction the table-hill of Captain King bore east by south distant five miles. We now proceeded parallel to the sea, which was distant one mile through an indifferent country. This course continued for about five miles, and on the ranges to the eastward the country still appeared to be grassy and good.

#### RELUCTANCE OF THE MEN TO HASTEN ONWARDS. DIFFICULTY OF URGING THE PARTY FORWARD.

Although we had walked very slowly many of the party were completely exhausted, and one or two of the discontented ones pretended to be dreadfully in want of water, notwithstanding they carried canteens and had only walked eight miles since leaving the bank of a river; I was therefore obliged to halt, and could not get them to move for three hours. I am sorry to say that some who should have known much better endeavoured to instil into the minds of the men that it was preferable only to walk a few miles a day and not to waste their strength by long marches; utterly forgetting that most of the party had now only seven or eight pounds of fermented flour left, and that if they did not make play whilst they had strength their eventually reaching Perth was quite hopeless. This however was a very popular doctrine for thoughtless and weary men, who were overloaded and yet from a feeling of avarice would not abandon any portion of what they were carrying.

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The majority of the party not only adopted these views in theory but doggedly carried them into practice; and from this moment I abandoned all hope of getting the whole party into the settled districts in safety. Poor fellows! most of them paid dearly for the mistaken notions they now adopted. Mr. Smith, with his usual spirit, was for pushing on, although his strength was inadequate to the task. I laid under the shade of a bush lost in gloomy reveries and temporary unpopularity; Kaiber by my side lulled me with native songs composed for the occasion, and in prospective I saw all the dread sufferings which were to befall the doomed men who sat around me, confident of their success under the new plan; but like all prophets I was without honour amongst my own acquaintance; and after considering the matter under every point of view I thought it better for the moment to succumb to the general feeling, yet to lose no opportunity on every subsequent occasion of endeavouring to rouse the party into a degree of energy suited to our desperate circumstances.

At the end of the three hours I again begged several of the party, who appeared to be in an exhausted state, to abandon a portion of their useless loads; but they were quite sure that by making short marches, not exhausting their strength, and now and then halting for a day or two to refresh, they could carry them into Perth, and therefore refused to part with them. Mr. Smith and myself found that stopping in this way and getting cold rendered our limbs so stiff and painful when we walked on again that we could scarcely move; and I suspect that such was the case with the other men, for when we started again I could hardly get them along. One man of the name of Stiles, who was a stout supporter of the new theory, made us stop for him nearly every five minutes.

### THE BOWES RIVER.

After walking one mile we fortunately came to a very deep valley, having such steep limestone cliffs on each side that it assumed quite the character of a ravine: it was about a mile wide and in it was a watercourse winding through deep flats. We however only found water in pools; the course of the stream was very tortuous and its mouth was almost blocked up by sandhills. The valley itself was both picturesque and fertile, and the appearance of the country to the east and north-east was highly promising. The stream I called the Bowes.

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### NATIVE RESTING-PLACE. NATIVE HUTS.

This spot was a favourite halting-place of the natives; and from the number of huts and other indications which we saw the district must be very densely populated. The huts were of the same superior construction as those which we had seen near the Hutt, and the traces were very recent, but the natives themselves were either at a distance or kept carefully out of our way. The valley that we were now in, as well as the other limestone valleys in this province, partook exactly of the character of those in the carboniferous limestone districts of England inasmuch as they were deep gorges, or ravines, now traversed by watercourses or streams apparently much too insignificant to have grooved them out.

### PROVOKING INDOLENCE OF THE MEN.

Our finding water here was fortunate for I now showed the men that, had they walked one mile farther instead of halting in the manner they had done, they would have had abundance of it, and would have been, at this moment, at least, five miles nearer home. I also directed Mr. Walker to examine Stiles and to state whether he was in good health or not. He did so and reported him quite well. I therefore when we started again gave Stiles warning that I should not halt every minute for him but would leave him behind, at the same time ordering him to walk in front of the party, next after me.

I continued a course of 180 degrees up a steep limestone range, behind which apparently ran a branch of the watercourse we had just passed: a good country lay to the eastward of us. Stiles now delayed us so much that some of his comrades spoke to him very warmly on the subject, whilst others still held to the opinion that walking a few miles a day and sometimes halting a day or two to refresh was the true mode of proceeding. We only made two miles this evening and I threw myself on the ground so worn and harassed that I could not sleep.

### AN EXTENSIVE FERTILE COUNTRY.

Sunday April 7.

Before the sun had appeared above the horizon I managed to get the party fairly started, and we followed a course of 180 degrees over elevated sandy downs which rested on a limestone formation. The

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first four miles of our journey was not very encouraging; we could only see as far to the eastward as the flat-topped range; and although the slopes of these hills looked very fertile I had no means of judging how far back this good country extended; we had however been creeping gradually up an ascent, and when we gained the summit of this I turned to look to the northward after the straggling party, who were slowly mounting the hill, some of them staggering along under loads so heavy that I should have hated the tyranny of any man who could have compelled them to carry such a weight; but as it was I could only grieve to see men, from the hope of gain, rushing so inevitably on their fate. Having gazed till weary at this painful picture of the weakness of human nature, I turned to the north-eastward, and there burst upon my sight a most enchanting view. In the far east, that is, some twenty or five-and-twenty miles away, stretched a lofty chain of mountains, flat-topped and so regular in their outline that they appeared rather the work of art than of nature. Between this range and the nearest one lay a large rich valley vying with the most fertile I have ever seen in an extra-tropical country. In front of us lay another valley which drained a portion of the large one, and in both rose gently swelling hills and picturesque peaks, wooded in the most romantic manner. Whilst I stood and looked on this scene, my woes were forgotten. Such moments as these repay an explorer for much toil and trouble.

### THE VICTORIA RANGE AND DISTRICT. THE PROVINCE OF VICTORIA.

The distant range I at once named the Victoria in honour of Her Majesty; and being now certain that the district we were in was one of the most fertile in Australia I named it the Province of Victoria. There is no other part of extra-tropical Australia which can boast of the same number of streams in an equal extent of coast frontage, or which has such elevated land so near the sea; and I have seen no other which has so large an extent of good country. It is however bounded both to the north and south by comparatively-speaking unproductive districts; but what the character of the country to the north-east and south-east may be still remains to be ascertained.

Another mile on a course of 180 degrees brought us to the valley in our front; it was of the same rich and romantic character as that which I have just described, being in depth about two hundred feet, down limestone rocks, in places assuming the character of cliffs. In its bottom was a watercourse containing water in pools only; but it



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must be borne in mind that it was now the very end of the dry season. The party all came up, and we laid ourselves down under the grateful shade of the mimosas. Those who chose took their fill of water. I had made a rule never to taste it except to wash out my mouth from sunrise until we halted for the night; for I found that drinking water promoted profuse perspiration and more ardent thirst, and I preferred practising a little self-denial to enduring the greater pangs arising from indulgence.

Whilst I stretched my weary length along under the pleasant shade I saw in fancy busy crowds throng the scenes I was then amongst. I pictured to myself the bleating sheep and lowing herds wandering over these fertile hills; and I chose the very spot on which my house should stand, surrounded with as fine an amphitheatre of verdant land as the eye of man has ever gazed on. The view was backed by the Victoria Range, whilst seaward you looked out through a romantic glen upon the great Indian Ocean. I knew that within four or five years civilization would have followed my tracks, and that rude nature and the savage would no longer reign supreme over so fine a territory. Mr. Smith entered eagerly into my thoughts and views: together we built these castles in the air, trusting we should see happy results spring from our present sufferings and labours, but within a few weeks from this day he died in the wilds he was exploring.

### THE BULLER RIVER.

The stream we were on I named the Buller; we rested some time by it and when we moved on some of the advocates of the eight or ten mile a day system very unwillingly followed the party. We fell in with a native path which wound up through a thick scrub in pleasing sinuosities, and emerged upon a tableland similar to the one we had traversed this morning.

### THE CHAPMAN RIVER.

I now followed a course of 169 degrees, and after walking three miles more we arrived at the edge of a valley of the same character as that wherein the Buller flowed, and through it we had another view of the fertile country to the eastward: into this valley we descended and, finding a watercourse running through it with water in pools, I seated myself with such of the party as were up, about

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half a quarter of a mile from the Mount Fairfax of Captain King, and named this stream the Chapman.

### SEARCH FOR A MISSING MAN.

Mr. Walker now came up with the remainder of the party and reported that Stiles was missing. As he could have no difficulty in finding us I merely took the precaution to make the men sit in such positions that he could distinguish us from the summit of the opposite cliffs when he arrived there, and we patiently awaited that moment. Time however wore on, and some of the men finding a species of geranium with a root not unlike a very small and tough parsnip, we prepared and ate several messes of this plant. At length, no signs of Stiles having been seen, I sent Mr. Walker, Corporal Auger, and Kaiber to the top of the cliffs we had descended to try if they could discern anything of him or his tracks. During their absence I expressed, in the hearing of some of the men, my anxiety lest he should have lingered behind and have fallen in with the natives; upon which they smiled and said that "Tom Stiles was a man who did not care about the natives; and that only that morning he had said he didn't mind for all the natives in the island, d—them;" and that they thought he had stopped behind on purpose.

### GATHERING OF NATIVES. SCENE WITH NATIVES.

The absence of Mr. Walker and his party continued much longer than I expected, and just at the moment that I had become rather alarmed about it Coles reported to me that he saw natives on the opposite cliff, jumping about and running up and down brandishing their spears in the manner they do before and after a fight. Coles was at this time posted as sentry on a terrace just above where we were, and the ascent to which was very difficult. I got up on this as fast as I could; it was only two or three yards broad and ran apparently along the whole length of the valley. The natives used it as a path, and a very steep hill rose behind it. I could not however make out the natives, and as the opposite cliffs were a long way off I thought that Coles might have been mistaken. When I told him this he merely said "Look there, then, Sir," and pointed to the top of Mount Fairfax, distant about 400 yards due north of us, and sure enough there were a party of natives, well armed and going through a variety of ceremonies which the experience of centuries had proved to be highly efficacious in getting rid of evil spirits. In the present instance

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however their wonted efficacy failed, but the natives appeared every moment to be getting more vehement in their gestures.

Our situation by no means pleased me: Stiles and a separate party of our own men had mysteriously disappeared in the direction where Coles had first seen the natives, by whom we were in a manner surrounded, and that in an abominable position, for they could steal amongst the underwood close above us in our rear, and annoy us with missiles of all sorts; whilst from the extent and thickness of the scrub it was impossible to occupy it effectually against treacherous (or rather, bold and skilful) enemies. On the other hand I could not quit my present position and occupy a more favourable one, for, in the event of Mr. Walker and Corporal Auger being pressed by the natives and retreating on us, it was our duty to be at that spot where they would calculate on finding us and an effectual assistance. I made therefore the best disposition of my little force I could, and, occupying the centre of the party, I had the satisfaction of seeing our wild friends on Mount Fairfax, blowing strongly at us and capering more furiously than ever when they beheld our unaccountable manoeuvres.

### THEIR MANOEUVRES.

It was fortunate that poor Kaiber was absent, for so fearful an exhibition of sorcery would have altogether upset his nerves; but the British soldiers and sailors I had with me remained surprisingly calm; whilst the natives, having exhibited their antics for a few minutes more, suddenly withdrew in a hurried manner. I therefore made up my mind for a surprise, and we anxiously waited to see from what quarter the attack would come.

### CONTINUATION OF SEARCH FOR THE MISSING MAN. RETURN OF PARTY FROM SEARCH.

The cause of their disappearance was however soon explained. Mr. Walker, Corporal Auger, and Kaiber came winding down the hills under Mount Fairfax, and gave the following account of their proceedings: On ascending the cliffs opposite to us they had found Stiles's tracks, and had followed them until they reached the sea beach; on passing the stream on their way there they found a place where he had halted and made up all his flour into dampers; but on coming out on the shore they saw a large party of natives seated on the sandhills in front, whilst others were fishing in the sea at this

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point; and the tracks of Stiles turned off into the interior: this hero, who wished to encounter all the natives of the island single-handed, had evidently fled from them. Mr. Walker had been unable to follow his tracks any further and had therefore thought it most prudent to return to the main party.

From the circumstances of Stiles having thrown away part of his clothes, and having made such a large quantity of dough to bake into dampers at the first convenient opportunity, together with various expressions he had dropped in the presence of the men, there could be no doubt but that he had purposely quitted the party; yet to abandon him to his fate amongst natives, who were by no means friendly in their gestures and appearance, required a degree of resolution I was unprepared at that moment to exercise. To leave him without a search was to sacrifice one life, to allow one man to perish, whilst occupying one or two days in looking for him would merely increase the temporary sufferings of the rest; whilst the loss of time would probably occasion no other bad result than a little more personal privation; and this, in order to try to save the life of a fellow-creature, I conceived it to be my own duty and that of the rest of the party to undergo. Influenced by these reasons I desired all hands to prepare to start in search of Stiles.

Strange however to say, my resolution was scarcely made known ere much grumbling arose; and this chiefly amongst those men who had lately been loudest in their praises of the system of only marching a few miles a day and occasionally halting for a day or two where we could get native roots to eat, in fact, amongst those whose foolish ideas had led Stiles to desert the party. We however moved on in the direction of the spot where Kaiber had lost the tracks, and on our way over the high ground we met a native with his spear and a handful of fish; he was lost in thought and we were close to him before he saw us: when he did so he took no notice whatever of us, but without even quickening his pace continued in his original line of direction, which crossed ours obliquely. As he evidently did not wish to communicate with us I directed the men not to take the least notice of him, and thus we passed one another. He must have been a very brave fellow to act so coolly as he did when an array so strange to him met his eye.

ANOTHER PARTY OF NATIVES.

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On arriving at the beach to the south of a bay or harbour,<sup>24</sup> which the pressure of circumstances precluded me from examining, we could find nothing of Stiles's tracks: he appeared to have gone off due east in the hope of crossing our route, but, being in advance of us, and consequently not finding our traces, it was impossible to say in which direction he might have turned. The natives now mustered a very large force and occupied the high hills (almost cliffs) which lay a few hundred yards to our left, and, as they had such an advantageous position and could at any moment surprise us amongst the low sandhills where we were searching for Stiles's footsteps, our situation was one of great danger. At length, finding it impossible to keep the men steady, I moved them up to the higher ground, where we could have met the natives upon a footing of equality. They appeared, although very numerous, to be now by no means hostile, merely standing on a high hill, watching us and calling out "Yoongar kaw," or "Oh, people!" whilst Kaiber, who knew nothing of their vile magical practices, and therefore regarded them as mere ordinary flesh and blood, was very ready to communicate with them; but as they made no other advances, I thought it better merely to remain near them for the night, occasionally firing a gun in hopes Stiles might hear it, and with this intention I selected a spot for our encampment.

April 8.

We started very early this morning and Kaiber exerted himself to the utmost to find Stiles's traces. At the end of three miles, on a course of 180 degrees, we descended from the elevated scrubby plains we had been moving along to the lowlands, and on reaching this came upon the bed of a small watercourse. I here halted the party; and as it was uncertain when we might again fall in with water I commenced a search for it with Kaiber, but after travelling rapidly over a good deal of ground without seeing either water or any traces of Stiles we rejoined the party very much fatigued.

### THE MAN FOUND.

For the next two and a half miles we wound along low, grassy, swampy plains, thinly wooded with clumps of Acacias, and then entered upon low scrubby plains bounding the sea-shore. I here caught sight of Stiles just ahead of us and coming in from the eastward: he was very glad once more to find himself in safety; and his comrades seemed pleased to see him again, although many a

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suppressed murmur had met my ears during our morning's walk at the trouble I was taking to look for him.

### THE GREENOUGH RIVER.

Four miles further over similar plains in a south by east direction brought us to a river, about five-and-twenty yards wide, which I named the Greenough; and travelling up it a short distance we found a spot where we could cross by stepping from rock to rock. Its waters were quite salt. I continued our route for about three miles, when I found it was impossible to induce some of the men to walk any further; they laid sullenly down and were so fully convinced that I was pursuing a wrong system in marching so far in a day, and never halting for two or three days to refresh, as they wished, that I could do nothing with them, and was therefore forced to sit down too. Corporal Auger soon afterwards found water near us, and I moved the party down to it.

Finding water in some degree revived their spirits and I contrived to get them to proceed seven miles more before nightfall, the way being over sandy open plains very favourable for walking.

### MORE NATIVE HUTS.

We passed a large assemblage of native huts of the same permanent character as those I have before mentioned: there were two groups of those houses close together in a sequestered nook in a wood, which taken collectively would have contained at least a hundred and fifty natives. We halted for the night in the dry bed of a watercourse, abounding in grass, so that we again enjoyed the luxury of a soft bed. At first I thought that we were near natives from hearing a plaintive cry like that of a child, but Kaiber assured me that it was the cry of the young of the wild turkey.

### CROSS THE HEADS OF TWO BAYS.

In the course of this day we travelled across the heads of two bays, which were indistinctly visible through the woods.

### FERTILE VALLEY.

April 9.

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The first three miles of our route this day lay over sandy scrubby plains; we saw however a good country to the eastward. I found that a man of the name of Charley Woods was much knocked up; he was a supporter of the eight or nine miles a day system, and had a very heavy load with no portion of which could I induce him to part; he however insisted on sitting down every half mile and detaining the party, and as I found that they got more worn out and weaker, and the impression in favour of long rests and short marches became much stronger, I thought it more prudent to acquiesce for the present.

We now reached a very thick belt of trees, pushing through which was a task of great difficulty, but at length we emerged upon some clear hills overlooking a very extensive and fertile valley, from which arose so dense a fog that portions of it appeared to be a large lake. Into this valley we descended, and the remainder of the day until near noon was spent by me in endeavouring to get the men to move.

### THE IRWIN RIVER. AUSTRALIND.

We this morning for the first time met with *Zamia* trees, and about 12 P.M. came down upon the large sandy bed of a dried up river which I named the Irwin after my friend Major Irwin, the Commandant at Swan River; following this for half a mile we found a native well, dug to a considerable depth in the bed, but all our scraping here was vain. Water was found at a great depth, but so shallow that we could not dip it up. Some of the men saw four native boys playing in the grassy plains near us; directly however the little fellows perceived us, they scampered off at their utmost speed, and no doubt ever since that period they have been firm believers in the existence of ghosts.

The men now began to complain much of the want of water, and I for some time followed the traces of these native boys, who had come from the southward and eastward, in the hope that their tracks would lead us to it, but the grumbling and discontent of some of the men was so great that I found it almost impossible to induce them to move. My object was to get them to walk to a high peaked hill distant about five miles from us in a due south-east direction, and under which I felt certain, from its height, that we should find water, but I was obliged at last to give up this idea: Charles Woods would not stir at all, and several of the men followed his example; they laid down on the ground and no inducement could prevail on them

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either to move or to abandon a portion of their loads; and this obstinacy on their part was accompanied in some instances with the most blasphemous and horrid expressions. Indeed I could not conceal from myself the fact of its being the general impression that my mode of proceeding was "killing the men," and that consequently some of them had arrived at the resolution of compelling me by their conduct to adopt their favourite system of short marches and long halts. But I was still aware of the disastrous consequences which must necessarily result from such a mode of proceeding, and determined to have nothing to do with it.

In the course of the afternoon I managed to get the party to move about a mile and a half in an easterly direction, but they here again sat down and could neither be induced to walk or to part with their bundles.

### SEARCH FOR WATER.

As they had not tasted water today I selected the best walkers, namely, Corporals Auger and Coles, Hackney, Henry Woods, and Kaiber, and went off to look for some to bring to the rest. We were now on a well-beaten native path which traversed a fertile tract of country, and along this we continued our route, walking as rapidly as we could, for night was coming on apace. From this path we made frequent divergencies but found no water; in one instance we met with a native well of great depth, where a party of them had been drinking a few days before, but it was now quite dry.

### FIND IT AT WATER PEAK. WATER PEAK HILL.

We therefore continued our search, and just as it was growing dark had made about seven miles of a circuitous course and found ourselves at the foot of the high-peaked hill seen this morning, named by me Water Peak. I still hurried along the native path, and was so wrapped up in the thoughts of our present position that I passed, without seeing it, a beautiful spring that rose to within a few inches of the surface. Near this the natives had built a small hut, covered with boughs, concealed in which they might kill the birds and animals which came to drink at this lone water; the keen eye of Coles in a moment detected the little pool, and our thirst was soon assuaged.



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For a few minutes we lay on the bank of this clear spring, resting our wearied limbs and admiring the scenery around us. There is a something in the wild luxuriance of a totally new and uncultivated country which words cannot convey to the inhabitant of an old and civilized land, the rich and graceful forms of the trees, the massy moss-grown trunks which cumber the soil, the tree half uprooted by some furious gale and still remaining in the falling posture in which the winds have left it, the drooping disorder of dead and dying branches, the mingling of rich grasses and useless weeds, all declare that here man knows not the luxuries the soil can yield him: it was over such a scene, rendered still more lovely by the falling shadows of night, that our eyes now wandered.

### BENIGHTED IN RETURNING TO THE PARTY.

I roused the men again and we commenced our return to the party, loaded with a supply of water. It was now dark and we soon wandered from the path. Kaiber took a star for his guide and led us straight across the country; but our route lay through a warran ground, full of holes, and in the darkness of the night we every now and then had a tremendous tumble, so that at the end of about four miles I thought that it would be imprudent to proceed farther, as we every moment were in danger of breaking a limb or seriously injuring ourselves. I therefore halted for the night, and as we were unable to light a fire both on account of the heavy dew and of having no proper materials with us, the first portion of it passed wretchedly enough, indeed, weary as I was, I found it necessary to walk about in order to preserve some slight degree of warmth in my frame.

At length however the men, who were much too cold to sleep, got up and, renewing their efforts, succeeded in kindling a blaze. Kaiber soon collected plenty of wood, and as I was unable to sleep I passed the night in meditating on our present state.

### POSITION AND PROSPECTS.

I felt sure that if the men persisted in their resolution of moving slowly a lingering and dreadful death awaited us all; yet my opinion was a solitary one. Mr. Walker had in many instances plainly and publicly shown that he on this point differed with me; and he was a medical man, and one who certainly never shrank from any danger or toil which he thought it his duty to encounter. The most therefore I could say against those who were opposed to my system of moving

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was that I conceived them to be guilty of a grievous error in judgment; but it was not until our separate opinions had been tested by the future that it could be definitely pronounced who was right. Nevertheless those who have been much with men compelled to make long marches cannot fail to have remarked how readily and foolishly they find excuses to enable them to obtain a halt, and such persons would probably have agreed with me in suspecting that natural indolence of disposition, strengthened by fatigue and privation, might induce men to adopt, without a very strict investigation, any opinion falling in with their immediate feelings of febleness.

Being firmly convinced that these men intended to pursue a plan of operations which would entail great misery both upon themselves and the others, I considered that I ought undoubtedly to endeavour to save them from the danger which I foresaw impending over them; and this could only be accomplished by my making forced marches to Perth and sending out supplies to meet them before they were reduced to the last extremities. Had I foreseen a week ago that I should be compelled eventually to adopt such a step I would then have taken with me all such as were willing to march and have left the others; but this time had passed. My movement to Perth must now be accomplished with the greatest expedition or it would be useless; and to take anyone with me who was so much reduced as to have delayed, impeded, or perhaps altogether to have arrested our progress, would have sacrificed the lives of all.

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### CHAPTER 3. FROM WATER PEAK TO GAIRDNER'S RANGE.

#### RETURN TO THE PARTY.

April 10.

The morning's dawn found us in the vicinity of our comrades, and, just as the thick grey mists began heavily to ascend from the low plains on which I had left the party, we emerged from the bush upon the native path down which we had travelled the preceding evening; here I turned northward, and a few minutes more placed the party in our view. Some of them were missing. I felt alarmed lest a new misfortune had happened and, hurrying on, eagerly asked where they were. The answer given will describe more truly their position than the most minute detail could do; it was: "They are just gone into the bush to suck grass, Sir." This semblance of extreme thirst must however, I suspect, have been in some measure a piece of affectation upon their parts, for upon the morning of the day before they had had a plentiful supply of water: whether however their extreme sufferings were true or feigned mattered not, we fully supplied their wants; and then I immediately ordered preparations to be made for our further progress.

We moved on in the direction of the spring of water which lay about half a mile to the eastward of our true line of route. Our movements were soon again delayed by Woods, who began as usual to lie down and declare his inability to proceed any further.

#### DELAYS CAUSED BY USELESS BAGGAGE. DESTRUCTION OF USELESS BAGGAGE.

I desired him to leave behind the heavy load he was carrying; but as upon former occasions he again declared his determination to die rather than part with this mysterious bundle, which appeared to possess an extraordinary value in his estimation. It was easy to see from his appearance that he was now really ill and unable to carry such a weight as he was striving to do. At length he again laid himself down, declaring that he was dying, and, as I determined no longer to see his life endangered by his so obstinately insisting on carrying this bundle, I took it up, and, informing him of my intention to pay him the full value of any property of his that I might destroy, I proceeded to open it with the intention of throwing all useless articles away.

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Upon this announcement of mine he burst into tears, deplored alternately his dying state and the loss of the bundle, and then poured forth a torrent of invectives against me, in the midst of which I quietly went on unfolding the treasured parcel and exposing to view the following articles: Three yards of thick heavy canvas; some duck which he had purloined; a large roll of sewing thread, ditto; a thick pea jacket which I had abandoned at the boats, and had, at his request, given to him; and various other old pieces of canvas and duck; also a great part of the cordage of one of the boats, which he had taken without permission.

When these various articles were produced it was difficult to tell which was the prevailing sentiment in the minds of some of the party—mirth at thus seeing the contents of the mysterious bundle exposed, or indignation that a man should have been so foolish as to endanger his own life and delay our movements for the sake of such a collection of trash. A pair of shoes and one or two useful articles were retained, the remainder were thrown away, and in a few minutes we were again under weigh for the spring of water.

### HALT AT WATER PEAK.

Another hour's march brought us to the spring; and those who with me had been marching through a great part of the night gladly laid down to rest; but I soon roused myself again, being urged by the pangs of hunger. Fortunately I had shot a crow in the morning, and now, gathering a few wild greens that grew about the water, I cooked a breakfast for myself and the native without being obliged to draw upon my little store of flour. This frugal repast having been washed down by a few mouthfuls of water, I resumed my meditations of the previous night.

### CRITICAL SITUATION.

The following appeared to be our true position. We were about one hundred and ninety miles from Perth, in a direct line measured through the air. None of the party had more than six or seven pounds of flour left; whilst I had myself but one pound and a half, and half a pound of arrowroot; the native had nothing left and was wholly dependant on me for his subsistence. Now we had been seven days on our route, and had made but little more than seventy miles, and as the men were much weaker than when they first started it appeared to me to be extremely problematical whether we

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should ever reach Perth unless some plan different from what we had hitherto pursued was adopted. And even granting that we did eventually make this point, it was evident that we must previously be subjected to wants and necessities of the most cruel and distressing nature.

### NEW PLAN OF PROCEEDING.

Yet it was quite manifest from recent events that the majority of the party had not only made up their minds not to accelerate their movements, but had fully resolved to compel me to pursue their system of short marches and long halts. Being fully aware of the danger which threatened them, it remained for me to act with that decision which circumstances appeared to require, and to proceed by rapid and forced marches to Perth, whence assistance could be sent out to the remainder. For this purpose it was necessary that all those who accompanied me should be good walkers and resolute men; for if any accident happened to the portion of the party I took with me, arising either from want of energy, want of discipline, or any other causes, that portion of the party which remained behind would have been reduced to the last extremity.

### DIVIDE THE PARTY, AND PROCEED WITH THE STRONGEST TO PERTH FOR ASSISTANCE. ARRANGEMENTS AT STARTING.

Having formed this resolution, it became necessary to make a selection of those who were to accompany me. In determining however upon this point I had but little difficulty; for it was evident that those men who during our late toils had shown themselves the most capable of enduring hardships, privations, and the fatigue of long and rapid marches, were those who were the best suited for the service I now destined them for. The following was the division I made of the party: I named:

Corporal Auger, Corporal Coles, H. Woods, W. Hackney, Kaiber, the native,

as those who were to accompany me, and left the remainder under the command of Mr. Walker.

### EMBARRASSMENT REGARDING THE CHART.

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In making my arrangements with Mr. Walker a very serious difficulty arose upon his part, and one from which I immediately augured the worst of consequences. On quitting the boats I brought away with me Captain King's chart of the coast between North-west Cape and Cape Leeuwin, and had hitherto carried it along with my papers and sketches. I wished Mr. Walker to take this chart with him for the purpose of recognising his position by means of the islands and headlands as he advanced along the coast. No inducements upon my part could however persuade him to take charge of it. It was in vain that I urged on him the well known fact that nothing encourages men in a long journey so much as knowing the exact distance they have travelled and what extent of country they have still left to traverse. It was in vain that I assured him he would, from his inexperience in calculating distances in the bush, soon get confused in his reckoning; and that the men, finding out his error, would lose all trust and confidence in him, whence would spring want of discipline and disorders of various kinds; he knew that I much valued this chart and had apparently taken it into his head that I wished to disencumber myself of it and to entail the duty of carrying it on him.

He at length proposed to me to allow him to cut the chart up, in which case he said he would carry on the part he wanted and leave the rest. I would not however part with so valuable a document, for it contained my route up to that point, and the public utility of the expedition mainly depended on the preservation of it. He next requested me to make a copy of it for him; this I assured him under existing circumstances it was utterly impossible for me to do with sufficient accuracy to answer the intended purpose, and I therefore would not attempt it. He then applied to Mr. Smith, who coincided in my opinion; but ever willing to oblige he made as accurate a copy as he could, which I in vain represented to Mr. Walker he would find utterly useless. His unreasonable reluctance however I could not overcome.

### POINT OF RENDEZVOUS FIXED.

The next matter to arrange was what place should be fixed on as the point of rendezvous to which assistance was to be sent to those who were left to follow with Mr. Walker. This was soon arranged. Mr. Smith had previously been with me to a place called Goonmarrarup, on the Moore River about fifty-five miles to the north of Perth; and it was agreed that the party should proceed along the coast as they

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best could until they made the Moore River, where I would have another party stationed with provisions to meet them; and in order that they might not pass this river it was settled that the party who went out to meet them should separate into two, one of which would remain at this point on the Moore River, about twelve miles from the sea, whilst the other was to proceed down to it, leaving, besides their tracks, marks to show where they had passed; and then, in the event of not finding those they were in search of, this last detachment was to push still further northward to look for them.

As soon as the arrangements were concluded I assembled the men and publicly repeated these directions to them; and to such as Clotworthy I addressed strong admonitions as to their future conduct. Many of them did not appear to be in the least aware of the critical situation they were placed in; I however entertained great fears for the safety of some of them. Poor Smith was at this time in a very delicate state of health, and his courage and gentleness had so endeared him to me that the sight of his sickly face made me long to be on the march to send out help to him. For Mr. Walker I had no fear; I have never known anyone endowed with a greater degree of patient endurance; indeed had he not, from a mistaken good nature, been too familiar with the men, no one could have been more admirably adapted for the trying position in which he was placed; and even as events turned out I doubt if anyone could have been found who would have endured more, or would have gone through greater exertions to save those under his command.

The party I left, and who were not required to proceed by forced marches, consisted of:

Mr. Walker,  
Mr. Smith,  
Thomas Ruston,  
C. Woods,  
T. Stiles,  
A. Clotworthy.

SEPARATION OF THE PARTY. ADVICE TO THOSE LEFT BEHIND.

Before parting with Mr. Walker and Mr. Smith I again urged them to push steadily onwards and never to idle for an instant; but I do not think that either of them were fully aware of the dangers they had to

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contend with. Poor Smith, as he squeezed my hand, begged me to send out a horse for him, if one could be procured, and also some tobacco; he said the only thing he dreaded was want of water.

Mr. Walker smiled and told me to look out for myself that he was not in Perth before me, and several others seemed to participate in his feeling and to regard my plan of proceeding as the height of folly.

I left with Mr. Walker's party everything that was really useful, such as the cooking saucepan and the only hatchet we had. These were very valuable to them, for had they come into a grass-tree country they might have subsisted for a long time upon the tops of these trees, as Mr. Elliott did upon a former occasion; for he together with two men lived upon them for fourteen days. This very useful implement they however threw away the second day after we parted. We also left them all the fishing-hooks.

Mr. Walker's party instantly commenced on the system of halting, and instead of moving on in the afternoon remained where they were that day for the purpose of resting themselves.

The country we travelled over for the first two miles was pretty good, being a series of grassy plains. At this point we came to a belt of thick wood which we found exceedingly difficult to traverse. We then continued our south by east course for four miles further over undulating sandy downs, and halted for the night in a small clump of Banksia trees which afforded plenty of wood for our fires.

April 11.

About an hour before daylight I roused the party, and as soon as it was light enough to distinguish the surrounding objects we started. Our route lay along a series of undulating sandy hills which sloped down to a fertile plain, four or five miles in width, on the western side of which rose a low range of dunes, and beyond these was the sea. We found the walking along these hills very difficult on account of the prickly scrub with which they were covered, and the general appearance of the country to the eastward was barren and unpromising.

COURSE IMPEDED BY A THICK WOOD.



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The course I pursued was about south by east, but we soon found ourselves embarrassed in thick woods through which it was almost impossible to force a way: the trees were not large but so matted together that it required my utmost exertions to prevail upon the men to persist in pushing through them, indeed it will afterwards be found that these woods had a most disastrous effect upon the spirits of that portion of the party which followed me. It was however absolutely necessary to make our way through one of these which formed a belt of nearly a mile in width, running almost east and west as far as the eye could see in each direction.

I therefore gave a bold plunge into the bushes, followed by the native and slowly by the other men, who kept alternately groaning from fatigue and pain and uttering imprecations against the country they were in. Having cleared this wood I turned rather more inland, and we pursued our route over barren scrubby plains, and, after having travelled about fifteen miles over this uninteresting description of country, we suddenly found ourselves on the top of a low range which overlooked a most luxuriant valley of about three miles in width, its general direction appearing to be from the east-south-east.

### THE ARROWSMITH RIVER.

I immediately knew from the appearance of the country that we were near some large river; and whilst descending into the valley I indulged in speculations as to the size of that we were about to discover, and as to whether Providence would grant me once again to drink a draught of cool river water.

I soon however began to fear that my expectations were to be disappointed. We had already proceeded more than two miles of the distance across the valley; and although the soil was rich and good we had yet seen nothing but dry watercourses, inconsiderable in themselves yet apparently when united forming a large river. I still however entertained hopes of finding water, for I saw numerous tracks of natives about, and the whole of this valley was an extensive warran ground in which they had that very morning been digging for their favourite root.

At length, just as my patience began to wear out, we ascended, out of a dry watercourse, a rise rather more elevated than the others we had met with in crossing the valley; and from the summit of this a

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curious sight met our view: beneath us lay the dry bed of a large river, its depth at this point being between forty and fifty feet, and its breadth upwards of three hundred yards; it was at times subject to terrific inundations; for along its banks lay the trunks of immense trees, giants of the forest which had been washed down from the interior in the season of the floods; yet nothing now met our craving eyes but a vast sandy channel which scorched our eyeballs as the rays of the sun were reflected back from its white glistening bed.

### WATER FOUND IN IT BY DIGGING.

I picked out the most shady spot I could for the men to halt at, then descended into the bed of the river to search, with the native, for water; and immediately on scraping a hole a few inches deep in the bed of the river the water came streaming into it, for the sand composing the bottom of the watercourse was completely saturated, and I afterwards found that there were large pools of it immediately above and below where we were.

The wants of the men having been thus supplied I determined, as it was intensely hot, to halt for an hour or two; we each of us therefore ate a little doughboy, or piece of damper, and the men then lay down to rest. As I sat musing alone the first thought that struck me was how providentially it happened that we had not fallen in with this river in the season of the floods, as our crossing it then would have been utterly impossible.

### APPROACH OF NATIVES TO THE RIVER.

But my reveries were soon disturbed by hearing the call of a native from the opposite bank, and I roused up poor Kaiber from his sleep that he might ascertain what was going on upon the other side. His quick eyes soon detected natives moving about amongst the bushes; but on farther examination he ascertained that there was only one man, who walked as if he had been wounded, the rest of the party being made up of women and children, who were digging for roots. They were quite unconscious of our presence, and we lay snugly behind a bush, watching all their movements. As soon as they had dug a sufficient quantity of roots for their purpose they descended to the bed of the river and walked up to a pool about one hundred yards above our position, where they all drank and then sat down to cook their roots. I ordered the men to keep themselves as quiet as possible so that we in no way disturbed these poor creatures; and

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when at length the party moved off we passed them in a diagonal direction so as to give them an opportunity of seeing us without frightening them. When first we emerged into view they began to run away; but when they saw that we still moved steadily on without noticing them they were no longer alarmed, but stood still, gazing at us with the greatest wonder and amazement; the youngest children standing behind their mothers, peeping cautiously out at us; and many a strange thought must have passed through the breasts of these natives as they saw us wind in regular order up the opposite hill. This tribe was the most northern one that I had seen wear the kangaroo-skin cloak.

Another mile and a half in a south by east direction brought us to a low range to the south of this river, which I named the Arrowsmith River after Mr. John Arrowsmith, the distinguished geographer. From this range we had a fine view of the rich valleys drained by this important stream.

### MOUNT HORNER.

These valleys ran nearly north and south between the interior range and the sandy limestone range parallel to the coast on which we now were; but the river must also, of course, from its magnitude, penetrate the interior range, which was only distant about sixteen miles from us. A very remarkable peak in the latter, which bore east-north-east from this point, I named Mount Horner, after my friend Leonard Horner, Esquire.

It appears from the report of the party who came along the coast that this river loses itself in a large lake, between which and the sea a great bar of dry sand intervenes in the dry season; there is however a very fair proportion of good country in the neighbourhood of the Arrowsmith.

In the course of the evening we travelled six and a half miles further in a south-south-east direction, over barren, sandy, scrubby plains, which extended on all sides as far as the eye could see, and even the interior range appeared to be perfectly bare. Towards nightfall we were all quite worn out from the difficulty we had experienced in walking through the prickly scrub, yet I could see no place that afforded sufficient wood to enable us to make a fire and, as most of us had no covering with us, and the nights were intensely cold, we had every prospect of passing a most wretched one; but at length I

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spied two clumps of Banksia trees, the nearest of which we just reached as it became quite dark. The other clump was about a quarter of a mile to the eastward of us, at which I soon distinguished native fires; as the men were however much exhausted I thought it better not to mention this circumstance to them, and Kaiber and myself, who always slept at a little fire alone, kept a good look out during the night.

This evening we found the Bohn or Boh-rne, a native esculent root, and it is the most northern point at which I have met with it.<sup>25</sup>

April 12.

Before dawn this morning our native neighbours, who doubtless were not pleased at our sleeping so near them, began to cooe to each other, which is their usual signal for collecting their forces; and, as our safety depended upon none of the party being incapacitated by a wound or other cause from proceeding with the utmost rapidity, I at once roused the men and we resumed our way.

CONTINUE OUR ROUTE.

In the course of the day we made a march of twenty-five miles in a south-south-east direction, the whole of this distance being across elevated undulating sandy plains, covered with a thick prickly scrub, about two and a half feet high; these plains were however occasionally studded with a few Banksia trees, but anything more dark, cheerless, and barren than their general appearance can scarcely be conceived.

About half an hour before sunset we came to the bed of a dry watercourse, the direction of which was from south-east to north, so that it was probably a tributary of the Arrowsmith. We were fortunate enough to find a small pool of water in it, yet the large flights of birds of every description that came here for the purpose of drinking showed the rarity of water in these parts. We made several attempts to get a shot at them but they were so wild, and we were so worn out and weak, that all our exertions were unsuccessful. In the course of the evening one of the men made up my last pound of flour into a damper for me, and I supped on a spoonful of arrowroot.

SERIOUS ROBBRY BY A RAT.

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April 13.

On waking up this morning I found that in the night a rat had gnawed a hole in the canvas bag in which my little damper was placed, and had eaten more than half of it; this was a very serious misfortune as all my provisions were now reduced to three table-spoonfuls of arrowroot and the morsel of damper left me by the rat. As I had shared my provisions with the native my situation was far worse than that of any of the others, and he, poor fellow, had become so dispirited and weak that he was incapable of searching for his food. Indeed the productions of the country through which he had hitherto passed were so different from those of the one in which he had lived that the various kinds of roots and vegetables were, with one or two exceptions, quite unknown to him.

We made a very good march of it this morning, having travelled nineteen miles in a nearly south direction before 12 o'clock. Soon after starting we sighted Mount Perron, distant about two and twenty miles and, seen over the waste and barren plains which surrounded us, it was a very remarkable object.

We halted at noon for about two hours, during which time I made my breakfast with Kaiber, sharing my remaining portion of damper between us. It was almost a satisfaction to me when it was gone, for, tormented by the pangs of hunger, as I had now been for many days, I found that nearly the whole of my time was passed in struggling with myself as to whether I should eat at once all the provisions I had left or refrain till a future hour. Having completed this last morsel I occupied myself for a little with my journal, then read a few chapters in the New Testament and, having fulfilled these duties, I felt myself as contented and cheerful as I had ever been in the most fortunate moments of my life.

### GAIRDNER'S RANGE.

Soon after two P.M. we resumed our journey, travelling for about eight miles in a due south direction over plains similar to those we had passed yesterday and this morning, and then began to ascend a red sandstone range of the same description as the Perth ironstone and thinly studded with black bay trees. I named this range Gairdner's Range after my friend Gordon Gairdner, Esquire, of the Colonial Office and, after continuing a gradual ascent for about four miles, I found that we were in the neighbourhood of a forest, at the

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outskirts of which I chose a spot for our halting-place, which afforded plenty of firewood but was deficient in water. As we had now however marched thirty-one miles without seeing water, and were all perfectly worn out, I judged it more prudent to halt where we were.

### FIND SOME EDIBLE ZAMIA NUTS.

Kaiber here brought in some of the nuts of the *Zamia* tree; they were dry and therefore in a fit state to eat. I accordingly shared them amongst the party. Several of the men then straggled off to look for more, and were imprudent enough, before I found out what they were doing, to eat several of the nuts which were not sufficiently dried, the consequences of which were that they were seized with violent fits of vomiting accompanied by vertigo and other distressing symptoms; these however gradually abated during the night, and in the morning, although rendered more weak than they were before, the poor fellows were still able to resume their march.

### GENEROUS CONDUCT OF ONE OF THE MEN.

Soon after the fires had been lighted I was sitting alone by mine, as the shadows of night were just falling over the wild hilly scenery with which we were surrounded; I had no water to cook a portion of the three spoonfuls of arrowroot yet left me, and I saw each of the others preparing his scanty portion of food. The native had at this time gone away to look for *Zamia* nuts, and it may be imagined that many almost undefined feelings at such a time thronged rapidly through my mind. Whilst thus thinking I heard Hackney propose to Woods to offer me a share of their little store of food: "No," said Woods; "everyone for himself under these circumstances; let Mr. Grey do as well as he can and I will do the same." "Well then I shall give him some of mine at all events," said Hackney; and a few minutes afterwards he came up to my fire and pressed me to accept a morsel of damper about the size of a walnut. I hesitated at first whether to do so or not, but, being aware that when we came into a country where game was to be found I could, by means of my gun, provide enough amply to repay this lad, I took it, after several refusals and having it as often warmly pressed upon me.

I was much affected by the kindness of Hackney, who was a young American; and I regret to add that I felt more hurt than I ought to have done at the remark of Woods.

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### CHAPTER 4. FROM GAIRDNER'S RANGE TO PERTH.

#### THE HILL RIVER.

Sunday April 14.

We travelled about fourteen miles due south over a range of high ironstone hills which were occasionally clothed with grass-trees. The scrub was however still thick, prickly, and very difficult to penetrate; the heat was intense and the whole party were getting very weak. About noon, and when we had just gained a commanding summit, I looked back at Mount Perron, now several miles in our rear; from this point we began to descend into an extensive valley, and at the end of fourteen miles reached a small river which I named the Hill.

#### DISCOVERY AND PILLAGE OF A NATIVE PROVISION STORE.

We halted at the first pool we came to and the men, who had a little flour left, boiled two tablespoonfuls of this in about a pint and a half of water, thus making what they called soup. In the meantime Kaiber came in and told me that he had found some holes in which the natives had, according to their custom, buried a store of By-yu nuts,<sup>26</sup> and he at the same time requested permission to steal them.

I reflected for some time on his proposal; I was reluctant to mark the first approach of civilized man to this country of a savage race by an unprovoked act of pillage and robbery; yet we were now in the desert, on the point of perishing for want of food, the pangs of hunger gnawing us even in our very sleep, and with the means of temporary relief at hand. I asked myself if I should be acting justly or humanely by the others, whose lives were at stake if I allowed them to pass by the store, which seemed providentially offered to us, without pointing it out.

In my perplexity I turned to Kaiber: his answer was, "If we take all, this people will be angered greatly; they will say, 'What thief has stolen here: track his footsteps, spear him through the heart; wherefore has he stolen our hidden food?' But if we take what is buried in one hole they will say, 'Hungry people have been here; they were very empty, and now their bellies are full; they may be sorcerers; now they will not eat us as we sleep.'" Good, it is good, Kaiber," I replied; "come with me and we will rob one hole." And accordingly we went and took the contents of one, leaving three

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others undisturbed. I brought back these nuts to the men and we shared them amongst us.

We were so weary that we did not start until late in the afternoon, and then travelled south by east down the course of the river, making about six miles. It was joined by many small tributaries and now became a running stream flowing through a deep grassy valley in which were many large flats. In the course of the afternoon some of the men had a shot at a native dog; he was a fine fat fellow; but they were unsuccessful and never did I feel more disappointed than when I saw him cantering away desperately frightened but perfectly uninjured. I was sufficiently fortunate to shoot a hawk just before nightfall, and we then halted by the side of the river, lighted our fires, and laid down to sleep.

April 15.

In the course of the night I had cooked the hawk which I shot yesterday and before starting divided it as follows: I gave the head, entrails, and shanks to the native; then cutting the residue in half I gave one part to Hackney, who had so generously shared his morsel of damper with me, and kept the remaining portion for myself. Poor Hackney's wan and wasted countenance glowed with pleasure when this acceptable gift was placed in his hands, and I felt no slight degree of satisfaction in having an opportunity of showing him that I felt grateful for his act of generosity to me.

We now followed the course of the river for about two miles further and saw a considerable quantity of good land along its banks, clothed with feed for stock; but I cannot tell how far back this extends.

The river now ran away nearly due west under a low range of hills; and still adhering to my original plan I quitted its banks and continued my course straight for Perth, travelling in a south by east direction. The next two and a half miles led us to the top of a low range. The whole tract of country between this point and the river was arid and barren in the extreme, being devoid of all vegetation but a stunted prickly scrub, and on it we saw no signs either of animal life or water. We here for the first time since quitting Moresby's Flat-topped Range saw that the one to the east of us became well wooded, the interval between these two points having been completely bare of trees.



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### BARREN COUNTRY.

I now halted for about an hour and a half to rest the wearied men, and then again commenced our route over this barren waste. For the next twelve miles we travelled down a gentle descent leading to a very deep valley, and late in the evening reached some dried up swamps where we made an ineffectual search for water; we however saw here some parakeets, and I was lucky enough to kill one which was about the size of a thrush; several of the men also got shots at these little birds, but without success. As the day had been intensely hot and we had tasted no water since morning we suffered a great deal from want of it, but were at length compelled by darkness to lie down to rest without finding any.

### DRY BED OF THE SMITH RIVER.

April 16.

We had not travelled above two miles this morning in an east-south-east direction when I found that we had reached the bottom of the valley into which we had yesterday evening commenced our descent. In this valley lay the dried up bed of a considerable stream, which I have named the Smith after my unfortunate friend. Its direction was from north-east to south.

### LONG AND UTTER DESTITUTION OF FOOD AND WATER. SUFFERINGS FROM THIRST.

As we were now suffering a good deal from thirst we made a search in both directions along the bed, but although there were many pools (some of them being twelve or fourteen feet deep) we could not find the slightest indication of water having stood in them for a considerable time: in the bottom of one of the deepest of these pools was a native well, dug to the depth of about seven feet, but even at this distance below the surface we could see no signs whatever of water. There was much good land in the valley through which this watercourse wound, but all was barren and arid. In the course of the morning we had seen a flight of cockatoos coming from the eastward down the valley in which the bed of the river lay, which at the time made me imagine that water would be found in that direction in the interior, and the natives subsequently stated that such was the case, but our circumstances would not admit such a deviation from our course in a search which if unsuccessful would have proved fatal.

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### DISTRESSING SEARCH FOR WATER.

The sun had by this time become intensely hot, and the poor fellows grew faint for want of water, whilst it aggravated their sufferings that they stood upon the brink of a river, or wandered along its banks with eager piercing eyes, and an air of intense scrutinizing watchfulness peculiar to those who search for that on which their lives depend. One while they explored a shallow stony part of the bed, which was parched up and blackened by the fiery sun; their steps were slow and listless, and I could plainly see how faint, weak, and weary they were; the next minute another pool would be discerned ahead, the depth of which the eye could not at a distance reach; now they hurried on towards it with a dreadful look of eager anxiety, the pool was reached, the bottom seen, but, alas! no water; then they paused and looked one at the other with an air of utter despair. As long as they remained on the banks of this river bed a glimmering of hope remained; but I felt convinced from the general appearance of the country that there was not the slightest probability of our finding water there, and resolved therefore still to continue a direct route. When I gave this order the weak-minded quailed before it: they would rather have perished in wandering up and down those arid and inhospitable banks than have made a great effort and have torn themselves away from the vain and delusive hopes this watercourse held out to them.

With great pain I witnessed and bore my part in this distressing scene, but I at the moment felt that it would be necessary to save my energies for other occasions; suspecting that we were in a great tract of desert country, a large portion of which must still be passed ere we could hope for any alleviation from our sufferings; and I therefore at once commenced carrying into execution the order I had given, by walking on in a south by east direction. In about two miles we had gained the summit of the low range which bounded to the southward the valley where we had so vainly searched for water, and for the next ten miles we travelled over elevated sandy barren plains, thinly wooded with occasional clumps of Banksia trees.

### DRY TEA-TREE SWAMP.

On our left was a lofty and well wooded range, distant only about four miles, and on our right lay extensive plains, the western extremity of which, distant about sixteen miles from us, was by the sea; these plains appeared tolerably fertile, being covered with tea-

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tree swamps, now apparently dried up. I still was led on by the hope, raised by the height of the range on our left, that we might find water issuing from it towards the coast, and had therefore not searched the plains which lay between us and the sea, indeed I felt fully convinced that the swamps we saw were all perfectly dry and the native coincided in my opinion; about an hour before sunset however we descended towards the plains, and turning due west we reached them in about half an hour, but found all the swamps quite destitute of water. As soon as it became dark I lit my fire and laid down by it, advising the others to pursue the same course and to preserve their energies for the morrow. But such advice was thrown away upon men almost perishing with thirst, and every now and then throughout the night I heard their weak husky voices as they wandered from swamp to swamp in the neighbourhood, digging holes with pointed sticks in a vain search.

### NATIVE SONGS.

Poor Kaiber alone lay crouching by my fire, occasionally feeding it with fresh fuel and chanting to himself these two songs, in his own language:

Thither, mother oh, I return again,  
Thither oh, I return again.

The other had been sung by the mother of Miago, a native who had accompanied Captain Wickham in the Beagle from the Swan River, and it had made a great impression on the natives.

Whither does that lone ship wander,  
My young son I shall never see again.  
Whither does that lone ship wander.

### EXTREME FEEBLENESS OF THE PARTY.

The night wore heavily on; sleepless sufferers were around me, and I myself began to feel very anxious as to what the next day might bring. The men had now been already one night and two days without tasting a single drop of water or food of any kind whatever, for as the only provisions they had left was a spoonful or two of flour each it was impossible for them to cook this without water; indeed only two of them had even this small supply of flour left, and the rest were wholly destitute.

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I personally suffered far less than any of the others with the exception of the native, and this for several reasons. In the first place I had been long accustomed to subsist on a very small quantity of water, and secondly I had always kept my mind occupied and amused instead of giving way to desponding or gloomy thoughts. When we halted and the others laid wearily down, brooding over their melancholy situation, I employed myself in writing up my journal, which was most scrupulously kept; and this duty being concluded I had recourse to a small New Testament, my companion throughout all my wanderings, and from this latter I drank in such deep draughts of comfort that my spirits were always good.

### DANGER OF PERISHING FOR WANT OF WATER.

April 17.

About an hour and a half before dawn we started in a south by east direction, the native leading the way, for it was yet too dark for me to select points to march upon. As we moved along we moistened our mouths by sucking a few drops of dew from the shrubs and reeds, but even this miserable resource failed us almost immediately after sunrise. The men were so worn out from fatigue and want of food and water that I could get them but a few hundred yards at a time, then some one of them would sit down and beg me so earnestly to stop for a few minutes that I could not refuse acceding to the request; when however I thus halted the native in every instance expressed his indignation, telling me that it was sacrificing his safety as well as those of the others who were able to move, for that if we did not find water ere night the whole party would die. He was indeed as weak from want of food as any of us, for we had made such rapid and lengthy marches in the hope of speedily forwarding assistance to those left behind that when we came at night to the conclusion of our day's journey Kaiber was too much exhausted to think of looking for food.

About two o'clock in the afternoon the men were so completely exhausted that it was impossible to induce them to move, and at this period I found that we had only made about eight miles in a south by east direction, over plains studded with small sandy hills and the beds of dried up tea-tree swamps.

When I halted the sun was intensely powerful; the groans and exclamations of some of the men were painful in the extreme; but my

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feelings were still more agonized when I saw the poor creatures driven, by the want of water, to drink their own —, the last sad and revolting resource of thirst!

### UNSUCCESSFUL SEARCH FOR WATER WITH KAIBER.

Unable to bear these distressing scenes any longer I ordered Kaiber to accompany me, and notwithstanding the heat and my own weariness I left the others lying down in such slight shade as the stunted banksias afforded, and throwing aside all my ammunition, papers, etc., started with him in search of water, carrying nothing but my double-barrelled gun. We proceeded towards the sea. As the natives have the faculty, even in the trackless woods which they have never before been in, of returning direct to any spot they have left by however circuitous a course they may have travelled after quitting it, I paid no attention to the direction we were moving in but followed Kaiber, who roamed from spot to spot in the vain search of water; but we found not a drop. The same arid barren country seemed spread on every side; and when at length I began occasionally to stumble and fall from weakness hope abandoned me, and I determined to return direct to my comrades and get them to make one more effort to proceed and search for it in a southerly direction.

### TREACHEROUS INTENTIONS OF KAIBER, THE NATIVE.

I therefore told Kaiber that such was my intention, and directed him to guide me to the party. With apparent alacrity he obeyed my orders; but after leading me about some time in an extraordinary manner he told me that he had lost his way and could not find them. His look was so very plausible when he said this, and he seemed so grieved at the circumstance, that for a moment I believed his tale; but I felt convinced that we could not be at any very great distance from them and therefore fired one barrel of my gun; the echo of this sound, never heard in these solitudes before, rang loudly through the woods, remoter distances caught it up, and at length it gradually died away: anxiously did I now listen for a repetition of the report, for I knew, were they within hearing, the men would instantly fire again to acknowledge the signal I had made; but minute after minute passed on and no answering signal struck my ear. I sat down and applied my ear to the ground; every sense became absorbed in the single one of hearing, but not the remotest sound that I could distinguish broke the frightful solitude of these vast woods. I

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remained seated on the ground for a few minutes, still hearing no answer to my shot, till the conviction gradually forced itself on my mind that the native had been leading me astray. Only two cases could have occurred: either he had done so purposely, for he could not, by any accidental mistake, have taken me to such a distance as to prevent the party in these silent woods hearing the report of my gun, or otherwise the men had of themselves moved away from the place where I had left them. But I felt assured that this latter supposition was not correct, for ever since I quitted the other portion of the party I had maintained so strict a discipline that no man ever separated from the rest without my permission; indeed I had increased my strictness in these respects exactly in proportion to our increasing difficulties; and I moreover felt sure that some of the men were by far too much attached to me ever to abandon me in such a manner.

My situation however was undoubtedly very critical, not as far as regarded my own safety, for I was not now more than eighty miles from the nearest settler's hut; but was it possible for me to return alone to my countrymen and to say that I had lost all my comrades? that I had saved myself and left the others to perish? Yet I knew that unless I sent assistance to the first party I had left the majority of them could not survive; and from the state I had, about an hour and a half ago, left the others in, it appeared more than probable that they might wait and wait anxiously, expecting my return, until too weak to move, and thus die miserably in the woods.

These thoughts thronged rapidly through my mind. Indeed I was obliged to do all things quickly now for I felt that my existence depended upon my finding water within the next three or four hours. The native sat opposite to me on the ground, his keen savage eye watching the expression of my countenance, as each thought flitted across it. I saw that he was trying to read my feelings; and he at length thus broke the silence:

"Mr. Grey, today we can walk and may yet not die but drink water; tomorrow you and I will be two dead men, if we walk not now, for we shall then be weak and unable. The others sit down too much; they are weak and cannot walk: if we remain with them we shall all die; but we two are still strong; let us walk. There lies the sea; to that the streams run; it is long since we have crossed a river: go quickly, and before the next sun gets up we shall cross another running water." He paused for a minute, looking steadfastly at me, and then

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added, "You must leave the others, for I know not where they are, and we shall die in trying to find them."

### HIS DESIGNS FRUSTRATED.

I now knew that he was playing me false and that he had purposely led me astray. He was too great a coward to move on alone for fear of other natives and, dreading to lose his life by thirst, he had hit upon this expedient of inducing me to abandon the others and to proceed with him. "Do you see the sun, Kaiber, and where it now stands?" I replied to him. "Yes," was his answer. "Then if you have not led me to the party before that sun falls behind the hills I will shoot you; as it begins to sink you die." I said these words, looking at him steadily in the face, and with the full intention of putting my threat into execution. He saw this, and yet strove to appear unconcerned, and with a forced laugh said, "You play. From daylight until now you and I have walked; we have wasted our strength now in looking for water for the others. But a short time, and we shall be dead; and you say, search for men whom I cannot find; you tell me, look; and I know not where to look." I now lost all patience with him and replied: "Kaiber, deceive as you will, you cannot deceive me; follow back our tracks instantly to the point from whence we started: if you do not find them, as the sun falls you die." "I am wearied," answered he; "for three days I have not either eaten or drunk, far have we wandered since we left them, and very distant from us are they now sitting." I could bear this no longer, and, starting up, said, "You deceive: the sun falls! just now I spoke: Koolyum, nganga dabbut—garrum wangaga." Again he forced a laugh and said, "Surely, you play." I answered shortly, "Did I ever tell you a lie, Kaiber? I now speak the truth."

### RETURN TO THE PARTY WITHOUT WATER.

He seemed, when he saw that I was so determined, to feel a little uncomfortable, and shifting his position moved rather further from me; this motion on his part induced me to conceive that he intended to run away; in which case I could never again have hoped to rejoin the party; I therefore instantly cocked the remaining barrel of my gun and presented it at him, telling him that if he ever moved from me further than a certain tree which I pointed out I would forthwith shoot him, instead of waiting until sunset as I had originally intended. The decided manner in which I announced this to my friend Kaiber had the desired effect. He made a few protestations as

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to the folly of my conduct; lamented most loudly that his mother, and the Dandalup (a river of his own land) were so far removed from him; asserted vehemently that the natives of these parts were bandy-legged, rough-tongued beings; that they eat earth and drank no water; and, winding-up with a fervent wish that he might catch one of them wandering anywhere between Pinjarup and Mandurup, in which case he would spear his heart, his kidney, and his liver, he sulkily resumed his route and led me straight back to the party in about an hour.

### DISTRESSING SYMPTOMS OF EXTREME THIRST.

The men, who had been much surprised at the length of my absence, were at first buoyed up with the hope that I had found water; but this hope had at last died away, and they knew not what to conjecture. They were all reduced to the last degree of weakness and want; indeed I myself was at this period suffering from the most distressing symptoms of thirst; not only was my mouth parched, burning, and devoid of moisture, but the senses of sight and hearing became much affected; I could scarcely recognise the voices of the rest; and when uncouth unnatural tones struck upon my ear it took me some time to collect my thoughts in order to understand what was said, somewhat in the way in which one is obliged to act when roused suddenly from a deep sleep. In the same manner my sight had become feeble and indistinct; but by far the most distressing sensation was that experienced upon rising up after having rested for a few moments. I then felt the blood rush violently to the head, and the feeling produced was as if it were driven by a forcing-pump through all my veins.

### LAST EFFORTS.

Previously to starting again I gave the men orders, which I believed at the time would be, to some at least, the last. I did not attempt to hide from them the dangers which surrounded us; but stating these I represented that matters had now arrived at such a crisis that, in the event of any of them being unable to proceed, it would be wrong to expect the others to halt on their account; and I therefore called upon all to exert their utmost energies and boldly to make a last struggle for their lives. My intention, I told them, was to proceed slowly but steadily to the southward, and never once to halt until I dropped or reached water; even in the event of any being unable to keep up I warned them that I should not wait for them but still pursue a steady



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and undeviating course until water was found; but as soon as I had slaked my own thirst I would return and bring assistance to those who might have been unable to come on with me.

### PAINFUL MARCH.

Having thus imparted my intentions I ordered them to throw away every superfluous article; and a very valuable sextant, which had hitherto been carried turn about by Corporals Auger and Coles, was here abandoned. These our preparations having been made we moved slowly on in sad procession, and never shall I forget the wild and haggard looks of those that followed me; reason had begun to hold but a very slight influence over some, and I feel assured that had it not been for the force of that discipline which I rigidly maintained some of the party must now have lost their lives. As it was, not a word of complaint was heard as to the plan I pursued or the route I took; but they all reeled and staggered after me, the silence being only broken by groans and exclamations. I preserved a slow uniform pace, proceeding still in a south by east direction, that is, in a straight line for Perth. The same sandy sterile country was around, thinly clothed with Banksia trees.

We had marched for about an hour and a quarter and in this time had only made two miles, when we suddenly arrived upon the edge of a dried-up bed of a sedgy swamp, which lay in the centre of a small plain, where we saw the foot-mark of a native imprinted on the sand, and again our hearts beat with hope, for this sign appeared to announce that we were once more entering the regions of animal life. We soon found that another part of the swamp was thickly marked with the footsteps of women and children; and as no water-baskets were scattered about no doubt could exist but that we were in the vicinity of water. We soon discovered several native wells dug in the bed of the swamp; but these were all dry, and I began again to fear that I was disappointed, when Kaiber suddenly started up from a thick bed of reeds and made me a sign which was unobserved by the others, as was evidently his intention.

### FORTUNATE DISCOVERY OF A MOIST MUD-HOLE. PROVIDENTIAL SUPPLY.

I hurried up and found him with his head buried in a small hole of moist mud, for I can call it nothing else. I very deliberately raised

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Kaiber by the hair, as all expostulations to him were useless, and then called up the others.

Kaiber had completely swelled himself out with this thick muddy liquid, and from the mark upon the sides of the hole had evidently consumed more than half of the total supply. I first of all took some of this moist mud in my mouth, but finding a difficulty in swallowing it, as it was so thick, I strained a portion through a handkerchief. We had thirsted with an intense and burning thirst for three days and two nights, during the greater portion of which time we had been taking violent exercise under a fierce sun. To conceive the delight of the men when they arrived at this little hole of mud would be difficult. Each, as he came up and cast his wearied limbs on the ground beside the hole, uttered these words: "Thank God;" and then greedily swallowed a few mouthfuls of the liquid mud, protesting that it was the most delicious water and had a peculiar flavour which rendered it far superior to any other he had ever tasted.

### DANGER OF PERISHING FROM HUNGER.

But it required some time before their faculties were sufficiently recovered to allow them duly to estimate the magnitude of the danger they had escaped. The small portion of muddy water in the hole was soon finished, and then by scraping it out clean we found that water began slowly to trickle into it again. The men now laid themselves down almost in a state of stupefaction, and rested by their treasured pool. I felt however that great calls upon my energies might still arise, and therefore, retiring a little apart with the native, I first of all returned hearty thanks to my Maker for the dangers and sufferings he had thus brought me through, and then tottered on with my gun in search of food. As might have been expected, game was here plentiful: numerous pigeons and other birds came down at nightfall (which was now the hour) for the purpose of drinking at this lone pool, and the numbers of birds of different kinds that congregated here was a most convincing proof of the general aridity of this part of the country. Indeed the natives subsequently reported that the tract we had just traversed was at this season of the year totally devoid of water. It was in vain now that I raised the gun, for my tremulous hand shook so that I could not for a moment cover the bird I aimed at, and after one or two ineffectual attempts to kill something I was obliged to desist in despair.

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### PANGS OF HUNGER.

I now dreaded that I had only escaped the pains of death by thirst in order to perish of hunger, and for a moment regretted that I had not died ere I found water, for I firmly believed, from the state of weakness I was then reduced to, that the bitterness of death had passed. But a short period sufficed to smother these unmanly and unchristian feelings in my breast, and, seeing a flight of black cockatoos soaring about in the air, I determined to watch them to their roosting-place, and then favoured by the darkness of night to steal upon them. On my return to the party I found the men sitting by the hole of water, anxiously watching until they again saw a little black mud in it, which they then eagerly swallowed.

I found some difficulty in inducing them to light their fire and to choose a situation where they could repose for the night, but, having accomplished this, I sat down by my own, hand-rubbing my limbs until it should grow rather darker. At length I had the pleasure of seeing that the black cockatoos, who found we were not likely to leave them in possession of the water, had taken up their position for the night in a large clump of trees distant not more than half a mile, and I hereupon started with Kaiber to try and get a shot at them.

### SHOOT AND COOK A COCKATOO.

After about an hour's wandering and excitement such only as the desperate gambler can know whose life depends upon the stake for which he plays, I succeeded in getting a shot into a whole flight of roosting and snoring black cockatoos, and one fell. I pounced in triumph on it and received a bite which, famishing as I was, somewhat damped my ardour; Kaiber however hit it upon the head with a stick, and we then bore it off to our fire.

The men had cooked one spoonful of flour each in the liquid mud which the pool afforded, and assured me that they found this thick water very nourishing; whence I concluded that the large portion of mud it contained in some degree gratified the cravings of the stomach. Kaiber soon plucked the cockatoo and roasted it: I gave him the entrails, the feet, and the first joint of the legs, eating the head and thighs myself and reserving the other portions as a store against future emergencies. I now felt assured that my life was saved and, rendering thanks to God for his many mercies, I laid down by the fire to watch for the first appearance of dawn.

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April 18.

The men slept but little during the night: every now and then one of them visited the hole of mud and water to see if a little of this fluid had drained into it, and about an hour before daylight I roused them up to proceed upon their journey. They were dreadfully feeble though upon the whole stronger than they had been for the last three days. We now entered upon a more hilly country than we had traversed yesterday; the hills were steep, being composed of sand and recent limestone, whilst the valleys were thickly wooded with grass-trees and stunted Banksias. The general line of route I followed was south by east, and we had not travelled more than nine miles when we came suddenly upon a valley with a river running rapidly through it. The sight of this cheered us up; and when on tasting the water we found it excellent, and saw adhering to the banks a species of freshwater mussel (*Unio*) called by the natives Maraylya, our joy was complete.

### SUPERSTITIOUS FEELINGS OF KAIBER REGARDING MUSSELS.

I proceeded therefore to collect wood for my fire and ordered Kaiber to make haste and gather some of these mussels, an order which, considering the hungry state he was in, I imagined he would gladly have obeyed; but to my astonishment he refused positively to touch one of them, and evidently regarded them with a superstitious dread and abhorrence. My arguments to induce him to move were all thrown away; he constantly affirmed that if he touched these shellfish through their agency the *Boyl-yas*<sup>27</sup> would acquire some mysterious influence over him, which would end in his death. He could not state a recent instance of any ill effects having happened from handling or catching the mussel; but when I taunted him with this he very shrewdly replied that his inability to do so only arose from the fact of nobody being "wooden-headed enough" to meddle with them, and that he intended to have nothing whatever to do with them. This much he assured me was certain: that a very very long time ago some natives had eaten them, and that bad spirits had immediately killed them for so doing.

Kaiber was a great deal too sensible a fellow to be allowed to remain a prey to so ridiculous a superstition as this was; I therefore ordered him instantly to go and bring some of these mussels to me; that I intended to eat them, but that he could in this respect please himself. He hereupon, after thinking for a moment or two, got up to obey me,

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and walked away for this purpose; but I heard him, whilst occupied in the task, lamenting his fate most bitterly. It was true, he said, that he had not died either of hunger or thirst, but this was all owing to his courage and strong sinews, yet what would these avail against the supernatural powers of the boyl-yas. "They will eat me at night, whilst, worn out by fatigue, I must sleep." Amidst these and sundry other similar exclamations he brought the mussels to me: by this time my fire was prepared, and in a few minutes I was making such a meal as the weak state of my stomach would admit of. No inducement of mine could however prevail upon Kaiber to share with me, and I therefore handed him the remains of the cockatoo.

As soon as my repast was concluded I walked about three miles up the river in the hopes of getting a duck, Kaiber accompanying me. We saw several but killed none. There were some fine reaches in the river, as well as some good flats along its banks.

In the afternoon we travelled about three miles in a south by east direction, and then came to the bed of a small stream, which ran from east to west but was now merely a chain of pools. Across the bed where we passed it was a native weir. Our route during the whole evening lay over hills of a nature similar to those we passed yesterday. We did not halt until it was so dark that we could not see to walk, and then just dropped at the spot where we ceased to move.

### DISTRESS FROM COLD.

The men made their fire and I lighted mine from theirs; but scarcely was this done ere the rain fell in torrents. I had no blankets or protection of any kind against this, and Kaiber was in the same predicament; so that when the fire was extinguished our position became pitiable in the extreme, for I know not if I ever before suffered so much from cold; and to add to my annoyance I every now and then heard Kaiber chattering to himself, under its effects, rather than singing:

Oh wherefore did he eat the mussels?  
Now the boyl-yas storms and thunder make;  
Oh wherefore would he eat the mussels?"

At last I so completely lost my temper that I roared out, "You stone-headed fellow, Kaiber, if you talk of mussels again, I'll beat you." "What spoke I this morning?" replied Kaiber; "you are stone-

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headed. We shall be dead directly; wherefore ate you the mussels?" This was beyond what my patience in my present starved state could endure, so I got up and began to grope about for a stick or something to throw in the direction of the chattering blockhead; but he begged me to remain quiet, promising faithfully to make no more mention of the mussels. I therefore squatted down, in a state of the most abject wretchedness.

### CRIPPLED STATE OF THE MEN.

I nearly expired from cold and pain during this inclement night; the rheumatism in the hip in which I had been wounded was dreadful, and I lost the power of moving my extremities from cold. Kaiber must have suffered even more for he had nothing but a shirt on, whereas I had also a pair of trousers. The men were in somewhat better condition for they had a blanket, or rather a piece of one, between each two, and lying together they afforded one another mutual warmth. The long starvation which we had undergone had totally unfitted us all to cope with anything like cold.

April 19.

The rain and clouds protracted the morning dawn until late, which somewhat lengthened our miseries. As soon however as it was light enough to see our way we started, and moved slowly onwards in a south by east direction. The men were all completely crippled from the cold of the night, and it was with the greatest difficulty I could get either them or the native to move. My own energies were however only raised from these calls upon them, and I cheered them on as well as I could. Corporal Coles, my faithful and tried companion in all my wanderings, could scarcely crawl along. The flesh was completely torn away from one of his heels, and the irritation caused by this had produced a large swelling in the groin. Nothing but his own strong fortitude, aided by the encouragement given him by myself and his comrades, could have made him move under his great agony.

Still however we advanced slowly; other lives depended on our exertions; and whenever I reminded the men of this for a minute or two they quickened their pace. Pale, wasted, and weak, we still crawled onwards in the straight line for Perth, which I assured them they would reach on Saturday night or Sunday morning.

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### RIVER OF RUNNING WATER. PASS THE MOORE RIVER.

About two hours and a half after starting we crossed the southern branch of the Moore River, which was running strong; but the rain, which had only just ceased, prevented our being thirsty.

The whole of this day's route lay over hills similar to those we had found yesterday. We moved on, occasionally halting for a few minutes, until it was so dark we could no longer see, and then laid down, having again this day tasted no food.

### MISERY FROM RAIN AND COLD.

It rained hard all night and our miseries of the last one were repeated. We were also less able to bear them, being weaker from longer abstinence. This day we travelled about one-and-twenty miles.

### DESPONDING FEELINGS.

April 20.

This morning we rose again, weak and stiffened from the cold and wet; life had long ceased to have any charms for me, and I fancy that the others must have experienced a similar feeling. A disinclination to move pervaded the whole, and I had much the same desire to sink into the sleep of death, that one feels to take a second slumber of a morning after great fatigue. My life was not worth the magnitude of the effort that it cost me to move; but other lives depended on mine, so I rose up weak and giddy and by degrees induced the rest to start also. Poor Coles however was in a dreadful state.

The country through which we were travelling is intersected by a long line of lakes which run nearly parallel to the sea for a distance of about forty-five miles. One of the party had travelled in the same direction with me before, but we had then kept along the edge of the lakes. He had imagined however that they were only two or three miles distant from the sea, whereas many of them were as much as eight or ten. The route we were pursuing was about midway between the lakes and the sea, and this man seeing nothing of the lakes could not be convinced that I was right in the position I said we then were; for I assured the men they were not more than twenty-seven or twenty-eight miles to the north of Perth; but I heard him

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relating his doubts, which tended to discourage the others very much.

### A PARTY OF NATIVES.

We however walked on as well as we could until near noon, at which time, from excessive weakness, we had not made more than eight miles, or about a mile and a quarter an hour, when we suddenly came out on the bed of a dried-up swamp, now looking like a desert of white sand studded with reeds. The forms of natives were seen wandering about this, one mile from us, who were searching for frogs. There was a very numerous party, and they did not appear at all inclined to approach us. Now it was very evident that if we were so near Perth as I imagined these natives must be well acquainted with Europeans; for although but very little was known of the country to the north of Perth, and the farthest settlement in that direction was only four miles from the town, still the natives must, from mere curiosity, have been frequently in the settlement.

### JOYFUL INTERVIEW WITH A FRIENDLY TRIBE. KAIBER'S OPINION OF THEM.

We therefore approached them but as we came near they withdrew. Kaiber was now called into consultation; he scrutinised them long and carefully, and then announced that they were "mondak yoongar," wild natives; and, after a second survey of them, declared that they had the "mondak kurrang kombar," or great bush fury, on them, or rather, were subject to wild untutored rage. After making this announcement he squatted down under a bush to conceal himself, and then recapitulating rapidly all the dangers we had gone through, conjured me not to bring him into a fresh scrape by having anything to do with such a numerous party of his countrymen in our present weak state.

The men, who understood enough of what he was saying to know that he thought these natives had never seen Europeans, became extremely uneasy and begged me to allow them to fire a gun as a signal to them: "For if we are so near Perth as you suppose, Sir," they said to me, "these natives will come to us." Kaiber hereupon told me that the instant the gun was fired he should run away. This was rather too ridiculous a threat when the coward was afraid to move five yards from us; I therefore ordered a gun to be fired, and then,



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telling the men to remain steady and prepared in case of accident, I walked off towards the natives, Kaiber, in the meanwhile, sitting on his haunches under cover, muttering to himself, "The swan, the big head, the stone forehead;" and, as these denunciations reached me, I could not, even in all my misery, forbear smiling at them.

### DISCOVERED TO BE FRIENDS.

The natives no sooner heard the gun and saw me approaching than they came running to me. Presently Kaiber called out to me, "Mr. Grey, Mr. Grey, nadjoo watto, nginnee yalga nginnow," "Mr. Grey, Mr. Grey, I am going to them; you sit here a little;" and he then, with his long thin ungainly legs, bounded by me like a deer. "Imbat, friend," I heard him cry out, as a young man came running up to him. I grew giddy; I knew Imbat by name, and felt assured that at all events the lives of a great portion of my party were safe. In a few minutes Kaiber had given an outline of our adventures and present state. Fearing such mischances as had really happened to me, I had, previously to my departure to the north, done my utmost to cultivate the friendship of the northern natives; and most of them, even to the distance of sixty or seventy miles from Perth in that direction, had received presents from me. My name was well known amongst them as a tried friend, although indeed my common denomination was "Wokeley brudder," or Oakley's brother; for, from my giving them flour, they concluded that I was a relation of the baker of that name at Perth.

### HOSPITABLE RECEPTION BY THEM.

The women were soon called up, bark baskets of frogs opened for us, by-yu nuts roasted, and as a special delicacy I obtained a small fresh-water tortoise. "Now, friend, sleep whilst I cook," said Imbat, and lighting a fire he made me lie down and try to slumber whilst he roasted some frogs and the turtle for me. I was not over-well pleased at the skill he chose to exhibit in his cookery, for he thereby delayed me for a longer time than was agreeable, but we were all soon regaling on this native fare.

Anxious questions were put by the men as to their distance from Perth, and the natives all told them they would see it the next morning, "whilst the sun was still small;" and on further enquiry it turned out that a kangaroo hunter of the name of Porley was at a hut distant only seven miles from us, and according to the account of the

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natives he had a supply of provisions with him. As soon therefore as I had a little recruited my strength I started on with Imbat to the hut, leaving the men to follow in company with the other natives as rapidly as their strength would allow them. Imbat carried my gun and everything but a book or two and my papers, which, being precious documents, I had never trusted out of my own possession, however heavy my labours and misfortunes had been. He moved merrily along, trying to win me from my moody thoughts by relating all the news of the settlement both as concerned the Europeans and natives; for like all other idle people the natives are great gossips and really love a little scandal. Worn out from fatigue, I was rather petulant and ill-tempered, but Imbat talked on unmindful of this, or only laughed at me, and jeered me for it.

### IMBAT'S NOTIONS.

My intentions in going on were to have everything prepared for the men on their arrival at the hut; but when I reached it I found it deserted, the owner having returned to Perth. I however lit a fire and laid down, Imbat again beginning to cook, and then chattering: "What for do you who have plenty to eat and much money walk so far away in the bush?" I felt amazingly annoyed at this question and therefore did not answer him. "You are thin," said he, "your shanks are long, your belly is small, you had plenty to eat at home, why did you not stop there?" I was vexed at his personalities, besides which it is impossible to make a native understand our love of travel. I therefore replied, "Imbat, you comprehend nothing, you know nothing." "I know nothing!" answered he; "I know how to keep myself fat; the young women look at me and say, Imbat is very handsome, he is fat. They will look at you and say, He not good, long legs, what do you know? where is your fat? what for do you know so much if you can't keep fat? I know how to stay at home and not to walk too far in the bush. Where is your fat?" "You know how to talk; long tongue;" was my reply; upon which Imbat, forgetting his anger, burst into a roar of laughter, and saying, "and I know how to make you fat," began stuffing me with frogs, barde, and by-yu nuts. The rest of the party arrived just before nightfall, and, searching the hut, found a paper of tea, and an old tin pot in which they cooked some, and then eating frogs, etc., for their supper, we all laid down to sleep, and in the silence of the night I rendered fervent thanks to my Maker who had again brought us so near the haven where we would be."

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### OPINIONS OF THE MEN REGARDING THE FATE OF OUR OTHER PARTY.

April 21.

It had rained all night but we had been a little sheltered by the hut; though from the state of anxiety we were in sleep did not visit our eyes. This was the first time since I had been out that I had slept so near the men as to be able to overhear their conversation; but the rain forced us all to seek the shelter of the same little hut, and I thus gathered the different stories that they narrated to one another. Their speculations and conjectures naturally ran upon our absent comrades; some imagined that they were within a day or two's march of us, but another party held firmly to the opinion that we should never see them more.

### SUPERSTITIONS OF MY MEN.

They could give no apparently satisfactory reason for holding this opinion, and, as there was evidently some deep mystery connected with it, I kept on pressing my servant Coles in order to induce him to tell me whence it arose. At last it came out that Mr. Walker had had a dream, when we were on the shores of Shark Bay and before we had commenced our return home, that some dreadful misfortune had befallen us and that Mr. Smith, Thomas Ruston, and he himself, were endeavouring to make the Isle of France in a boat, when Mr. Smith died, and the remaining two had eaten his body. Mr. Walker had, with the utmost imprudence, related this dream to some of the men, and they, with that superstition which is so common amongst sailors and Englishmen of the lower orders, had attached a great degree of importance to it; many circumstances which had hitherto been unexplained to me now flashed upon my mind; poor Mr. Smith had been very ill at the time Mr. Walker had related this inauspicious dream, and at that period an extraordinary degree of despondency had crept over him, so much so that some of the men imagined he had become deranged. When also we were working our way down the eastern coast of Shark Bay in the boats others of the party had got into a very desponding state, one of whom, Henry Woods, had even gone so far as to tell me when I remonstrated with him on this point that he knew that the greater part of us wore doomed, and that our lives were worth nothing.

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My anxiety for those I had left behind me now increased, and about an hour and a half before daylight I started for Perth with Imbat, leaving the others to follow as rapidly as they could, and telling them that I would have food ready for them at Williams's cottage, who was the settler living farthest north from Perth. In about an hour and a half I reached Williams's hut, which I entered, and found his wife and another woman at breakfast.

I had often got a drink of milk at this cottage when I had before been at Perth, and I flattered myself that Mrs. Williams would recollect me; little calculating how strangely want and suffering had changed my appearance. The two women only stared with the utmost surprise and said, "Why, Magic, what's the matter with you?" (They alluded to a crazy Malay who used to visit the outsettler's houses, and who had somehow or the other acquired the nickname of Magic.) I was rather hurt at my reception and said, "I am not Magic;" at this they both burst into a roar of laughter and Mrs. Williams said, "Well, then, my good man, who are you?" "One who is almost starved," was my reply. "Will you take this then," said my hostess, handing me a cup of tea she was raising to her lips. "With all my heart and soul, and God reward you for it," was my answer, and I swallowed the delicious draught. Imbat, who had been to search for Williams, now came in and explained who I was; in a few minutes more I was seated at a comfortable breakfast; water was put on to boil, and by the time the things were prepared the rest of the party came up.

### ARRIVAL AND RECEPTION AT PERTH. NOT RECOGNIZED BY MY FRIENDS.

I now washed and made myself as clean as possible. I could obtain no conveyance to take us on to Perth and therefore started to walk in with Imbat, leaving the others to complete their breakfast; but I soon found myself dreadfully ill from having eaten too profusely; still I pushed on as well as I could, and in about an hour and a half reached the house of my friend, L. Samson, Esquire. He could not believe it was me whom he beheld, but having convinced himself of the fact he made me swallow about a tea-spoonful of brandy, and, recruited by this, I was sufficiently recovered to wait upon His Excellency the Governor in order to have immediate steps taken to send off a party in search of my missing comrades.

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The Governor could scarcely credit his sight when he beheld the miserable object that stood before him; but in this as in all other instances in which I have known him the goodness of his heart shone conspicuous; not only was every kindness shown me but immediate steps were taken to forward assistance to those who were still in the bush. Having thus far performed my duty I retired to press a bed once more, having for nearly three consecutive months slept in the open air, on the ground just at the spot where my day's hardship had terminated. So changed was I that those of my friends who had heard of my arrival and were coming to congratulate me passed me in the street, whilst others to whom I went up and held out my hand drew back in horror and said, "I beg your pardon, who are you?"

Ere I was in bed the remainder of the men who were journeying with me arrived, and it had thus pleased Providence to conduct six of us through great suffering and want to the termination of our miseries.

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### CHAPTER 5. FROM WATER PEAK TO PERTH.

(MR. WALKER'S PARTY.)

PARTY SENT IN SEARCH FROM PERTH.

I arrived at Perth on the 21st of April and not a moment was lost in preparing a party to go in search of the men I had left with Mr. Walker, and who, it will be recollected, were instructed to proceed along the coast until they made the Moore River, where assistance was to be sent out to them from Perth.

SEARCH FOR THE OTHER PARTY.

Accordingly on the 23rd of April Lieutenant Mortimer of the 21st regiment and Mr. Spofforth, with four soldiers, left Perth and arrived on the Moore River in two days; but after traversing its banks in vain for two days more they abandoned all hope of finding those they were in search of there, and pursued a straight course about 25 miles further north, when they fell in with another river where they formed a depot, and detours were made in various directions for several days without any avail.

RETURN WITH CHARLES WOODS.

At length, on one of these excursions, the seaman Charles Woods, one of my party, was found by Mr. Spofforth, lying on the beach, wrapped in his blanket and fast asleep. He soon awoke and was not a little delighted to recognise Mr. Spofforth whom he had seen before at Fremantle. By the account Woods gave it appears that from the period of my departure much disorder and discontent at the direction of their course prevailed among the men. They frequently left the beach and wandered inland to procure water and food, not sufficiently exerting themselves to advance southward. They had succeeded, he said, in procuring upon the whole about a dozen birds, a crab, and eighteen fish. On the 21st of April Mr. Walker, who had frequently exerted himself in procuring firewood and water for the weaker of the party, divided two dough cakes still remaining in his possession among them all. They were then upon the beach, and though still at a great distance from the appointed place of rendezvous the men were very unwilling to distress themselves to reach it, being persuaded they should be tracked, wherever they might be, by the natives whom I should send to their help. Woods,

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being dissatisfied with their slow progress, now quitted them at a place where, he says, they had to go round two very deep bays close together, which took him a whole day; and it was owing to his having obeyed my instructions more strictly than the others that he was found by Mr. Spofforth. Woods, who seemed to have a singularly accurate idea of the distance he was from Perth when found, added that he thought he could have walked to it had he not been discovered, although he had nothing to eat but a few native figs; and that he thought the whole of the party were getting more accustomed to native food and were latterly better than they had been at first; he said he felt so himself.

### SECOND PARTY IN SEARCH, UNDER MR. ROE.

Lieutenant Mortimer's party, having made every exertion but in vain to find the five remaining persons, were compelled at the end of a fortnight by want of provisions to return to Perth, where they arrived on the 6th of May; and early the next morning the Surveyor-General, Mr. Roe, accompanied by Mr. Spofforth (who again volunteered his services) four men, and two native youths, with five horses, set out in search of those still missing.

### ARRIVAL OF MR. WALKER AT PERTH. JOURNAL OF MR. WALKER'S PARTY.

On the 9th of May, two days after the departure of Mr. Roe's party, Mr. Walker came into Perth alone, and from his statement, together with what was gleaned subsequently from the other men, I shall here briefly narrate what befel them after my departure on the 10th of April.

### NARRATIVE OF THEIR PROCEEDINGS FROM WATER PEAK.

On the next day they started at dawn and soon came to a great deal of scrub; this was the belt of thick wood mentioned in my journal. Mr. Walker says the men, being disheartened at this, they went down to the beach and halted about a mile from it; Water Peak Hill being distant about fifteen miles. Woods said much discontent was caused amongst the men by its being conceived that they were following a bad course; or, according to Ruston's expression, that "the steering was very bad."

April 12.

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They found a river with pools of water in coarse gravel in which they caught here two small fish, and travelled six miles through the scrub along a native path.

April 13.

They started and went down towards the beach. The men cut and cooked some greens but found no water. Travelled twelve or fourteen miles along the beach.

Sunday April 14.

They shot a pigeon, two red-bills, and a hawk. In the afternoon it rained, and they travelled along the beach and got some cockles, and found a fine stream of water running out from under the rocks. They then got under the scrub to keep the rain off, having made about eight miles.

April 15.

They again came out on the beach and kept along it. Good travelling. Made a march of nearly twenty miles.

EXTREME DISTRESS FROM HUNGER AND THIRST.

April 16.

They continued on the beach till they came to a good place for fishing and caught eighteen. Mr. Walker shot a bird. After eating the fish, they were all very thirsty.

April 17.

Went into the interior about midday and found a native well six miles inland; also a large cave in the rocks. The party here procured and ate some *Zamia* nuts.

April 18.

They were all sick from the nuts, and turned back to the beach about four miles but did not reach it.

April 19.



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This morning they reached the beach and travelled on until they came to some high rocks from whence they saw an immense tract of sand. Again this evening they went into the interior to find water. Boiled some young trees and ate them.

April 20.

They were travelling into the interior along the steep banks of a river running nearly east. Got plenty of green stuff to eat. They had now two guns and the means of getting fire, but the powder and shot was nearly expended. The axe I left with them had been lost soon after.

April 21.

Woods left the others to proceed alone.

April 22.

Being the day after Woods left they went into the interior about six miles from the coast and there found a river, which Mr. Walker and Mr. Smith thought was the Karpan (the Moore). This river was standing in pools, and there was a great rush of water from the hills; they traced the bed up for two or three miles, where it came out from some very high hills, when Mr. Smith said he was certain that it was not the Karpan. They then made a south by west course, and thought where they came out was 12 miles below where Woods left them; and that the river was nearly halfway between these two points.

They now again turned into the interior, being, as they thought, at the bay to the south of Jurieu Bay.

April 23.

They returned and kept along the beach, made about fifteen miles, when they halted close to it.

April 24.

They went on for five or six miles, then halted and made a fire with the end of a spar.

April 25.

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They travelled two or three hundred yards. Mr. Walker went back for the end of the spar and Mr. Smith cut some firewood. There they halted, catching fish and crabs.

April 26 and 27.

Still halted at this spot, fishing, and caught parrot-fish, rock-cod, etc.; so that they had as much fish as they could use, and found fresh water in the holes of the rocks.

April 28.

They started at dawn and went on for a mile. Ruston was taken ill from the number of crabs he had eaten, and Mr. Walker stopped with him whilst the other three went on a mile ahead and got fish and periwinkles. Mr. Smith, Stiles, and Clotworthy had a little water left; Ruston and Mr. Walker had canteens half-full. Ruston got better in the evening but they did not proceed until the next morning.

April 29.

Mr. Walker moved on with Ruston about a mile and there found Mr. Smith clambering up some rocks, and having plenty of periwinkles, of which he gave them some. Clotworthy had stopped up all night and had picked up enough for four or five days. At night at low tide they got nearly fresh water running out from under the rocks.

April 30.

They still halted, living on the periwinkles; but this evening the water was more salt.

May 1.

This day the party separated into two portions and did not meet again until the 2nd, on which day Mr. Walker left them by agreement, he being the strongest of the party. His object was to proceed as expeditiously as he could to Fremantle and send from thence a boat and fresh water for the relief of the rest. The party he left behind having agreed to keep a constant look out on the beach and hoist concerted signals.

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For two days after Mr. Walker left them it appears they wandered about to look for water and then fished. They fortunately fell in with a cask of water, washed up on the beach, from which they filled their canteens, roasted the fish and started on again, but made no distance. This lasted for several days. They subsisted by picking up a few shellfish and some dead birds which had been washed ashore, and they ate a sort of cane that grows near the beach, and the Hottentot fig.

### DEATH OF MR. SMITH.

Mr. Smith now gradually became exhausted, and at last one evening sat down on a bank, and said he could not go on. He was behind the party with Ruston, who thought he was dying, and went on and told the other men. The next morning Ruston went back to try and find where Mr. Smith was, but was so weak that (as he thought) he did not go far enough, and did not find him. Mr. Smith seems to have crawled up into the bush, a little on one side of their route, and there died.

### TIMELY DISCOVERY OF THE REST BY MR. ROE. MR. ROE'S REPORT.

Four days after the rest were picked up by Mr. Roe's party, whose proceedings I shall now relate from his own interesting report; premising that the men had then been three days without water and four days without food, and had nothing to eat but the sweet cane that grows near the beach.

### MR. ROE PROCEEDS IN SEARCH OF THE MISSING MEN.

Mr. Roe says:

Leaving Perth early on the 8th instant, accompanied by Mr. E. Spofforth and four men, with the native youths Warrup and Wyip, and five horses, we travelled in a north by west direction along a chain of beautiful lakes, from three to ten miles apart, and surrounded by good soil and grass to a short distance; and in the middle of the third day reached Neergabby on the Garban River, about 52 miles distant. Giving our horses an hour's rest, I rode forward twelve miles with Mr. Spofforth and Warrup to the mouth of the river, where we hoped to find some traces of the absentees; but to our disappointment and regret not a footmark was to be seen

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on the sand except those of Woods, and the written directions which had been placed conspicuously on sticks so as to intercept the track of the wanderers were either untouched or washed down by the high tides. Replacing these with full instructions how to proceed, we returned to our camp at Neergabby, where we were joined by some natives of the district, from whom however no information whatever could be obtained respecting the objects of our search. Inferring from these circumstances that they could not yet have reached so far south, and that they might probably have quitted the beach for the purpose of seeking fresh water inland, we lost no time in pushing on to the northward, and at sunset of the 11th took up our bivouac at Barrumbur on the Moore River, seventeen miles in advance, where excellent water was found in deep pools and our horses revelled in luxuriant pasturage. Between the two rivers there is a great extent of level country, so much under water in wet weather as to be then totally impassable with horses or carts, and the beds of the rivers (near which there is generally good cattle feed) assume the form of deep sandy pools, a few yards apart and grooved to the depth of 25 or 30 feet below the level of the banks.

Being desirous of penetrating the country further to the north before we again visited the beach, which was computed to be about fifteen miles distant with no water or feed for our horses in the intermediate space, we buried half our provisions, etc., in a hole beneath our temporary shelter, which was then fired in order to lull the suspicion of the natives; and our sable companions having secreted the pannier-baskets and packsaddles among the adjoining bushes in such a way as to defy discovery, we trusted to Providence for the result, and next morning resumed our northern route. Leaving the extensive shallow lakes of Garbanup, at this time quite dry, about two miles on our left, we traversed a more hilly and dry sandy district than before, and had an elevated mountainous country fifteen or twenty miles to the eastward. We had now entered upon the inhospitable tract in which Mr. Grey and his party had been so much distressed for water on the homeward journey, and their foot-marks were distinctly recognised by our natives around a swampy space in search of some. At the end of sixteen miles we reached Nowergup, a small rushy lake, at this time quite dry and dusty at the surface, but having at its north end a small well, seven feet deep, containing about a gallon of stinking water. Although this proved very palatable after a dry day's journey, it was by no means adapted to the wants of five horses, and we gladly accepted the services of one of the natives of the district to conduct us to a larger quantity.

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Our way to it led over a mile and a quarter of nearly level country, entirely under water in winter, and covered with rushes and tea-trees. At the lowest level was a well with abundance of water two feet below the surface, near which we immediately took up our quarters and learnt that the spot was called by them Bookernyup. We were also given to understand that the country to the northward and westward was at this time of the year entirely without water, and that none was to be found nearer than a river "far away" in the north-east.

This account by no means lessened our fears for the poor fellows of whom we were in search, and led us to determine on leaving the party here, and making a forced march of two or three days to the north-west with the smallest possible supplies, in the hope of reaching the spot where the absentees had been left by Woods, and which we supposed to be the vicinity of Jurieu Bay.

### SUCCEEDS IN FINDING THEIR TRACES.

Previous however to putting this plan into execution, it was considered advisable to visit the beach again, fifteen or sixteen miles distant, on doing which next morning, with Mr. Spofforth and Warrup, we had the satisfaction to find the feet-marks of five men on the sand, taking a southerly direction. Warrup having pronounced them to be without doubt the footsteps of white men, and not more than two or three days old, we followed them eagerly along the shore for a mile, and then came to an empty cask that had been washed on shore, together with several broken bottles and a stone jar. On further examination part of the head of the cask was found much cut with a knife, as if used for a plate, and near the extinct embers of a small fire lay the bones of a fish, which Warrup concluded had been picked on the morning of the previous day. Rejoiced at having now got upon the right track, and being unwilling to lose time by following it up from this spot, we took a good look round and returned to our camp at Bookernyup by sunset, from whence we next morning started early in a southerly direction, took up safely everything we had concealed on the Moore River, and shortly after dark had completed 24 miles to a place called Kadjelup, where we halted on some deep pools similar to those at Barrumbur.

Breakfasting early on the 15th, the baggage was despatched forward to Neergabby, and at daybreak Mr. Spofforth, Kinchela (a private of the 21st regiment) and Warrup accompanied me on horseback to the

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beach, which we found eleven miles off, but to our great disappointment a very high tide had totally obliterated all marks from the sand and left us in perplexity and doubt. Concluding however that the missing party must be in advance of us, and that they could not fail to observe the papers which had been offered to their notice at the mouth of the Garban River, we turned our steps that way; left a paper of directions in the event of their being behind us, and carefully examined both beach and sandhills, as well as the country immediately in rear of them. Twelve miles brought us to the mouth of the river, and there we found everything as we had placed it—not a mark near the beach except the footsteps of the native dog prowling about the sandhills, and nothing which could lead to a belief that the spot had been visited since we last left it. Somewhat disappointed, although rejoicing in having now hemmed the unfortunate absentees up into a narrow limit, within which we knew they MUST be wandering towards Perth, we joined our party at Neergabby shortly after dark, and observed on our way the traces of five natives who were confidently said by Warrup to be Perth natives, sent to look after us with intelligence. They had come along the coast from the south as far as the mouth of the river, and had struck inland to the south-east on their return. The conclusions of this intelligent lad on the occasion were afterwards found to be strictly correct, even to the names of the men who composed the party.

### PROVIDENTIAL DISCOVERY OF THEM.

The early morning of the 16th found us all in busy preparation for the day's proceedings and relying with reasonable confidence on a successful issue to our exertions. The remainder of the party were sent back with one horse to Kadjelup, whilst my indefatigable companion Mr. Spofforth accompanied me, with Kinchela and the two natives and four horses, to resume our examination of the beach to the north. Fifteen miles in a north-west direction brought us to the desired spot, but still no sign was apparent of its having been visited by any human being since ourselves; we however commenced a close examination to the northward, and at the end of a mile and a half had the infinite satisfaction of falling in with three of the missing party, in the persons of Ruston, Stiles, and Clotworthy, who had formed a portion of the wrecked boats' crews.

### THEIR MISERABLE CONDITION.

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The state of distress and exhaustion in which they were found on the beach was truly pitiable and moving. With scarcely strength to drag one foot after the other they had marched about a mile and a half that morning until they encountered the bold rocky projection of land at which we discovered them, and the passing of which they had given up as utterly hopeless from want of sufficient strength to climb over it. Having been three days without water except their own and the seawater, the former of which they had saved in their canteens, and emptied out before us, and their only food being such nourishment as they could obtain from chewing a coarse rushy plant which grew about high-water mark, it cannot be matter of surprise that they were almost frantic after water, and that the portions of it which we sparingly administered to them, mixed with a little brandy, were most eagerly seized. Indeed the greatest firmness and forbearance were necessary on our part to prevent the unfortunate sufferers from committing fatal excesses. They declared their extremity to have been so great that no chance had appeared to them of surviving the next awful night, or of getting a foot beyond their present position; and, to his credit be it said, one of them<sup>28</sup> had been on his knees only ten minutes before they were rescued, supplicating with uplifted hands that aid and assistance which had thus, through Divine Providence, been so opportunely afforded them.

### SEARCH FOR MR. SMITH.

In answer to our anxious enquiries respecting Mr. Walker and Mr. Smith we learnt that the former, being much the strongest of the party, had, at their request, made the best of his way towards Perth ten days since, in order to send them out assistance, and that Mr. Smith, having been totally unable to proceed with them any further, had remained behind, in a dying state, four days ago. Touched by this distressing intelligence, and sensibly alive to the value of time, we lost not a moment in lifting our three light weights on our horses, and by supporting them in their seats conveyed them over the sandhills to the more level space behind, where sufficient brushwood was scattered about for maintaining a fire. Here Mr. Spofforth kindly undertook their charge, while I should proceed with Kinchela and Warrup in search of poor Smith.

Ruston having expressed himself very anxious to accompany us, and fearing that we might not otherwise accomplish our object, after receiving some suitable refreshment, he was mounted, and we all set off at as quick a pace as he could manage. At the end of three miles a

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good view of the coast to the northward was opened to us from the summit of a rising ground, and Ruston pointed out, at the distance of 24 miles, an island near which he said young Smith had been left. As this was far beyond the six or seven miles of which they had at first spoken, and totally precluded the possibility of my returning that night with the water-kegs which I had taken to be filled at some wells which they had seen in the vicinity, I relinquished all idea of proceeding, while the sun was then touching the horizon, and we accordingly rejoined Mr. Spofforth and his charge. We were now perfectly satisfied of the wandering inconsistency in the conversation of the three rescued men, who were evidently to a considerable extent delirious or light-headed. Being too sore in body and excited in mind to admit much sleep to their assistance, they were full of their expressions of thankfulness for their timely deliverance, and at length terminated a long and weary night.

### DISCOVERY OF HIS BODY.

The morrow's dawn found me on my way with Kinchela and Warrup to search for poor Smith, while Mr. Spofforth proceeded with the three rescued men and Wyip to join our party at Kadjelup, 12 miles off. At the distance of a mile and a half we found the guns of Mr. Walker and Mr. Smith, which the men had buried among the sandhills from inability to carry them any further. A close scrutiny of the beach brought us, at the end of ten miles, to a spot where Warrup observed the traces of feet in the sand. Following them up, they ascended a bare sandhill to the height of twelve or fourteen feet, turned short round to the left, and there terminated at the unfortunate object of our search, extended on his back, lifeless, in the midst of a thick bush, where he seemed to have laid himself down to sleep, half-enveloped in his blanket. The poor fellow's last bed appeared to have been selected by himself; and at the distance of three or four yards from him lay all the trifling articles which had constituted his travelling equipage. These were his wooden canteen, his brown felt hat, and haversack, containing his journal, shoes, tinder, steel, gun-screw, a few small canvas bags which he had used for carrying shellfish, and a small bag with thread, needles, and buttons. Life seemed to have been extinct rather more than two days; and from the position of the head, which had fallen considerably below the level of the body, we were led to conclude that a rush of blood into the brain had caused his death, and at last without much suffering.



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### BURIAL OF MR. SMITH.

With the help of the soldier and Warrup we made a grave with our hands and buried poor Smith deep in a sandhill near the shore, about seventy-six miles to the north of Swan River. Even Warrup, notwithstanding the general apathy of the native character, wept like a child over the untimely fate of this young man, from whom he had formerly received kindness. Smoothing over his solitary bed, and placing at the head of his grave a piece of wood found upon the beach, we pursued our melancholy way half a mile to the northward, where we found the water to which we had been directed by digging 12 inches in the sand at the commencement of a considerable sheet of bare sand, extending at least four miles into the interior. In the course of the evening we rejoined our party on the Moore River. Next day we halted at Kadjelup; and on the 19th we separated at Neergabby once more, Mr. Spofforth to conduct the remainder of the party home with as much celerity as they could travel, whilst I proceeded with Kinchela and Warrup to examine the coast from the mouth of the Moore River for any traces of Mr. Walker, of whose fate we were in total ignorance. By noon of the 22nd we had arrived within 12 miles of Perth without remarking the least trace of the supposed absentee, when we were met by Mr. Hunt the constable with the pleasing intelligence that Mr. Walker had reached Perth on the 9th instant. In the evening we arrived at the same place, and found that Mr. Spofforth had brought in his charge the day before.

...

### CONCLUSION OF THE EXPEDITION.

If Mr. Roe's party had been delayed only a few hours there is every probability that from the debilitated state in which the men were found they would all have perished.

I deeply regretted the death of poor Frederic Smith, who had come out from England expressly for the purpose of joining me, led solely by the spirit of enterprise, and not with any view of settling. He was the most youthful of the party, being only 18 years of age, and thence was less capable than the others of bearing up against long-continued want and fatigue, and the excessive heat of the climate, under which he gradually wasted away until death terminated his sufferings. When aroused by danger or stimulated by a sense of duty

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he was as bold as a lion, whilst his manner to me was ever gentleness itself, as indeed it was to all.<sup>29</sup>

Upon the final return of the expedition a desire was expressed by some gentlemen of the colony of Western Australia to remove Mr. Smith's remains to Perth; but upon mature reflection I declined their friendly proposal, preferring rather to let him rest close by the spot where he died, having given the name of my ill-fated friend to a river which hides itself in the sandy plains near where he fell so early a sacrifice to his gallant and enterprising spirit.

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### CHAPTER 6. SUMMARY OF DISCOVERIES.

#### RIVERS AND MOUNTAIN RANGES DISCOVERED.

Having now brought the narrative of my expedition along the western shores of Australia to a close I shall here retrace in a brief summary the principal geographical discoveries to which it led.

The country examined during this expedition lies between Cape Cuvier and Swan River, having for its longitudinal limits the parallel of 24 degrees and that of 32 degrees south latitude, and the expedition combined two objects: the examination and nautical survey of such parts of the coast lying between these limits as were imperfectly known, and the exploration of such parts of the continent as might on examination appear worthy of particular notice.

#### RIVERS DISCOVERED.

In the course of my explorations ten rivers, which are, when considered with reference to the other known ones of Western Australia, of considerable importance, were discovered, some of them being larger than any yet found in the south-west of this continent; many smaller streams were also found.

The larger rivers I have named:

The Gascoyne,  
The Murchison,  
The Hutt,  
The Bowes,  
The Buller,  
The Chapman,  
The Greenough,  
The Irwin,  
The Arrowsmith,  
The Smith.

Two mountain ranges were discovered; one at the northern extremity of the Darling Range and about thirty miles to the eastward of it, lofty and altogether differing in character from the Darling, which at this point, where its direction is nearly north and south, is called Moresby's Flat-topped Range.

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I have taken the liberty of naming this northern range, after her most gracious Majesty, The Victoria Range; and the extensive district of fertile country extending from its base to the sea, and having a length of more than fifty miles in a north and south direction, I have also named the Province of Victoria, trusting that her Majesty will not object to bestow her name upon one of the finest provinces in this her new, vast, and almost unknown empire; and which, protected in its very birth and infancy by her fostering hand, will doubtless ere long attain to no mean destiny among the nations of the earth.

The other range is thrown off in a westerly direction from the Darling Range; it is about forty miles in length from north to south, of a bare, sterile, and barren nature, and terminates seaward in Mount Perron and Mount Lesueur; to this range I have given the name of Gairdner's Range: it forms a very important feature in the geography of this part of Australia.

### DISTRICTS OF BABBAGE AND VICTORIA.

Three extensive districts of good country were also found in the course of this expedition, the Province of Victoria, before alluded to, the district of Babbage, and another adjacent to Perth, to which I have not affixed a name.

The district of Babbage is situated on and near the river Gascoyne, which stream discharges itself in the central part of the main that fronts Shark Bay, and may indeed almost be recorded as the central point of the western coast of Australia; thus at once occupying the most commanding position in Shark Bay and one of the most interesting points on that coast; it is moreover the key to a very fine district which is the only one in that vast inlet that appears well adapted to the purposes of colonization.

### COAST OF SHARK BAY.

Immediately to the south of the southern mouth of this river commences a line of shoals which at low-water are nearly dry, extending to a distance of from two to four miles from the coast and running with scarcely any intermission round the bay: except at high-water it is therefore impossible to approach the greater part of the coast, even in the smallest boat, unless by tracking it over those flats, which proceeding is not unattended with danger, for, if it

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comes on to blow at all hard, owing to the shoalness of the water, the whole of them becomes a mass of broken billows. I feel convinced it was owing to this circumstance that the navigators who had previously visited this bay left so large a portion of its coast unexplored.

The shoals in the vicinity of the mouth of this river, as well as those in the river itself, have many snags upon them; and on the coast of Bernier Island, opposite to the main, we found the remains of large trees which had been washed down the river and had then been drifted across the bay. It was that circumstance which first convinced me that a large river existed hereabouts, and induced me so minutely to examine the coast.

This occurrence of driftwood in the neighbourhood of large rivers is a circumstance unknown upon the south-western shores of this continent. I however observed it in Prince Regent's River and other rivers to the north, as well as in the Arrowsmith. This latter however is the most southern river in which I have remarked it, and it certainly is an evidence of the existence of timber of a much lighter description than has hitherto been known in this part of the continent.

### MOUTHS OF THE GASCOYNE.

The southern mouth of the Gascoyne is however completely free from shoals, and has seven feet water on the bar at low tide. There is also a channel in it which has never less than this depth of water for about four miles from its mouth, after which it is only navigable for small boats in the dry season, and that merely for a short distance.

The greatest difficulty which presents itself in entering the southern mouth arises from what in America are termed snags, that is, large trees, the roots of which are firmly planted in the bed of the river, whilst the branches project up the stream, and are likely to pierce any boat in its passage down. These snags are however more to be feared at the time of high-water than at any other period, for they have generally become fixed upon shoals as they originally descended the river, and at low water can easily be seen.

The northern mouth of the Gascoyne is more difficult of entrance than its southern one, being narrower and more shoal. I still however think that at high water it could be entered by small craft; but as my

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examination of it was hurried and imperfect from our being pressed for provisions at the time I was there, the opinion I have given above must be received with caution.

Our visit to this river took place at the close of a season which had been preceded by the driest one known since the occupation of the western coasts by Europeans. There was consequently but little fresh water in the bed of the river, and this only in small pools; but the breadth of its main channel (for it sometimes had several) was where I measured it upwards of three hundred yards, and this measurement was made in a part which was by no means the widest.

### THE COUNTRY ADJACENT.

The bed of the river was composed of fine white sand. The country had a gentle slope from the interior, and no land of any great elevation was visible from the farthest point I attained, distant about fifteen miles from the coast.

Plains of a rich reddish loam bordered the river on each side. These were occasionally broken by low, gently-rounded hills, composed of the same soil. Freshwater lagoons, frequented by wild-fowl, were found in several places; and during the course of my walks, which extended for several miles in various directions, I saw no termination to this good land except on approaching the sea, where the salt marshes always commenced; but along the southern bank of the river, to the point where its mouth actually disembogued into the open bay, the land was of a fertile description: the country, even in the dry season, during which we were there, being covered with rich grass.

I ought here to state that this river is the most southern one that I have ascertained to be deficient in that universal characteristic of all those in the south-west of this continent: an estuary. I must observe that I have not seen the mouths of three or four of the rivers before enumerated, and cannot therefore say that some of them may not terminate in estuaries; but the Gascoyne discharges its waters by two mouths of considerable magnitude, between which lies Babbage Island, the southern mouth being in latitude 24 degrees 57 minutes.

This is also the most southern river on the western side of this continent where the rise and fall of tide is sufficiently great to

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exercise any influence upon it relatively to the purposes of navigation. Hence it would appear that the presence of estuaries at the mouths of rivers on this coast is in some way connected with the amount of tidal elevation at the points where they are found. The rise and fall here was about five and a half feet; but there is only one full tide in twenty-four hours. The first tide rises to a certain point, and it has scarcely commenced to ebb, ere the second comes slowly in, so that, to a careless observer, only one tide is perceptible.

### PROVINCE OF VICTORIA.

The province of Victoria is situated between the parallels of 27 degrees 30 minutes and 29 degrees 30 minutes south latitude; its most considerable river is the Hutt, which disembogues into a large estuary. A few miles above the estuary the river separates into two branches, both of which were running strong at the time we passed them.

Previously to our reaching the Hutt our boats had all been wrecked; I had therefore no opportunity of examining whether the estuary of this river was navigable or not; from its size however I should be inclined to the affirmative. The other principal streams which drain this district are the Buller, and the Murchison.

One remarkable feature in the province of Victoria is that the carboniferous series is here developed throughout a tract of Western Australia extending in latitude from the bottom of Geographe Bay to near Cape Cuvier, and which I have carefully examined. The tract above alluded to is the only one in which I have yet found the rocks belonging to this series: this circumstance therefore imparts a very high degree of interest to the district in question.

Within a few weeks after my return from the province of Victoria applications from settlers were made to the Government of Western Australia to permit them to occupy a district which had been so highly spoken of; this application was however unsuccessful, but an expedition was subsequently sent there to ascertain if there was a navigable entrance to the Hutt River. In this object the expedition was unsuccessful, but the vessel touched at the Abrolhos Islands and at some parts of the adjacent coast, including Port Grey.<sup>30</sup>

MR. MOORE'S JOURNAL. MR. MOORE'S VOYAGE TO HOUTMAN'S ABROLHOS AND PORT GREY.

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An account of some of the places visited was subsequently published in the Perth Gazette, being contained in extracts from the journal of G.F. Moore, Esquire, the Queen's Advocate at Perth, who sailed with the expedition; and as Mr. Moore's description contains several points of novelty and interest these extracts are again transcribed below.

### EXPEDITION TO THE NORTHWARD.

After Captain Grey had the misfortune to have his boats wrecked in Gantheaume Bay, having started thence with his party and walked to Perth, he reported that he had passed over extensive tracts of fertile country in the neighbourhood of Moresby's Flat-topped Range, where there are several rivers, one of which (the largest) he had called the Hutt River, after His Excellency the Governor. His Excellency having directed the Champion schooner to proceed to explore the coast with a view to ascertain whether there was any practicable entrance to the river, and whether there was any harbour, shelter, or anchorage in that neighbourhood, also what sort of anchorage there was about the Houtman's Abrolhos, it appeared very desirable that such an opportunity should be taken advantage of to obtain, at the same time, as much information as circumstances would permit as to the nature and quality of the soil and its general capabilities with reference to its eligibility as a district to be occupied by settlers. With this view G.F. Moore, Esquire, embarked on the trip.

### DESCRIPTION OF THE ABROLHOS ISLANDS.

The Abrolhos. Latitude by a good sight on shore, 288 degrees 45 minutes, subsequently corrected to 288 degrees 40 minutes.

That part of the Abrolhos where we anchored seems to consist of a number of small islets, perhaps 10 or 12, lying something in the form of an irregularly shaped horse's shoe, extending for a space of perhaps 20 miles in a north and south direction.

These islets, which are raised only from 10 to 12 feet above the level of the sea, are a mere mass of coral and shells with a very small variety of plants struggling to establish themselves upon some of them. I was rather surprised to find a few plants of the common groundsel on one of the barest. It is not improbable that these islets are upon the outer rim of the crater of a volcano, and that not only



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the entire outer rim, but also a large space, both interior and exterior, will eventually be elevated. Nothing can exceed the beauty of the different sorts of coral as seen under the clear smooth water. We broke of many specimens of the branch- or tree-coral, which seemed to be in full vigour of life and activity. These islets appear to be a favourite resort of seals, many of which we saw, but of the sort called hair-seals. The sailors knocked many of them upon the head with clubs as they lay sleeping on the shores. One of these afforded much sport, though rather of a barbarous sort if one had taken time to think at all on the subject. Sleeping on the brink of a small lagoon in the interior of one of these islands, he was roused by the approaching footsteps of his enemy. Seeing the man close to him, with upraised club over his head, he dropped into the water. This was so shallow as not to protect him from the stones that were hurled at him from all sides, and so small that he was completely surrounded. Finding his retreat cut off he boldly stood up and seemed deliberately to scan the most practicable mode of breaking his way through us all, but he was so incessantly plied with stones as entirely to distract him. When a well-aimed blow struck him he wreaked his vengeance on the stone, and, diving after it to the bottom, gnashed upon it with his teeth. At last a gun was brought by one of the party and a well-directed shot under the ear laid him dead. Rock oysters of a large size and delicious flavour were found in great abundance. Range of thermometer 67 to 82 degrees.

On Sunday the 12th continued to explore the several islands; unable to land upon the first we approached on account of a reef which ran all round it. This was one which lay at the north-east extremity of the Horseshoe. It was high and sandy, but with some vegetation on the surface, and we saw many large seals sleeping on the sandy beach. After this, visited five or six in succession, all of the same formation, some being mere masses of loose coral and dead shells.

### SINGULAR CORAL FORMATIONS.

In passing from island to island we had many opportunities of observing the different formation and shape of several species of coral; some stood in masses of the brain-stone and cockscomb coral, some like petrified sponge, some like fans, some again of the branch-coral interlaced and intertwined in every direction; again, some broad flat masses lying layer over layer, like huge sea-lichens, again many presented the appearance of a fungus or great sea-mushroom, with a broad-spreading head springing from a small thick base. It is

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not a little singular that many of the growing islets which are nearly level with the surface of the water have a similar form, not rising from the bottom with a perpendicular side, but with broad overhanging heads resting upon a small base. In many places we passed over some of these isolated sea-mushrooms, upon which there was barely water for a small boat, where one step over the ledge would be in the deep sea, and you might see the hollows underneath as if looking under an umbrella. Birds were abundant on most of the isles, and on two of them were hawks' nests, raised to the height of four feet by an accumulation of sticks, stones, and shells. This day there was but little breeze; the thermometer ranged from 76 to 86 degrees.

### COAST UNDER THE MENAI HILLS.

Saturday morning January 25.

Stood in close along the shore opposite to the Table Hill and the Menai Hills, and examined the coast from the rigging. There are two openings of rivers laid down in the chart, that to the south being the larger, and both nearly abreast of Table Hill and only a few miles distant from one another; and besides these Captain Grey had marked down in another chart a considerable river, with a large estuary, close to the north of the Menai Hills, which he had called the Hutt River. As we were just on that part of the coast where all these are laid down we were the more anxious and eager. We saw three openings on the west range, but in truth very small, and after anchoring nearly opposite to the northern one we went in the boat directly for it. There was a continuous sandy beach the whole way across it, and the surf was running high, so that it was not very easy to land.

### LAND ON THE COAST.

Just as we were considering about how to effect a landing we observed a number of natives on the hills and behind the beach, evidently watching our motions. As we stood along the beach, looking for a landing-place, they followed and became more bold; they shouted and made gestures, which were certainly not like those of encouragement; but still as we pulled on, they followed, till we counted forty-nine men, but they appeared to have left their spears behind them. Finding this, we thought it well to parley with them, when we backed in close to the shore, holding up our hands making

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signs of peace, and calling out in the Swan River language that we were friends and would give them bread. I flung a piece of biscuit on the beach, and some waded into the water and threw in their fur belts and other ornaments, when we commenced a system of barter immediately. They had no spears and few throwing sticks; nor had they with them either cloaks, or hammers, or shields, or any other weapon that we could see. They seemed to like the bread very much, for they followed us for many miles, still making signs to land, but the surf was so high we could not venture in the face of so many of them. At last, having passed the opening of the second river, and having come to a smooth place, I jumped out upon the beach and was soon followed by the Captain.

### INTERVIEW WITH NATIVES.

They evinced a considerable deal of uneasiness at first, and looked with much jealousy at the gun as something suspicious. They wished me to part with it, but I sat down and intimated that I would keep it on the ground beside me. I addressed them in the Swan River native language, and they spoke much in return, but I must say that our language seemed to be mutually unintelligible. At last, by watching their mode of intonation, and accommodating myself to their dialect, I managed to succeed a little better. In this way they understood my inquiries for water, and their answer at last was precisely in the Swan River language, "Gaipbi jeral," (water to the north.) Their great anxiety at first seemed to be to know whether we were women. In answer I pointed to our beards, when they pulled their beards and said, "Nanya patta," by which name I have heard it called at Swan River also. Then they pointed to some young lads in the boat and asked were they women. No; I said they were "golambiddy" (boys) which they seemed to understand. I saw them eating the fruit of the mesembryanthemum (the Hottentot fig) but they did not understand either of the names used for it at Swan River, golboys, or mejaruk. They called it by a different name. After a little they volunteered to take us to water, and we walked along the beach with them, clustering about us with a show of friendship that was even more familiar than agreeable. One of them repeatedly asked me were we dead? at least so I understood him. At length we approached the opening of the river, in which they indicated the water to be, but how were our great hopes disappointed when they led us to a little hole scraped in the bed of the river containing about a pint of water. We afterwards saw several other holes of the same sort with more or less water in them; and it will be well to bear in mind that some of

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these were not fifty yards from the beach, and it is quite possible that if they were dug out a good supply of water might be obtained.

### ADVANCE INTO THE COUNTRY.

They then wished us to go up the valley of the river with them, but we ascended a high hill to the north side, being desirous of getting a view and in hopes of seeing the large estuary pencilled on the chart by Captain Grey. From this hill we had an extensive view of all the country to the west and north of the Menai Hills. The whole face of the country looked grassy, and thinly sprinkled over with what may be acacias, probably the mangart, or raspberry-jam-scented wood, as it had just that appearance, and a kily which we had got from the natives in the morning was made of that wood. But there was not even a drop of water visible, nor any sign of a large river, though this is just the position assigned to the Hutt River; but certainly it is quite possible that nearer the source of these rivers there may be larger reservoirs and more water, which may be to a great degree absorbed before it reaches the sea, as we find this to be the case with many of the rivers of this country. In the meantime the natives seemed dissatisfied about our going on the hills, and offended, and were very importunate with us to go down to the low grounds in the valley. "Koa yeka" ("Come this way," as I understood it) was their constant call; and when at last we did consent, as we were going down the side of a steep, rocky limestone hill, I could not help feeling that we were very much in their power. Looking round suddenly upon one occasion I observed a man making gestures with his feet at the head of the Captain, as if showing to the rest how he could knock him down easily. The man seemed uneasy at being detected, but I laughed it off as a joke, which probably it was after all; but their manner seemed to have changed considerably. When we arrived at the level ground they became very urgent that we should "sit down in the shade," "maloka nineka" (a Swan River man would say "malok nginnow"). They caught hold of us and pulled us, and wanted very much to get the guns from us. Thinking it most prudent to return to the boat we turned with that intention, when they did everything they could, short of using force, to prevent us. They stood in our way, they caught us in their arms, they pushed us, they tried to snatch or seize our guns, but we persisted steadily and good-humouredly to make our way back towards the boat. One old man wished me to approach the brink of the high ground overlooking the bed of the river, but seeing that it was a perpendicular precipice to which he was leading, or rather pushing

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me, I suddenly clasped him with one arm and walked away from it, at which the rest set up a shout of laughter. His intentions may have been perfectly friendly but I certainly did not feel confident that they were so. I intimated that when we got to the boat we should give them some more bread; and I felt that the knowledge that the bread was in the boat was likely to be very much in our favour and to contribute mainly to our safety. My fear was that they had sent for their spears and wished to detain us till they came. However we arrived at the beach where the boat was standing outside of the surf waiting for us.

### RETURN TO THE VESSEL.

On our return to the ship I proposed that we should now touch at the more northern river where we were deterred from landing by their first appearance. We went therefore to the mouth of the river, which is completely blocked up by sandhills, with two or three small gaps through which water appeared to have made its way at some time; but the entire of the bed of the river, which was only a few yards wide, was covered with growing samphire. There were two or three small pools of very salt water above this, but no fresh water visible. We took a hasty view from a high sandhill. The interior, where we could see anything of it, looked grassy, and there was some grass even on the sandhills near the beach; but our view was very limited and hurried. We had no sooner returned to the boat than we saw a party coming along the beach about a quarter of a mile away, and another party on the top of the hill above, where we first saw them and where we supposed their weapons to have been left. They shouted, we went on board.

### SAIL TO THE SOUTHWARD. PORT GREY.

Sunday morning.

Weighed anchor and stood to the south to examine a bay opposite the southern part of Moresby's Flat-topped Range. This bay, which is not laid down in the charts, was found to be an excellent anchorage, completely sheltered from all southerly winds, which are the prevailing winds on this coast at this time of the year, and also much protected by a reef running north and south from the extreme point of the bay. This reef or bank was found to have from three to five fathoms upon it, and within it there was seven fathoms, even near to the shore, at the bottom of the bay; and there is no appearance of any

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heavy sea or violent action of the water on the beach at any time of the year.<sup>31</sup>

### SEA VIEW OF AUSTRALIND. APPEARANCE OF THE COUNTRY.

To the south of the tongue of land which forms the bay there is also another bay, which would be completely sheltered from all northerly winds so as to combine between the two bays perfect shelter at all seasons of the year. From the deck of the schooner where she lay we had a view of the entire slope of ground from the beach to the top of the range, about five or six miles distant. The range seems to consist of isolated hills rising from an elevated plain. Judging by the eye at that distance, the entire space as far as we had any opportunity of seeing, after going a little way back from the coast, on the slope to the hills, upon the hills, among the hills, beyond the hills, and, in short, everywhere, as far as the eye could discern, appeared a grassy country, thinly sprinkled with some low trees or shrubs, perhaps the acacia. If this be the case, and that there be water sufficient, of which there is no reason to doubt, this may certainly turn out to be the finest district for sheep pasture that this colony can possess. What may be the breadth of this district, how far it may extend into the interior, of course nothing can be known or said; but from what I have now seen, and from what Captain Grey has seen on a former occasion, there is little doubt that it extends north and south from the northern part of the Menai Hills as far south as the River Arrowsmith, a distance of more than 80 miles. To the south of that river comes the range of hills which Captain Grey has called Gairdner's Range, and which is supposed to be the northern termination of the Darling Range; if so it is very probable that, by keeping on the east side of the Darling Range a continuation of pastoral country might be found all the way to Moresby's Flat-topped Range. In coming to our anchorage this morning we passed the opening of another river, that which is laid down in Captain King's charts as the largest. From what we saw of it I do not think that much water can issue from it either, although its bed looked larger and better defined than any we had seen hitherto. The man from the mast-head said he saw the sandy beach all across it. But the Captain, being anxious to examine the anchorage in the bay, did not wish to come to anchor sooner, so we passed on, perhaps 10 or 12 miles to the south of it. Just as they were about to let go the small anchor, which had been used since the first was broken, it was discovered that it also was broken nearly through, so we had to drop a large and heavy one, being the only one now remaining in the ship.

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We then landed in the boat, and saw two pieces of ship's timbers set up in the sand of the beach, about half a mile from each other. Dug and examined under and about the largest of them in hopes of finding some directions, probably about fresh water, but found none. Examined a place where the tea-tree and wattles were very green and luxuriant looking; it appeared like a swamp in winter, but quite dry now. Was struck by the singularity of some tea-trees growing, of a large size, both up the sides and on the tops of high sandhills, but which appeared to rest upon limestone. Got a view to the east and south of the range. The country presented the same appearance as before. It must be remarked that the grass was all parched and withered and of a yellow straw colour; and it was from this colour principally that we judged of its existence on the distant grounds. Those who have once seen tracts of withered grass will not readily mistake its appearance; but the green of the shrubs was extremely vivid. One observation which we had repeated occasion to make was the constant heavy dews which fell at night on this coast, rendering everything about the ship quite wet. The wind was off the land. The country all around seemed to be on fire in the morning. The thermometer, as I stood on the deck, was 94 degrees. In the evening the wind came round to the north-west, and, desirous of availing ourselves of such a favourable breeze, we got on board and set sail, but were obliged to stand well out to sea to clear the reefs. Towards night it fell calm again, and there was some lightning in the north.

### DISTRICT IMMEDIATELY TO THE NORTH OF SWAN RIVER.

The third district lies immediately to the north of Perth. It contains four rivers:

The Norcott,  
The Moore,  
The Smith,  
The Hill.

The Norcott and Moore Rivers, about fifty miles to the north of Perth, were before known; and about twenty-five miles to the north of Moore River is the Smith. The Hill comes out of Gairdner's Range, the natural northern limit of this district, which is connected with Perth by a chain of freshwater lakes, the greatest distance between any two of them being not more than from five to six miles. The whole of this district is therefore fit for location, and affords a

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gratifying proof that the flourishing colony of the Swan is by no means deficient in good and immediately available land.

The circumstance also of this district being so abundantly supplied with water, even at the end of an uncommonly dry season, which was the period I traversed it in, much enhances its value. It must, as the number of horned stock in the colony of Western Australia increases, be the first occupied; for it is nearer to a market than any other open to location, and affords both water and food for cattle in good supply.



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### CHAPTER 7. VOYAGE HOMEWARDS.

Before quitting the Mauritius, in August 1838, I had written to the Secretary of State for the Colonies, reporting my intention to proceed to the Swan River, and then, as circumstances might guide me, either to return from thence at once to the north-west coast, or, should that not be feasible, to await further instructions from England; adding that, in the latter event, I should attempt in the meantime to pass the range to the north-east of the Swan, and endeavour to ascertain in what direction the streams thrown off from this range towards the interior might flow.

I have already stated the incidents that prevented me from following out the first of these plans, as well as those which led me to adopt the project of the voyage to Shark Bay in lieu of an inland journey such as the second; and now that this last expedition was brought to a close I had yet to await, for some time, the answer to my communication from the Mauritius, which was to guide my future proceedings. The interval between my return to Perth and the period at which a reply might be expected appeared too short to allow of my carrying out any comprehensive plan of exploration, and I therefore resolved to employ it in endeavouring to extend my knowledge of the native character and language, as well as of the general position and prospects of the colony.

At this time, the death of Sir Robert Spencer, the Government Resident at King George's Sound, having caused a vacancy in that appointment, I was induced, at the offer of Mr. Hutt, to assume the temporary duties, with a two-fold desire of rendering what public services I could during my unavoidable period of inaction in the country, as well as of enlarging my opportunities of observation on the aboriginal race.

In these occupations I remained, until the receipt of a reply from the Secretary of State, which, after speaking in terms of flattering approbation of my past exertions, notified that, for the present, Her Majesty's Ministers did not think it desirable that the researches in the north-west should be prosecuted further.

#### PREPARE TO RETURN TO ENGLAND.

On the receipt of this I made preparations for returning to England, but, no favourable opportunity offering from the western

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settlements, as soon as I was relieved from my duties as Resident, I embarked for South Australia in the hope of obtaining from thence a more speedy passage than the other colony seemed likely to afford.

After a short stay at Adelaide I finally sailed for England on the 11th April 1840, and reached this country in September following.

### NATURAL HISTORY.

The leisure of the voyage afforded me the means of making some additions to my former observations on the Natural History of the seas we traversed, the chief results of which will be briefly given in this chapter, together with some casual observations which I was enabled to make on the Geology of St. Helena in consequence of the vessel touching there.

June 2 1840. At sea: south latitude 20 degrees 0 minutes; east longitude 58 degrees 47 minutes 15 seconds.

I caught a species of shrimp (*Penaeus*) of a delicate prussian blue colour, which was more brilliant at the extremities, and gradually paled towards the centre of the animal. There was not the slightest shade of any other colour about it, but it turned pink in some places directly it was put into spirits; it had four anterior and four posterior legs on each side.

Total length 1.45 inches.

Length of apparatus on head 0.17 inches.

Length of tail 0.25 inches.

Head and connected apparatus 0.52 inches.

Tail and body to commencement of first ring 0.48 inches.

June 13. South latitude 27 degrees 4 minutes; east longitude 47 degrees 38 minutes 15 seconds.

A species of animal (*Alima hyalina* ?) was caught resembling a scorpion, having six legs, three on each side; the first pair of legs were provided with claws, like a lobster; its tail exactly resembled that of a scorpion; the sac or bag near the extremity of the tail was of a light red colour, and it tried to strike with its tail, as if for the purpose of stinging. Eyes pale blue, and prominent; body nearly diaphanous, with pale red spots.

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Total length 0.33 inches.  
Length of body 0.20 inches.  
Breadth across from eye to eye 0.13 inches.  
Breadth of body 0.14 inches.

Several of the animals which I supposed to be the *Veella* of Lamarck, and some of which had been caught on the 11th of November 1837 were also found today. Caught also a species of animal which I had found on October 22 1837, in south latitude 37 degrees 44; east longitude 38 minutes; and again on November 12 1837, in south latitude 30 degrees 11 minutes; east longitude 100 degrees 31 minutes 30 seconds. It resembles in shape and size a large grape.

Extreme length 0.5 inches. Breadth 0.45 inches. Total circumference round broadest part 1.30 inches.

Colour brownish blue; but there were round it twenty very narrow brownish yellow stripes, equidistant from each other, and not quite reaching either extremity of the animal.

June 16. South latitude 28 degrees 46 minutes; east longitude 42 degrees 3 minutes.

We caught an animal this afternoon somewhat resembling a shrimp (*Erichthus vitreus*)<sup>32</sup> covered with a shield: we had caught a similar one on the 12th of November 1837. From measurements taken from the living animal the dimensions were:

Length from tip of tail to tip of spine, in front of head 1.15 inches.  
Ditto of spine 0.23 inches.  
Ditto from tip of tail to bottom of last scale 0.2 inches.  
Ditto from tip of spear to end of shield 0.7 inches.

The temperature of the water at 6 P.M. was 71 degrees Fahrenheit; of the air 74 degrees.

The shield was perfectly air-coloured and diaphanous, and extended for some distance beyond the head and the upper parts of the body; the body itself was of a pale delicate blue, and it threw a very light bluish tinge upon the shield; the eyes were jet black, and placed at the end of a tube like those of the lobster; the tip of the spear was of a light red colour. Caught also this day the lower portion of a species

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of Diphyes, the same I had found on the 13th of November 1837 in south latitude 30 degrees 7; east longitude 100 degrees 50 minutes 10 seconds. The total length of this was 0.5 inches.

Caught also two minute animals resembling a species of shrimp (Penaeus); colour of both pale blue. The tail of the largest when examined in a microscope precisely resembled in appearance the fin of a fish. I did not examine the smaller one. Dimensions of the largest:

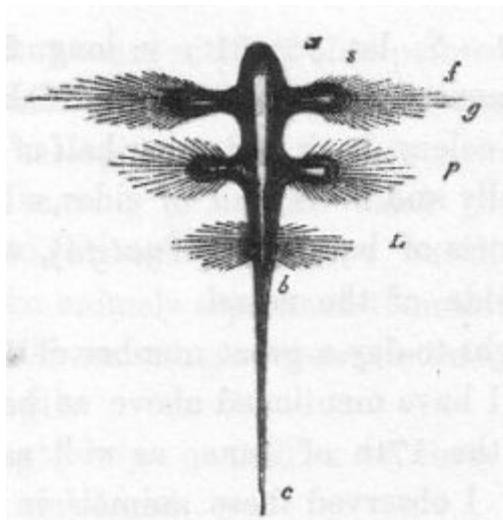
Total length 0.2 inches.  
Length of feelers 0.15 inches.

Of smallest:

Total length 0.13 inches.

When put into eau-de-cologne these animals changed to a pink colour.

June 17. South latitude 29 degrees 19 minutes; east longitude 40 degrees 19 minutes.



Caught a specimen of Glaucus.

Total length 0.35 inches.

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Colour down the back deep indigo blue; stomach bluish white; sides bluish white (silvery) like a frog; tail tapering to a point; its head resembled that of a frog, and when out of the water it sat on its tentaculæ, and raised its head and the fore part of its body, moving its head (a) from side to side; the tentaculæ were all so delicate that they fell off, it had apparently eight on each extremity; it belonged to the same family as the animal I caught on the 14th of November 1837, in south latitude 29 degrees 26 minutes; east longitude 101 degrees 32 minutes.<sup>33</sup>

June 23. South latitude 32 degrees 53 minutes; east longitude 29 degrees 45 minutes 15 seconds.

We for the first time saw Cape Pigeons and the Albatross.

June 27. ) South latitude 35 degrees 41 minutes; east longitude 25 degrees 13 minutes 20. June 28. ) South latitude 35 degrees 15 minutes; east longitude 23 degrees 26 minutes.

Upon these two days we were in a rapid current, which we entered on the morning of the 27th, and on neither could we see the slightest signs of any of the acalepha class; but on the 29th, on which day we experienced no current, we found the greatest abundance of these animals; it appeared as if they had collected in large quantities at the edges of the current; and on the western side of it we found many animals which I had not seen on the opposite one.

June 29. South latitude 35 degrees 31 minutes; east longitude 22 degrees 20 minutes 30 seconds.

The specimens caught were a minute fish, 0.35 inch in length; colour, back and upper half of sides, deep indigo; belly and lower half of sides, silver colour. Also two sorts of barnacles (*Anatifa*) which I got near the side of the vessel.

We caught today a great number of the animals (*Glaucus*) I have mentioned above as having been taken on the 17th of June, as well as on other occasions. I observed these animals in the water, and found that their long silk-like antennæ had, when uninjured, a length of five or six inches; they swim with the rounded part first, and the long antennæ trailing after them like tails; the progressive motion is produced by introducing water into certain sacs, or cavities, and expelling it by a contraction of the muscles with great violence. I

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observed their motions from a boat at first, and afterwards when they were in a glass of water. I counted the number of times they expelled water in a given time when swimming, and found the mean of several observations by a chronometer to give ten strokes in twelve and a half seconds.

We caught again many little animals which I had found on the 15th of October 1837; south latitude 37 degrees 28 minutes, east longitude 21 degrees 19 minutes; they were shaped like an octagonal crystal, terminating in a point, containing a brilliant blue colouring matter, they were about 0.4 inches in length, and were, when undisturbed, arranged in long strings, only the length of a single animal in thickness, and of the breadth of two of them abreast; they swam with the blue-pointed ends downwards, which then looked at a distance like the legs of a caterpillar, and the long string somewhat resembled a long gelatinous band in appearance as it passed through the water; but directly it was touched the animals separated themselves from one another. These strings were sometimes seen several feet in length.

We caught large quantities of these animals at one time, and found:

The temperature of the water 65 degrees Fahrenheit.

The temperature of the air 75 degrees Fahrenheit.

The temperature of the animals 66 degrees Fahrenheit.

We caught also a fish (*Orthogarisus*) which the seamen called a devil-fish.

The length of it was 6 feet 2 inches.

Breadth from fin to fin 3 feet 6 inches.

Length from tip of nose to pectoral fin 2 feet.

Thickness through the breast 1 foot 6 inches.

This fish was infested about its nose with a kind of parasite (*Lernaea*) having two long thin tails. The sailors stated that these animals frequently cause large sores about the nose of the fish, and that when suffering from this, it will allow the sea-birds to sit on it, and peck away at the affected part. The habit of the fish is to swim during calms with one of the hind fins out of water, and it is then harpooned from a boat. I have myself seen petrels perched upon them; and directly one of these fish was hoisted on board the sailors looked for the parasites and found them. Their dimensions were:

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Total length 1.0 inch.  
Length of tails 0.57 inches.  
Ditto of fore part of body 0.25 inches.  
Ditto of hind part of body 0.15 inches.  
Breadth across body 0.25 inches.

They were covered with a transparent shell, marked with grey spots and lines; the hind part of the body, near the tail, being darker than the fore part, as though the intestines were seated there. These little creatures adhered strongly to any substance that they were laid on, and caused an irritating feeling to the skin if placed on it; they swam with great rapidity when put into seawater, and in their movements in swimming much resembled a tadpole; their tails were merely long transparent fibres.

We caught also several transparent bodies, shaped like a balloon (Beroe ?) These consisted merely of a sac. At the flat end of the spheroid was a small ring of a pink colour, from which ran lines forming the ribs, which supported the sides of the animal. There were eight of these: they possessed great irritability, and if the animal was at all injured, a rapid and continued motion was propagated all along them. Some of these animals were between two and three inches in length, but they were so delicate that it was impossible to examine them, for they fell to pieces directly they were touched. Only one of these ribs was, at times, affected at the same moment, so that they appeared each to be capable of an independent movement.

We caught also many small insects, and some shrimp-like animals.

The sea was full of some things resembling hairs, but which broke the moment they were touched.

On this evening we placed a large number of *acalepha* in a bucket, and on agitating the water it became a mass of phosphorescent light. It is strange that these animals should never emit this light without being irritated.

July 1. South latitude 35 degrees 51 minutes; east longitude 18 degrees 56 minutes; average temperature of water, 65 degrees.

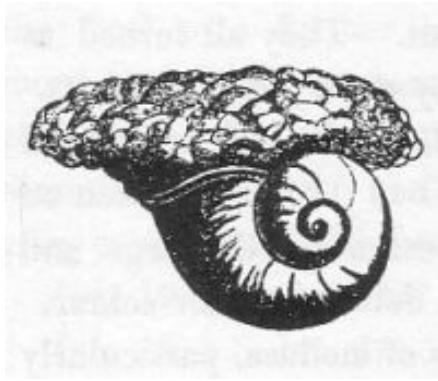
This day many specimens of different kinds were taken; and amongst them a shellfish (*Hyalea*) the same as that caught on the

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13th November 1837, in south latitude 30 degrees 7 minutes; east longitude 100 degrees 50 minutes 10 seconds. This fish today put out the apparatus with which it swam. It consisted of two broad transparent wings, shaped like the first pair of wings of a butterfly, and which it moved in a precisely similar manner. Its shell was of a delicate pale transparent brown colour, with a jet black spot in the centre. (See Illustration 6 volume 1 Figure 1.) We also caught an animal of a precisely similar form and colour with this, but which was not provided with a shell.

The other specimens were:

1. A shell (Janthina)<sup>34</sup> the same as was caught on November 14 1837, and on several other occasions, with its swimming apparatus attached.



2. Several of the small shells which resemble belemnites (Creseis) which were first taken on the 14th November 1837. I this day preserved one of these with its swimming apparatus expanded.

3. An animal without a shell, which had a sort of transparent horny covering, and when alarmed and not in motion folded itself up.

4. A tube 3.2 inches in length, perfectly transparent, and swelling out to a little knob at each extremity; but these knobs were of the same colour as the body.

5. Some delicate white shells (Atalanta) or very hard gelatinous animals, 0.2 inches in length, 0.2 wide, and 0.15 thick; they had three ridges of short spines on them, one down each edge, and one ridge running down the centre of the shell or back.



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6. Some perfectly spherical transparent bodies, 0.18 inches in diameter; these neither moved nor showed any signs of life when placed in salt water, but another animal, exactly resembling them in shape and colour, with the exception of having some light brown spots on it, unrolled itself like a wood-louse, and then swam nimbly about. They all turned as white as eggs soon after they were put into spirits.

We caught also several species of an animal with two tentaculæ, which had been also taken on the 17th June, some of these were very large and beautiful, being of the most delicate amber colour.

Also many different sorts of medusa, particularly tubes of about 0.5 inches in length, with an apparatus shaped like a proboscis at one extremity of it. These I have not attempted to describe. In general the animals we caught this day differed altogether from those we had hitherto found during this voyage. Some few were the same, but the great majority were new.

Many of the medusæ and small gelatinous animals must be endowed with very acute sensibilities and perceptions, for they evinced extreme timidity if any substance approached them, and when plunged alive into spirits, their rapid movements and violent contortions repeatedly indicated acute pain; indeed so clearly that on this point there could be no mistake.

A mass of gelatinous animals, caught this day, gave out a slight electric shock. Some of them were shaped like the portions of an orange, and they evidently were formed to fit into one another in the manner in which they were found, although they separated directly they were touched.

July 2. South latitude 35 degrees 58 minutes; east longitude 17 degrees 54 minutes.

This day the ship went so fast that we could not catch anything. The aclephæ were not so numerous as they had been further to the north, but we saw more and larger medusæ than I had ever before remarked. It indeed appeared as if the aclephæ diminished and the medusæ increased in number after passing the 36th degree of south latitude.

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July 12. ) South latitude 23 degrees 2 minutes; east longitude 0 degrees 26 minutes 45 seconds. July 13. ) South latitude 21 degrees 55 minutes; west longitude 0 degrees 44 minutes.

The vessel went slowly through the water, but although the net was kept towing we could catch nothing, and there was no appearance of anything being in the sea.

July 14. South latitude 20 degrees 52 minutes; west longitude 1 degree 49 minutes.

This day we caught a *Veella* of the following dimensions:

Length of interior cartilage 1.1 inches.

Breadth of interior cartilage 0.5 inches.

Total length of blue base 1.7 inches.

Breadth of blue base 1.0 inches.

Height of centre of crest 0.5 inches.

Rim round crest, in breadth 0.55 inches.

This animal differed from those caught on the 11th November 1837, in the following particulars: It was much larger. The base of the animal consisted of two parts. The centre portion was an elliptically-formed cartilage, elevated in the centre, and marked with eighteen concentric striae, which became thinner and thinner as they approached the centre. No striae were visible on the elevated crest with which the animal swims, but this crest was furnished or fringed with a thin moveable flap, 0.55 inches in breadth, which ran quite round it. The animal has the power of flapping this to and fro constantly, as a fish does its tail.

The outer portion of the base was of a pale prussian blue colour, increasing in depth of shade both to the outer and inner edges. Many minute black spots were dotted all over this. The underside of the outer base was of a very dark prussian blue colour, and its lower interior edge was furnished with rows of blue tentaculae, which the animal uses as an elephant does its trunk. The whole interior surface of the oval cartilage is furnished with successive rows of white tentaculae, and in the centre is a long thin white tube, apparently its mouth.

These animals always swim in company. You see a number together, varying from four or five to twenty or thirty; these are all within a

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few feet of one another, and you may then pass over several miles and not see any more.

They produce countless numbers of little eggs, of a pale brown colour; these are apparently deposited from the interior white tentaculae, and cannot be estimated they are so numerous.

We also caught a minute fish, 0.6 inches in length; a minute species of nautilus, blue, marked with striae, or grooved, and thus different from what we caught on the 15th; a shrimp-like species of animal 0.5 inches in length; the lower part of a species of *Diphyes*, which had been caught on the 12th and 13th of November 1837; some minute animals, appearing to be the young of the larger species of *Velella* which we had taken; they were, like this animal, at first blue, but turned red soon after being put into spirits; also a very minute pale blue species of nautilus, I think the young of the kind we caught on the 15th July.

Caught a number of gelatinous animals, differing however apparently in species from any we had found before. Some were of the family of crystal-shaped animals with blue spots, so often mentioned in this journal; also several animals of the family figured June 17th, but which differed from them in the colour of their spots. We caught today a Portuguese man of war (*Physalis*) of a very different species from those which we had taken in the Indian ocean. This one had a much larger sac, or float, than the others, and the float was furnished with a crest.

July 15. South latitude 20 degrees 20 minutes; west longitude 2 degrees 17 minutes.

The same animals mentioned in the last paragraph of July 14th were again caught this day. A great number of the *Velella* were also taken.

Caught a small fish:

Length 1.2 inches.

Breadth over roundest part 0.48 inches.

For a particular description, and figure of a finer specimen, see below. The mouth and eyes of this fish were placed in a curious manner. Its food appeared to be the same as that of the other fish taken this day.

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Caught two curious little crabs (*Nautilograpsus*) one pale blue, and the other of a pale pink colour: also, another little pale blue crab:

Length of antennae 0.15 inches.

Length of body 0.34 inches.

Breadth of ditto 0.12 inches.

Caught a small animal shaped like a wood-louse (*Cymothoa*) having nine rings apparent on the back, and I think seven legs on each side, also, a tail-like fin on each side, which, when closed under its belly, formed a sort of shield for the lower part of the abdomen. Antennae, transparent with pale brown tips, and a few pale brown spots in them, colour pale blue down centre of the back, dark prussian blue on each side. It had the power of rolling itself up nearly double; in the same manner as a wood-louse, but not quite so close; eyes distinct and prominent. It lived a long time out of water, and appeared to me exactly like an animal I caught on the 21st November 1837, in south latitude 24 degrees 19 minutes; east longitude 107 degrees 8 minutes.

We also this day caught a *Janthina*. They have a little valve for the purpose of taking in air, with which to expand their float. These animals go in company. They emit when touched a brilliant scarlet dye. A similar animal caught on the 20th November 1837, in south latitude 25 degrees 12 minutes; east longitude 106 degrees 49 minutes, emitted a violet-coloured dye. The emission of this evidently depends upon their being irritated, as I found by many experiments.

The method in which this animal fills its float is curious, it throws it back, and gradually lifts the lip of the valve out of water, until the valve stands vertical, it then closes the valve tightly round a globule of air, around which it folds, by means of the most complex and delicate machinery. The valve is then bent over until it touches the edge of the float nearest the head, and when it is in this position, the portion of it which is inflated with air looks like a bladder, the air gradually is expelled into the float, and as this process takes place the bladder in the valve diminishes, and the valve becomes by degrees like a lip pushed forwards until it lies flat on the float. The valve is composed of two portions, a cup and a lip. The time occupied from first removing the valve from the float, until the inflation, and the expulsion of air into the float being completed, so

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that the valve begins to move again, is 61 seconds, from the mean of several experiments.

These animals have also the power of compressing the valve into a hollow tube, which they elevate above the water like a funnel, and draw down air through it.

The colouring matter which they emit has no stinging, electric or deleterious properties whatever, that I could discover. I found that when this colouring matter was mixed with water, it became of a deep blue. In those which I caught in November 1837, I may have been deceived, and the colouring matter might also possibly have been scarlet directly it was emitted. It is difficult to conceive what use this liquid can be to the fish against its foes, yet it certainly uses it as a means of defence.

To one of these shells, the fish in which was alive and well, we found attached a number of barnacles, some of which were of large size.

This sort of *Janthina* was very abundant; today we caught eight, and saw great numbers of them: yesterday we caught a smaller one of a different species. (*Janthina exigua*.)

This kind of *Janthina* is attached to its float by a sort of peduncle, which it has the power of elongating, so that the fish itself sinks, with its shell, and yet remains attached to the float, which continues at the surface. In one instance, I saw this peduncle elongated to a length of 0.9 inches. It may, of course, have the power of sinking itself much lower than I have seen it do. When it is in this state, the apparatus with which it fills the float remains behind the peduncle in a state of perfect quiescence.

The scarlet fluid emitted by this animal is of such a consistency that it can be drawn away from it out of the water, like a glutinous thread.

A part of the animal requires attention, it is composed of an outer cup, or circular lip, which it has the power of contracting or expanding in the same manner as the valve; and when opened out like a cup, an orifice can be seen at the bottom of it. It can also expand, and make broad the arm; and it then appears to use them as sails.

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This species of *Janthina*, I afterwards found, has the power of in some manner taking in by suction a quantity of water, which it can suddenly expel again with great violence, sending it out as if from a squirt.

We caught, also, an extraordinary fish this day. Its mouth has the appearance of being situated on its back; a fin, 0.4 inches in length, projected directly out from one side of the fish, and there was every appearance of a perfectly similar one having been torn from the other side; a hard horny membrane projected from underneath the stomach of the animal, being apparently a sort of fin.

Its colour was of a silvery metallic lustre, having in parts a burnished appearance, except where it is shaded (see Illustration 5 and below) and then it was of a dark green colour; the tail was perfectly transparent, except just where it joined the body, and there, where the shaded line is, it was dark green.

This fish was swimming about, apparently preying on the tentaculæ of the barnacles, of which there were numbers round the ship attached to the dead *Velella*, some of which I had caught yesterday; it appears therefore probable that its mouth was placed in so extraordinary a position to enable it to seize this pendant prey.

We caught this day a number of *Velella*, which are furnished with crests; some of them were dead, and nearly always when such was the case we found a species of barnacle attached in great numbers to them. When these animals had only recently died, so that the whole of their blue base had not been detached from them, the barnacles were generally very minute, so that the naked eye could only just detect them, and there were no large barnacles on the same fish: now, how did the minute ones get there? As the barnacles grew larger, the remains of the *velella* changed into large excrescences, half the size of a walnut.

We caught also several little animals, all of the same species, which swam about on the surface of the water with the greatest rapidity, performing the same kind of evolutions that we see in a little black and white insect (*Gyrinus*) which swims on the top of tranquil pools in England.

July 16.

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This day a curious animal was caught, perfectly diaphanous; total length 0.8 inch; length of third leg, 0.4 inch; this was provided with a claw like a crab; head shaped like a grasshopper, 0.2 inch in length, and placed like the head of a grasshopper, at right angles to the body; eyes black and prominent, apparently four, two on each side; first and second legs of nearly the same length; the third leg nearly double the length of either of the others; five on each side. The top of the head is divided into two prominent knobs, one on each side, which, viewed through a microscope, appear to be minutely reticulated.

The animal may be considered as consisting of four portions: the head; the upper part of the body, 0.18 inch in length, and divided into five rings; the lower part, consisting of one shield-like portion, 0.12 inch in length, the body at the lower portions of this decreases almost to the thickness of a thread; the tail, 0.3 inch in length, and divided into three shield-like pieces, laid one over the other as in the shrimp (imbricated); at the lower extremity of each of these scales there is on each side a fin-like leg, in addition to those above-mentioned. Breadth of the animal across its head, 0.2 inch, and this was the broadest part of it. It lived for some time out of water, and even when put into spirits, it swam in an extraordinary manner, falling head over heels every time, which motion it accomplished by swimming on its back and making rapid strokes with the fin-like legs with which it is provided behind.

We also caught today several little crabs and barnacles. I kept one specimen, to show old and young barnacles attached to the same *Veella*.

The sea was, this morning, covered in places with fleets of the *Veella* of Lamarck; also with great numbers of the species of *Janthina* which I described yesterday; to both of these kinds of animals large clusters of barnacles were frequently attached. These barnacles preyed on the different gelatinous animals which were swimming about. It was curious to see them seize on these with their hooked tentaculæ and draw them in, whilst the *acalepha*, or gelatinous animal, contracted and dilated itself with all its might and main, endeavouring to escape. We saw two or three times very large shoals of porpoises ahead of us, and when we reached the spot where they had been we found the sea quite cleared of the animals with which it was covered in other places, so that we imagined the porpoises must have been feeding on them. We saw also a whale and a shark today.

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Although these little floating animals were so numerous there were but very few of the gelatinous species to be seen, and they were chiefly of the larger sorts. I saw one of the species (*Glaucus*) of which I have given a sketch, on the 17th of June. Like all the animals of this species which we caught to the westward of the Cape it had a red intestinal spot in it; but excepting in its great size it differed in no respect from the others which I had seen: this one was at least a foot in length.

A number of black minute animals were caught, which, at a rapid glance, looked not unlike fleas with long feelers or antennae.

We caught also this day an animal (*Salpa*) which consisted of a gelatinous transparent bag, having an orifice provided with a valve that opened and closed the orifice at pleasure; there was no other opening to the sac that I could discover; I passed the end of a pencil down it, but although it passed readily through the valve it could not at first pass through the bottom of the gelatinous sac; but I afterwards found that this was an error, and that the pencil could be passed right through the body of the animal, which was provided with a valve at each end. I found also that the united animals had the power of swimming with either end foremost. There was an intestinal tube in the animal of a dark reddish brown colour. This animal appeared to exist very badly alone, fourteen of them were always found united together by a plane; they then formed a mass shaped like half an orange and having a cup at its upper surface; the intestinal canals, when they are in this position, are all brought near to one another, and the whole mass looks not unlike a flower; they are united to one another by so thick a fluid that it is very difficult to separate them. If one or more are torn away from the mass the outside ones immediately join together and form a united mass again, of the original shape. They open the orifices at different times: that is, two or three open theirs at the moment that some of the others are closing, so that no regular or simultaneous movement takes place between the different animals. This irregular movement of the animals gives to the whole body an irregular rotatory motion; but when one is separated from the others it can only drive itself round and round upon its own centre, and has not the faculty of propelling itself as the other *acalepha* have. They also swim with either end foremost, in the manner the other *acalepha* do.

We saw also some animals of this class, and nearly as large as the ones I have just described, but they differed in their form and mode



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of attachment, and joined themselves in long strings, two deep, so as to look like gelatinous snakes. I have before described animals of this class with blue spots. I think that a good mode of classifying these animals would be from their form of arrangement when united.

July 17. South latitude 19 degrees 47 minutes; west longitude 3 degrees 5 minutes 30 seconds.

Found a small animal (*Cymothoa*) like a wood-louse, similar to the one we caught on the 15th of this month and to another taken on the 21st of November 1837. It had seven legs on each side, besides the five which when taken out of the water it folded over its abdomen; the colour the same as before described.

Length 0.52 inch.

Width over broadest part 0.2 inch.

Length of antennae 0.2 inch.



Illustration 4, exactly the size of life, gives a good idea of it. It lived out of the water for two or three hours and did not die until put into spirits; it ran about on the table as well as it swam in the water, so that it was evidently amphibious. It swam about from a dead shell of the *Velella*, to a nautilus, and from that again to some barnacles; each shell that it reached it climbed up, and folding up its fins ran all over it, so that it appeared like a little navigator which was roving from island to island in the ocean, seeking food and nourishment from all of them. Are not the ways of nature very wonderful? This little animal was at least 500 miles from any land, as we term it, yet it was surrounded by sunny islands, teeming for it with the most delicious

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food, and where it either basked in the warm daylight, or shaded itself in some oozy recess, as seemed most pleasant to it.

When walking on these substances it used its antennae exactly as insects do, and showed an extraordinary degree of susceptibility when touched. I do not know that I have ever seen an animal which more decidedly evinced an acute sense of feeling and dread of pain.

The animal here described belongs equally to the Indian and Atlantic Oceans, and appears, as far as my experience goes, never to venture to the south of 25 degrees south latitude. This is now the third species of animals which I have found to be common to the Atlantic and Indian Oceans, and which never venture beyond the warmer latitudes.

The question is how they got round the Cape of Good Hope, or Cape Horn?

Might we not hence infer that there was a time when the continent of Africa did not exist? and might not this argument be much extended? It could be combated by none of those causes which are advanced relative to the distribution of species on land; for,

1. The temperature of the water in southern latitudes is very cold at all seasons of the year.
2. These animals are extremely susceptible of all changes of temperature.
3. They have no means of warming themselves by exercise or motion.
4. The species of food which they subsist on is confined to the latitudes in which they themselves live.
5. They would have to traverse great distances in ungenial climes, and contend against adverse winds, the children of placid seas and genial suns hurried into giant waves and chilling storms.
6. It is not probable that they are swept along in currents, from the circumstance that in the one which flows along the coast to the eastward of the Cape we could find none of them, whilst upon its very edge they were in abundance.

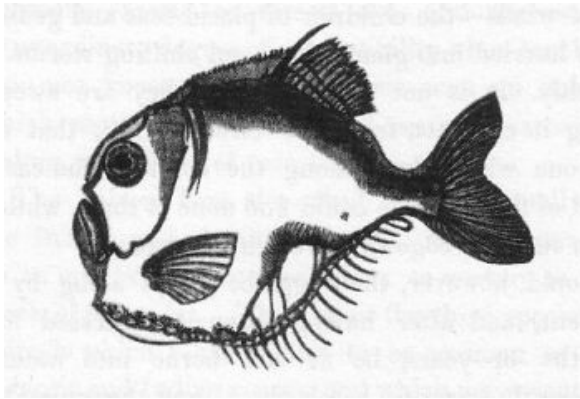
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Could however their eggs be swept along by a current, and after having been wave-tossed for months or years, be at last borne into waters sufficiently warm to hatch them, and the animals, finding themselves in a genial climate, have increased and multiplied?

The numerous little animals of the species which I have always considered to be the *Vellella* of Lamarck went sailing merrily by us today; the least breath of wind made them turn round and round; and this was their mode of progression, the animal moved its little sail which I have before mentioned, and worked its tentaculae so vigorously as to make ripples in the water, in the midst of which it went buoyantly floating along.

Caught another fish (*Stenopteryx* Illustration 5) of the same species as that found on the 15th of July. The accompanying figure is drawn from minute measurements. The length of this specimen was 2.5 inches, its thickness through the thickest part 0.38.

What I had before imagined to be either a spine or fin turned out to be a pectoral fin.



It thus has two pectoral, one dorsal, and one ventral fin, properly speaking; but the greater part of the body is surrounded by some cartilaginous substance which it probably uses as a fin; under the line b c there is a curved portion of this matter, and above and attached to the fish is a line of round white silvery scales, about ten in number.

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Between a and b there is another curved mass of transparent cartilaginous substance, along the bottom of which runs a spine to which is attached a fringe-like fin. There is a spine upon the back; the eye is very prominent and bright; upon the back, between the eye and the spine, there are successive stripes of purple and burnished gold, so that this little animal is one of the most gorgeously coloured denizens of the ocean. It swims about amongst the purple barnacles and pink nautili, seeking on the shores of these shining islands its prey, the curious formation of its mouth being admirably adapted to enable it, whilst swimming under these painted floating islands, to crop off what it lists.

There were scarcely any gelatinous animals in the sea this day; but many *Janthina* shells and *Verella* were round the ship, to which were attached barnacles of different species; amongst this group of islands numerous crabs were swimming about and running over them. Animals resembling a wood-louse were also in the sea, swimming and running about the floating shells and barnacles.

We caught also a new species of *Janthina*, the float of which, instead of being nearly round and extending over the shell on each side, was spread like a spiral fold from the shell; the breadth of this fold was 0.45 inch, close to the mouth of the shell, and it gradually tapered off to a point, its length being 3.6 inches. This float being curved round like the tail of an animal, the whole thing bore the appearance of being a sort of snake, of which the shell was the head; the sailors called them caterpillars before I had examined them. The float was composed of two parts, one of which was only froth and the other was apparently some extraneous substance attached to the froth. The shell is very different from those of the other nautili in being much more deeply indented with circular striae.

July 18. South latitude 19 degrees 49 minutes; west longitude 3 degrees 10 minutes 15 seconds.

We have lately caught several specimens of *Creseis*. Each consists of a cylindrical tube, increasing in size from its broadest extremity to the centre where it is thickest, and decreasing from the centre to its other extremity, where it becomes a fine point. It is throughout its extent gelatinous, transparent, and of strong consistency.

There is apparently a valve at its broadest extremity.

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Length 1.1 inch.

Breadth in centre 0.1 inch.

Breadth at mouth of wide extremity 0.08 inch.

We have several times caught a triangular, transparent, gelatinous animal; it is 0.18 inch in thickness, and in the outer pulpy gelatinous mass there is an interior sac, and strong muscular bands are marked across this. The sac is composed of three lobes, two of which have apparently no external opening, whilst at the end of the main lobe there is one which closes with a valve; through this I have seen them take in little animals, which reached no farther than the centre, from which the lobes radiate, when the sac became violently agitated, and made strong efforts to expel the foreign substance. This animal was very sensitive, more particularly about the opening of the entrance.

We caught today the lower part of the species of *Diphyes* which we had found on the 13th November 1837, in 30 degrees 7 minutes south latitude, in the Indian Ocean. This animal is thus distributed over a wide range.

We also found a very minute species of the animal similar to one which we caught on July 1st 1840. Those we caught today were scarcely 0.05 inches in diameter. They unfolded little wings and flew with them in precisely the way those did which I described on that day.

Nothing I have seen is more remarkable than the flight of these little animals; their wings are milk white and very large for their body, and as they fly, the ends, from their pliancy, bend over, which imparts to the motion a very graceful appearance; these wings are composed of a very fine membrane like that forming the wings of a bat. At one time these little animals hovered over a single spot like a bird of prey in the air, flapping their wings in just the same manner. At another time they darted forward with great rapidity, and the vibration of their wings was so rapid that I could not count them. When folded up they look like very minute gelatinous animals with a black internal spot, but when touched their shell can be felt. We saw a shoal of whales today.

We have caught lately a great many small animals, of which the following is the description; they swim about from one floating substance to another and are eaten by the little crabs which are numerous in these seas.

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Length of body 0.18 inch.

Length of anterior part of body 0.1 inch.

Length of posterior part of body 0.08 inch.

Length of tail 0.08 inch.

Breadth across back 0.05 inch.

Depth from back to bottom of breast 0.06 inch.

Head and eyes, deep brilliant prussian blue; body brilliant prussian blue with a bluish green stripe on each side; tail white. Seen through a microscope these animals appear to be a beautiful dark burnished blue mottled with silver. The head is remarkably round and regular.

The body is divided into two portions. The anterior portion is made up of six rings or shields, which lap over one another, and it is furnished with three legs on each side which terminate in a hooked claw; the posterior part is covered by three shields, and there was only one leg on each side. I could not make out any tentaculæ or antennæ.

I was much struck by a curious circumstance today. As we caught a great many gelatinous animals I thought this a good opportunity of taking their temperature, which, after an observation so carefully made that no error could occur, was found to be 66 degrees 5 Fahrenheit, the temperature of the air at the same time being 74 degrees. The temperature of the water was now taken and was found to be 2 degrees 5 minutes more than that of the animals; thus giving these animals a temperature lower than that of the fluid in which they were immersed. I conceived that some error must have been made in the temperature of the water, it was therefore taken again and found to be 69 degrees as before; this appeared to me so remarkable that I drew up a table of all the experiments which had been made on this subject, the result of which is that the mean temperature of these kinds of animals appears to be 64 degrees 9 minutes Fahrenheit; and that the greatest variation in excess is 1 degree 7 minutes; and in defect 2 degrees 9 minutes Fahrenheit. Is it possible, then, that an animal can live in a fluid, the temperature of which is constantly varying, and preserve nearly a mean heat?

In the following tables I have entered every experiment but one which was made on the 17th of June, and in which I believe the animals to have been kept too long out of water.

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### *Experiments to determine the temperature of gelatinous animals which inhabit the sea :—*

1837.	<i>Air.</i>	<i>Water.</i>	<i>Animal.</i>	
October 20.	62° 5' Fahr.	57°	62°	
November 12.	63	65	65	1st experiment
Ditto	63	65	65	2nd ditto
Ditto	63	65	65	3rd ditto
 1840.				
June 29.	75	65	66	
July 18.	74	69	66 5'	

### *Experiments to determine the temperature of shell-fish inhabiting the open ocean :—*

	<i>Air.</i>	<i>Water.</i>	<i>Animal.</i>
Nov. 20, 1837.	76°	74°	80° Fahr.
July 18, 1840.	72 5'	68	76

This last experiment was made from a sickly specimen which had been kept for some time in the water: the temperature of water above given is for that in which this animal was kept.

We caught again today many animals of the same family (*Glaucus*) as those of which a description is given in the journal for the 17th of June.

Also many shrimp-like animals (*Alima*) the bodies of which were divided distinctly into an interior and posterior portion; all the shrimp-like animals which we have caught whose bodies are thus divided swim by doubling up the posterior part close to the anterior, and then giving a stroke with great rapidity outwards. These little animals are very susceptible, and when they have been in the least injured their limbs remain in so constant a state of tremor that the motion communicated by them resembles that which would be caused by the passage of a rapid succession of electric shocks, rather than any other I am acquainted with.

### GEOLOGICAL OBSERVATIONS AT ST. HELENA.

July 21.

After visiting Longwood and Napoleon's tomb we rode to Flagstaff Hill to search for fossil shells. The whole soil that I saw was composed of decomposed old volcanic rocks; but I saw no rock but

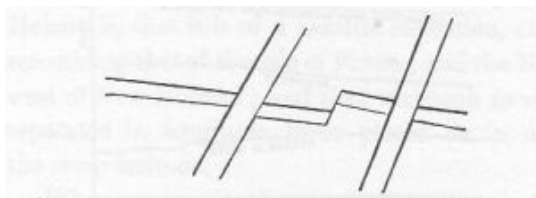
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basalt in different stages of decomposition; sometimes it assumed the form of porphyry. I also saw veins of quartz, gypsum, and jasper. On a part of Flagstaff Hill there was a thin stratum of calcareous earth, in which shells are found. My hip was so painful that I could not climb to the point where these were, but an artillery soldier ascended and brought down some, and of these I had several specimens given me; they are found associated with bones which are apparently those of birds. None of these bones were given to me but I saw and examined several specimens. The shells are very numerous at this point.

On returning into town I found several specimens of dead land shells, apparently recent; these lay on the sides of the hills, partly buried in the soil, and bore the appearance of having been washed into this position by the heavy rains.

July 22.

Rode over in the morning to Longwood, and then proceeded to Gregory's Valley, lying between Longwood and The Barn. This valley, nearly 1700 feet in depth, appears at one period to have been the scene of great volcanic disturbances. The lowest rock I saw was a compact porphyritic one. The upper strata of basalt were in a state of rapid decomposition; but the whole of the valley was traversed by basaltic dykes in every direction; these crossed one another in such a way that it was easy to tell their relative ages; for instance several of them were in the form of:



So that one had been forced from its position by another long subsequently to its formation.

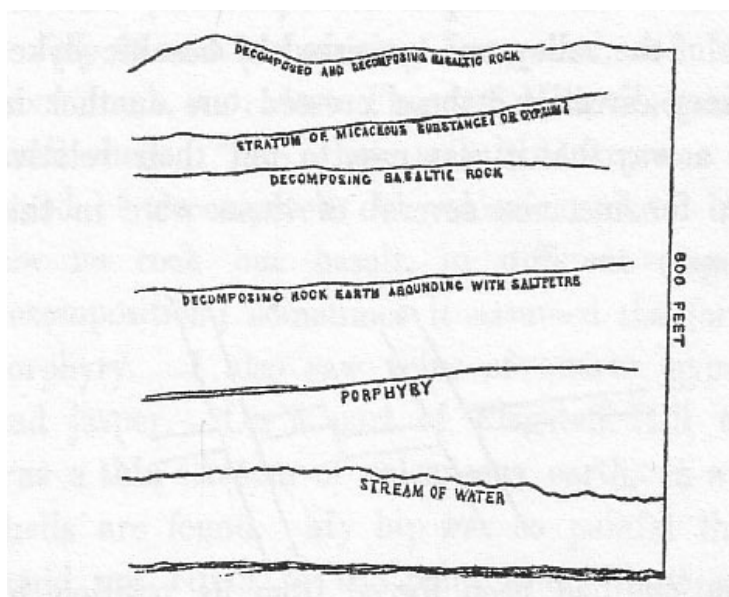
The general form of Gregory's Valley is a large basin bounded by a lofty precipitous mountain on one side called The Barn, and having a very narrow opening seaward, through which a small stream has cut its way. A remarkable circumstance connected with the basaltic dykes is that they are composed of a more compact basaltic rock than



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the basalt which they penetrate, so that whilst the rock has mouldered away these basaltic dykes have remained standing; and, as in the progress of their decay they split up, they present the appearances of walls built by human hands, with regular layers of stones, and which traverse the ravines of the island in all directions.

As might be expected, I found regular basaltic crystals in this valley, and also a variety of quartz ore, and other crystals, in the veins traversing the basalt. I also found the following remarkable section:



This was in a side valley or ravine leading from Gregory's Valley in a southerly direction.

On going down to the sea I found many species of starfish. I brought away three species of these with me. Two Species Pentagonal; one species Quadrilateral.

First species Pentagonal length of side 0.55 inch.

Second species Pentagonal length of side 0.50 inch.

Quadrilateral length of side 0.55 inch.

I found a sort of worm in the coral which had the power of extending its head like an English worm; its body then appeared to

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be composed of two portions, the fore part being much slighter than the other. Its dimensions were:

Length of fore part of body 0.4 inch.

Length of hind part 0.6 inch.

Breadth, or diameter of cylinder 0.1 inch.

In the coral there was also another insect, not unlike a centipede.

Length 0.9 inch.

Breadth at head 0.08 inch.

In the inmost recesses of the coral there was a minute bivalve shell and also a very minute species of crab.

One remarkable circumstance relating to St. Helena is that it is of a basaltic formation exactly resembling that of the Isle of France and the North-west of New Holland; and that, although so widely separated in longitude, these places lie in nearly the same latitude.

When you quit the sandstone ranges of the North-west of Australia reptiles which have been before very numerous at once become scarce. I never saw a snake in this great basaltic district although there were plenty in the sandstone. This however is only negative evidence. Brookes, in his History of St. Helena (second edition page 24) says: "There are neither frogs, toads, nor snakes in the island." In the Isle of Bourbon there are neither toads nor snakes. In the Mauritius likewise there are neither toads nor snakes, and only one species of frog, whilst the bones of the land tortoise (*Testudo indica*) are only found in a fossil state. Also, the highest land in St. Helena is 2800 feet; in the Mauritius about 2900 feet (scarcely); and in the volcanic district of North-west Australia about the same height.

July 26. At sea.

We caught a great variety of shrimp-like animals; these little things when disturbed emitted a brilliant phosphorescent light. We saw scarcely any gelatinous animals.

July 29.

Caught two small crabs (*Nautilograpsus*); these species have the power of swimming by means of the fringe-like fins with which their

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legs are provided. Several other crabs were also caught; some with their eggs attached, and two varieties of shrimp-like animals with eggs. Where these were abundant the sea was very luminous. Four or five of these were of a brilliant prussian blue colour, with silver-coloured spots on the back; others were of a very delicate pink colour; the tentaculæ of both of them were of a delicate prussian blue colour.

We also caught a species of small *Janthina*, nearly resembling those we had found before, but they were larger; moreover the species of barnacle attached to them was totally different from any we had before found, as if each species of nautilus had its own kind of parasite. This is worthy of attention.

August 8.

We found a species of *Halobates* which swam rapidly with the short legs foremost, and the foremost legs appeared to be furnished with a fringe to give them that power. The colour of the legs, dark prussian blue; body of a silver colour in front, with a prussian blue colour behind; under part of the body, near the tail, three consecutive striae of a silver colour, separated from one another by a line of prussian blue. I have never seen this animal before.

August 9.

Caught two or three small insects, somewhat resembling a bug, of a dirty brick colour and several minute species of *Diphyes* and small jellyfish.

August 19.

Caught a small *Janthina* nearly resembling those we had formerly seen, also a small crab, two new species of gelatinous animals, and a *Verella*.

August 20.

Several fish, resembling an eel in shape, were caught today; they were of different sizes, and some of them gave a slight shock on being touched. They were marked across the back with alternate striae of silver, and various shades of brown and black, though there were scarce two marked exactly alike. They had a transparent dorsal

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and two pectoral fins, which were all I observed, and a long thin snout or beak; the mouth was just at the end of it, on the top: some of them were thorny on the back; we caught also some crabs; a very minute blue fish; a black and red insect resembling a flea; a species of *Diphyes*; a very small kind of polypus; and one or two small jellyfish. A land bird flew on board today.

In 26 degrees north latitude we entered a portion of the sea covered with patches of seaweed, around which swarmed numerous eel-like fish, crabs, shrimps, and little blue fish; these last swam under those floating islands, sometimes leaving them for a little distance, but they always returned or swam to another: the crabs crawled in and out amongst the seaweed, and other fish of a large size came to these spots to deposit their spawn, so that we were in an archipelago of floating islands teeming with busy inhabitants and animal enjoyment.

August 21.

There were a great many crabs of different kinds and sizes caught today; two kinds of shrimps, one marked across with alternate striae of silver and dark brown; it had no antennae, and had apparently been hurt, as I could only see some very short legs; the rest appeared to be of the same kind as others recently caught, except being of a lighter colour. Some eel-fish of the same kind as yesterday. There were two other small blue insects caught; unfortunately none have been preserved as they were put in the same glass with the shrimps and were instantly eaten by them. The crabs also ate two small blue fish that were caught. No jellyfish were seen.

August 24.

Some of the eel-like fish, two or three shrimps, a new species of *dypha*, various kinds of crabs, and a large species of *Physalis*, were caught today.

August 25.

Caught various kinds of crabs, some minute shells, and a small curious insect, quite new to me, of a bright blue colour; the shrimps appear to be very fond of these insects, seizing them the instant they are put into the glass with them. We caught shrimps of all colours and sizes, many of them very beautiful; some were of a pale gold

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colour with bright blue spots; others with different shades of brown, and blue, white, or red spots. They all turned a dark red on being put into spirits. The smaller kinds had a round ball or excrescence on one side just below the head. I observed today that the eel-fish carries its eggs in a bag under the belly; the eggs were of a bright red colour. Two barnacles were caught; also a new and very remarkable fish.

August 28.

Caught today two of the fish of the same kind as the one taken on the 25th. It had a dorsal fin with 14 spines; a ventral fin; a tail, 16 spines; and in addition to these it had four pectoral fins resembling the claws of a frog, which it used much in the same manner that a lizard uses its claws. The upper pair of these were divided into two joints, the lower one of which was a perfect hand, terminating in ten claws, with which it could seize hold of any object, or expand and use it as a broad paddle, or fin. At the point where these arms are inserted into the body and immediately behind them are placed two tubes, one behind each arm. These form its gills, through which it expels the water taken in at its mouth; the lower pair of arms have only one apparent joint, and each of these hands are furnished with five claws; it has two protuberances which look like horns, one projects immediately between the eyes, and the other is situated between this and the dorsal fin, these are covered with little spines and it carries them erect. Its colour is pale yellow with brown spots and stripes on it; the spots about the head and upper arms are much darker than the others; about the stomach are little things resembling the wattles of the wattle-bird, they are of a brilliant white colour. It feeds on small shrimps, climbs about the weeds like a lizard, and at times swims like a fish and is very rapid and strong in its motions. It swells out the membranes about the spot where its gills ought to be, so as to puff itself out like a toad when it takes water in: its colour resembles that of the common English frog, and it looks remarkably like one when it sits on a piece of weed, resting on its claws and puffing out its cheeks. There are several lines of red stripes at the bottom of its stomach.

We caught also a great many shrimps and crabs; some of the shrimps were boiled and proved to be very good eating.

August 30.

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At 5 hours 30 minutes P.M. a pine tree passed us, covered with barnacles and surrounded by fish, which swam about this floating island, eating such things as fell from it.

No portion of the globe is more thickly inhabited, or affords, in proportion to its size, a greater amount of animal enjoyment than did this wave-tossed isle. On it were innumerable barnacles, several species of teredo, one of which, having its head shaped like a screw split into two equal portions, I believe to have been quite new. Many varieties of crab and minute insects shaped like a slug fed on the seaweed growing on the log.

These last animals were of different lengths. They were shaped like a caterpillar and composed of fifty-six rings; the stomach could only be distinguished from the back by a sort of excrescence which grew on the latter; each ring or division of the body was furnished with two pairs of legs, one pair pointing downwards from the stomach, the other pair projecting from the back; these legs were composed of bristles, and by sticking them into the timber they were able to maintain their hold and to walk along. In thus progressing they drew into a case the legs of the rings they were going to move, and pushed them forward by means of the other legs, and then, letting down the legs they had drawn into the case, they stuck them into the wood and made good their ground. Their habit was to lie about amongst the weeds that grew on the tree or to creep into some large holes that were in it. They did not die when I took them out of water but lived for sixteen hours, and were then as well and strong as ever, only dying after they had been put into spirits.

I got also two pieces of stones from the roots of this tree; they were small, quite angular, and had been carried this distance from the continent of America without any appearance of being water-worn. This must often take place when trees are blown down and washed away by floods, and in this manner angular pieces of stone may be conveyed many miles from the rock from which they were derived by the agency of water, and yet not be water-worn.

August 31.

At 11 hours 30 minutes A.M. we found a portion of the timber of a ship on the water, containing animals similar to those on the pine-tree yesterday: this was perforated through and through by different species of teredo.

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### CHAPTER 8. THE OVERLANDERS.

#### CLASS OF PERSONS.

It is to be expected that a totally new state of things will, in recently settled countries, give rise to different orders or classes of men unknown in older lands, but who have been called into existence by novel circumstances, and whose energies have been so developed as best to suit the modifications which these hitherto unexperienced causes may produce. In collecting information regarding the condition of our settlements in Australia my attention was particularly drawn to the mode of life pursued by some of my enterprising fellow-countrymen, known there under the denomination of Overlanders, and which is characterised by several remarkable peculiarities well deserving of observation, particularly at a time when so many young and adventurous spirits are looking towards that continent as the land of their future fortunes and home.

#### CHARACTER OF THE OVERLANDERS.

The Overlanders are nearly all men in the prime of youth, whose occupation it is to convey large herds of stock from market to market and from colony to colony. Urged on by the hope of profit, they have overcome difficulties of no ordinary kind, which have made the more timid and weak-hearted quail, and relinquish the enterprises in which they were engaged; whilst the resolute and undaunted have persevered, and the reward they have obtained is wealth, self-confidence in difficulties and dangers, and a fund of accurate information on many interesting points. Hence almost every Overlander you meet is a remarkable man.

The Overlanders are generally descended from good families, have received a liberal education (Etonians and Oxonians are to be found amongst them) and even at their first start in the colonies were possessed of what is considered an independence. Their grandfathers and fathers have been men distinguished in the land and sea service of their country; and these worthy scions of the ancient stock, finding no outlet for their enterprise and love of adventure at home, have sought it in a distant land; amongst them therefore is to be found a degree of polish and frankness rarely to be looked for in such a mode of life, and in the distant desert you unexpectedly stumble on a finished gentleman.

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### THEIR ADVENTUROUS MODE OF LIFE.

The life of an Overlander in the bush is one of great excitement which constantly calls every energy into action, is full of romantic and novel situations, and habituates the mind to self-possession and command. The large and stately herd of cattle is at least a fine if not even an imposing sight. The fierce and deadly contests which at times take place with the natives, when two or three hardy Europeans stand opposed to an apparently overwhelming majority of blacks, call for a large share of personal courage and decision; whilst the savage yells and diabolic whoops of the barbarians in their onsets, their fantastically painted forms, their quivering spears, their contortions, and shifting of their bodies, and their wild leaps, attach a species of romance to these encounters which affords plentiful matter for after-meditation. As the love of war, of gaming, or of any other species of violent excitement, grows upon the mind from indulgence, so does the love of roving grow upon the Overlanders, and few or none of them ever talk of leading a settled life.

### SUDDEN ACCUMULATION OF WEALTH.

And it is not to be wondered at that the young and ardent eagerly embrace a line of life so replete with exciting events and incidents, and which at once enriches the successful speculator, and fills with plenty and prosperity the region which he enters. The first individual who opens a market, which no other Overlander has yet visited, rides into the district an ill clothed way-worn traveller; the residents do not at first deign to cast a glance upon him till presently it is noised about that an overland party has arrived, that a route from the stock districts has been formed, and that the incalculable advantage of abundance of cattle at a cheap rate has been secured; landed property instantaneously rises, perhaps to double the value it had a few hours before; numbers of persons find themselves suddenly made rich without an exertion on their own part, and from all sides individuals flock to see their benefactor. The ill clothed way-worn traveller now finds himself at once invested with the dignity of a conqueror. On all hands he is feted, dinners are given to him, a piece of plate presented, and as he feels the sweets of renown and of the wealth which he has won he meditates fresh conquests on the trackless desert, new adventures with his tried stockmen, and further acquisitions of riches.





Drawn on Stone by Geo. Barnard, from a Sketch by G. Hamilton Esq.

M & N. Hasleart, Lith. Printers, 34, Chancery St. Barbours 71.

CROSSING CATTLE OVER THE MURRAY NEAR LAKE ALEXANDRINA.

#### EFFECTS OF THEIR ENTERPRISES.

Then comes a strange change over the unoccupied Overlander; he has brought with him every head of stock which he could muster, and in the course of a few days his last beast is disposed of; his establishment is broken up, he awakes some morning and finds himself a rich man, but he has no stock; he has so much money but no cattle. He no longer follows the long array of his stately herd and bleating flocks, his loaded drays and bearded stockmen, through the free wilderness; no longer regulates and watches their perilous course through the intricate ford of a deep river, or stands upon some solitary hill to reconnoitre the trackless country and select the line along which the motley assemblage is to pass. He is now an idle unoccupied gentleman, the inhabitant of a boarding-house, with no object in the world before him; but ere long the plans of fresh achievements and speculations are sketched out. You see a muster of bearded weather-beaten men, carrying short-handled whips. The Overlander enters the group, a short consultation takes place, and in

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a day or two more himself and his followers are under weigh for some district where he can purchase stock cheapest and make a good start for another market.

### MAGNITUDE OF THEIR OPERATIONS.

The magnitude of the operations of the Overlanders would scarcely be credited; a whole fortune is risked, and in the wilderness: its safety depends upon good guidance; yet far from being intimidated by the thought the adventurers are only stimulated to a greater degree of activity. The stock of an Overlander is the capital which he has invested in a single speculation; and to give an idea of the amount of this I will show, at a moderate estimate, the value of a herd, the property of an Overlander who arrived in Adelaide in the month of March 1840 from the district of Illawarra, New South Wales.

### HORNED CATTLE.

260 Cows, many broken in.  
230 Bullocks, 3 1/2 years old and upwards.  
190 Steers, 2 1/2 years old and upwards.  
39 Steers, 1 1/2 years old and upwards.  
70 Heifers, two to three years old.  
32 Heifers, one to two years old.  
9 Bulls.  
5 Calves.  
20 Working Bullocks, two shafters.

855 Total head of Horned Cattle.

### HORSES.

22 Mares, all in foal, 3 to 5 years old.  
5 do., 5 to 8 years old.  
7 Fillies, do., 2 to 3 years old.  
3 do., rising 3 years, not in foal.  
5 do., rising 2 years, not in foal.  
10 Saddle and Draught Horses.  
5 Colts, rising 4 years old.  
1 Colt, rising 3 years old.  
1 Colt, rising 2 years old.  
1 Blood Stallion.

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1 Draught entire Horse.

1 Entire Pony.

62 Total number of Horses.

900 Fat Wethers.

### AMOUNT OF STOCK VENTURES.

Now, striking a low average, the value in pounds of this herd of cattle, horses, and sheep, in South Australia, was:

Horned Stock 8,550.

Horses 3,720.

Wethers 1,575.

Total: 13,845 pounds.

But between this and an ordinary mercantile risk no parallel can be drawn. A merchant insures his cargo so that his total loss can but be a small portion of the whole. The Overlander cannot do this with his stock and runs a far greater proportionate risk. It must also be borne in mind that the statement of the herd, which I have above given, does not include all that started for South Australia, but only the survivors, who, after traversing so many hundred miles, reached in safety the destined mart.

### INFLUX OF STOCK TO SOUTH AUSTRALIA.

When the Overlanders drive sheep alone, without horned stock or horses, the number of heads is much increased, as from 8000 to 12,000 sheep are brought over at one time. They are driven in separate flocks of about 1000 each, and these follow one another in regular succession. The value of a flock of 6000 sheep cannot be estimated under 10,500 pounds.

### RAPID INCREASE OF WEALTH IN NEW SETTLEMENTS.

So much for the operations of single parties; but when once a road to a new market is opened numbers follow up the tracks of the first hardy adventurer, and the operations of the whole combined are not less startling in their magnitude than are those of enterprising

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individuals. From New South Wales into the province of South Australia the Overlanders introduced, in 1839:

4,200 Head of Horned Cattle,  
130 Horses,  
35,000 Sheep;

and within the three succeeding months of 1840, upwards of:

7,000 Head of Horned Cattle,  
100 Horses,  
25,000 Sheep;

making, in fifteen months, a total of:

11,200 Head of Horned Cattle,  
230 Horses,  
60,000 Sheep.

The value in pounds of the above stock being in the whole about:

Horned Cattle 112,000,  
Horses 13,800,  
Sheep 105,000,

Total: 230,800 pounds.

And this wonderful amount of stock was brought into a country which, three years before, only resounded to the war-cry of the naked savage; and the soil of which, hardened, baked, and unstirred for centuries, nursed not within its bosom seeds from which a plenteous harvest might spring, but, as if irritated by neglect and indifference, gave forth unwillingly only acid roots and scanty bulbs.

### PROSPERITY CREATED BY THE OVERLANDER.

The first entrance of an Overlander into a district may be compared to the rising of the Nile upon the thirsty land of Egypt; then does the country bear fruit and the land give forth her increase; he enters the district silently, noiselessly, unexpectedly, but his influence is soon felt everywhere; merchant vessels can now obtain cargoes of wool, and no longer sail empty away. England receives raw materials, and in exchange are sent out luxuries and manufactured goods. New

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clearings are made by the farmer, who has now abundance of manure; the artisan plies useful trades, and ceases to labour in the place of beasts of draught or burden; hateful scurvy, the scourge of new colonies, is expelled, not by medicine, but by fresh meat, milk, and vegetables. But the worker of all this good is unmindful of it; he has bargained to get the highest price he can for his stock, and is already plotting new enterprises; he sought to serve himself, not others, and has accomplished both.

The first Overlander having entered a district nothing can check the tide that follows on. It is in vain for him to declare (perhaps really conscientiously) that he conceives the risk of loss of stock to be so great that none should undertake the journey; this is only ascribed to his cupidity and a desire to keep others out of the market; HE has done it, and why cannot more? This argument is irresistible, and adventurer after adventurer marches upon his track.

### CONSEQUENCES OF HIS SUCCESS UPON OTHERS.

Now comes a hurrying into the new district of speculators from the old colonies: the fact of a road being found to it from the stock country is a guarantee that it will succeed, and it is in a new settlement that the largest profits are realized. These arrivals bring with them from the older colonies experience, capital, and extensive connexions; fresh sources of industry and speculation are at once opened up by them; all town-land and landed property to be purchased at a cheap rate they secure; money circulates from hand to hand, and an impetus is given, and a progress made, which must be seen to be credited.

### OPENINGS TO WEALTH IN NEW COLONIES.

The tide of emigration coming in from the older colonies is a certain sign of rapid success; those who arrive from these places are men who have done well in the first country of their adoption; but to this they had repaired when it was thinly inhabited, when land was of very low value and to be procured near the capital; there they have realized largely, but it appears to them that nearly all the good things have now been picked up; property has attained such a value that it rises but slowly, indeed is almost stationary in price; and the country is so largely stocked that they are driven to establish their sheep-stations at such a distance from the sea coast that the expense of the transport of their wool thither greatly detracts from its value.

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Under these circumstances once again do they emigrate, to repeat in a new land the operations which have before yielded them so lucrative a return; and, strong in past experience, they smile at the errors committed by the younger settlers, from which they reap many advantages.

### ITS EFFECTS UPON ALL CLASSES.

But time and intellect are all worth much more in Australia than they are in England, and everyone can realize upon his capital and speculate profitably upon his intelligence, activity, and strength; for all of these he gets paid, hence but few men are willing to follow professions. Clergymen too often turn farmers and speculators, even if they do not altogether throw aside their sacred character. Medical men but rarely pursue their practice, when such remunerating fields of enterprise are laid open to them; soldiers abandon their calling; and the government officers are all virtually farmers and stock-owners.

This is to be expected, from the character of man. In a new colony everything increases rapidly in worth—a landed estate which can be bought in the early stages of its existence at a mere nominal price grows yearly in value without a penny being expended upon it; stock increases in a geometrical ratio, at little or no cost, for there is plenty of land to pasture them upon. Nothing of this kind either does or can take place in England; and when the settler finds how changed his prospects are, and how new means of acquiring wealth are opened to him, he too often devotes his every thought and energy to the one object; and so far will this passion lead men that I have known an honourable member of council and leading magistrate in a colony take out a retail license, and add to his already vast wealth from the profits of a gin shop.

But as stock is that species of property from which the largest returns are realized, and that with the least labour, it is to this branch of industry that settlers generally direct their attention; indeed until plenty of stock is introduced into a new colony its success is wavering and uncertain, and its inhabitants are generally compelled to undergo a degree of poverty and privation which contrasts strangely with the affluence of the people occupying the more settled countries. The degree of care and attention which is bestowed upon the breeding of stock necessarily ensures both a constant supply of it and its rapid diffusion over all accessible portions of the continent.

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It is extremely difficult to convey to a mind which has never contemplated the subject an idea of the rapid advance of stock stations over the continent of Australia; there is something about it which bears an almost fabulous character; and the same circumstance takes place with regard to the rise in the price of town and country lands. Those who have not witnessed such things can scarcely give credit to them. In Western Australia town land was bought for twenty-three pounds an acre in the month of December 1839; and in the month of February 1840, large importations of stock having taken place, the same land was sold for sixty pounds an acre. But in other colonies, where overland communication takes place, this would be regarded as a very small increase in price for a new colony; there are many instances in South Australia of people realizing, in less than two years, sums of money to the amount of from ten to twelve thousand pounds from the sale of town acres in the city of Adelaide.

### RAPID SPREAD OF STOCK STATIONS.

To endeavour to give some idea of the rapid extension of stock stations over the face of the country I must begin by premising that farming stock somewhat more than double themselves in two years; or at the end of two years they occupy double the space of territory; at the end of four years, four times; at the end of six years, eight times; at the end of eight years, sixteen times; and thus, at the end of ten years, thirty-two times the space of country which was originally taken up by stock becomes occupied by civilized man.

Exactly in the same ratio as the amount of occupied territory increases so does the amount of wealth in the country advance, as well as the demand for labour; and the natural increase of population falling far short of this, and not supplying a sufficient number of persons to absorb the wealth which the country is capable of producing, a demand for emigration arises, and a stimulus to it is given by the ease with which wealth and comfort are acquired in the Australasian colonies.

### COURSE OF THE OVERLANDERS THROUGH AUSTRALIA.

If the reader casts his eye upon a general map of Australia it will be an easy task to follow the march of stock for the last four years:

Port Phillip was occupied in 1836,

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Portland Bay in 1835,  
South Australia in December 1836.

### COMMUNICATION BETWEEN SOUTHERN AND WESTERN AUSTRALIA.

The first step taken by the Overlanders was the connexion of Port Phillip with Sydney, and they thus, as it were, established a great base line from which their subsequent operations could be carried on; at this period they did not however bear the name of Overlanders, which was only given to them after Adelaide had been reached in 1838.

### EARLY ENTERPRISES OF THE OVERLANDERS.

The Overlanders had hitherto been occupied in merely pushing their stock stations to different portions of the colony of New South Wales; but a new and fertile field for enterprise opened to them in the establishment of the colony of South Australia, which as before stated was in December 1836; and many an enterprising mind instantly turned thitherward with earnest longings which soon ripened into action. In November 1837, that is, in eleven months from the foundation of the new colony, several hardy adventurers had laid, matured, and commenced carrying into operation plans which some deemed insane when they heard of the amount of capital invested in so new an undertaking, but which were undertaken by the adventurers in full confidence in their own powers.

### THEIR FIRST EXPEDITIONS TO ADELAIDE, AND TO THE WESTWARD OF PORT LINCOLN.

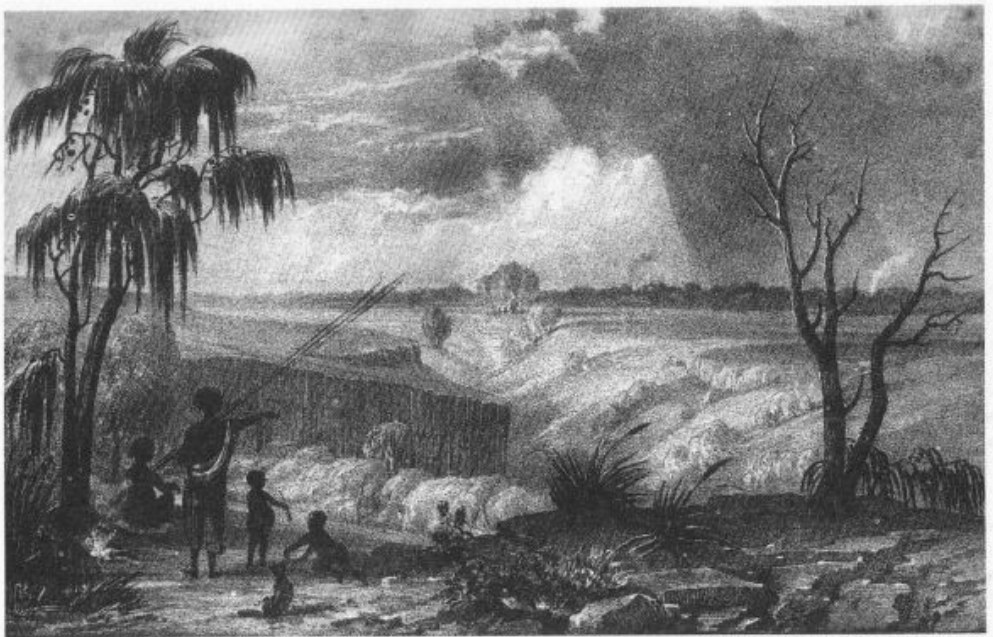
Two expeditions started almost at the same time for this new market. In February 1838 Mr. Hawdon moved from the Goulburn and Mr. Eyre from Port Phillip. In April 1838 Mr. Hawdon arrived in Adelaide and shortly afterwards was followed by Mr. Eyre, who had attempted to take a direct route from Port Phillip to Adelaide, but coming upon an impassable country he had been compelled to turn to the northward, and then to make it by the same route which Mr. Hawdon had pursued. Just eight years before this period a hardy party of explorers under Captain Sturt had first ventured in a whale-boat to descend a river traversing this unknown land. Rapidly had the fruits of this enterprise ripened to maturity; the river was now



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made a highway of commerce, a connecting link between two countries.

In the remaining portion of 1838 and in 1839 the energies of the Overlanders were fully employed in supplying South Australia with stock; and during this period several new and shorter lines of route were struck out, the last great improvement of this kind being made by the adventurous C. Bonney, Esquire, who connected Port Phillip with Adelaide by a direct road running nearly parallel to the coast, so that the portion of the continent of Australia which lies between Moreton Bay and Adelaide is now connected by a passable route.



Drawn on Stone by Geo. Bernard from a Sketch by G. Hamilton Esq<sup>r</sup>

MAN Hancock, Lith. Printer, 64. Charlotte St. Bathhouse Fl.

BASALTIC ROCKS CAMPASPI RIVER, NEAR PORT PHILLIP

Published by T and W Boone Lonsdon.

During 1839 it was felt however that the markets of South Australia no longer afforded such large profits; but Port Lincoln was then occupied and a new country opened, to which cattle and sheep were conveyed across Spencer's Gulf. This for a time afforded some employment to the Overlanders; but their spirits were secretly chafed by the thought that the limits of their career were attained. Several expeditions to the westward of Port Lincoln were

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undertaken, and in August 1839 Mr. Eyre, still anxious to open a new market, pushed as far to the westward as Denial Bay; but the journey to King George's Sound seemed so vast an undertaking that although such a scheme was often contemplated the hazard and risk of property appeared, even to a daring Overlander, to be too great.

Yet although none ventured, many an eager heart turned that way, and many a thoughtful face lighted up when a promising plan was unfolded.

Whilst the Overlanders were thus speculating upon the possibility of connecting the Eastern and Western portions of Australia by one great line of communication, the new settlements of South Australia and Port Phillip were making such rapid advances in prosperity as almost exceed belief.

The settlements of Swan River and King George's Sound, which had now been established nearly ten years, were truly in a most miserable condition. So late as the month of September 1839, when I landed at King George's Sound to assume the situation of Government Resident there, the population had been in a state bordering upon want.

But in the lapse of years the mismanagement and other causes which had weighed down the settlers in Western Australia had been swept away; and in 1839 an ameliorated system began to be introduced, the energies and resources of the colony were allowed to unfold and develop themselves, and a period of colonial prosperity commenced which bids fair, if not again checked, to run as rapid and astonishing a career as it has done in South Australia and Port Phillip.

### IMPORT STOCK TO WESTERN AUSTRALIA.

These changes were not unmarked by the Overlanders. Those symptoms of uneasiness which always precede new eras of events began to exhibit themselves at both ends of the proposed line of communication. My official situation enabled me greatly to forward these, and all persons who landed at the Sound on their passage to South Australia recognised the advantages to be derived from shipping stock to it from Adelaide, and thus avoiding the passage to Swan River round Cape Leeuwin; these persons carried numerous representations to this effect to some of the principal stock-proprietors of South Australia; and at the same time Dr. Harris, one

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of the oldest and most adventurous of the Swan River settlers, drove a flock of sheep overland from King George's Sound to the inland districts of the Swan River, thus demonstrating the feasibility of this part of the plan. The news of his safe arrival at Swan River had only just reached the Sound when Mr. Eyre arrived in Princess Royal Harbour with a vessel laden with sheep; he was followed in a few days by Lieutenant Mundy, who came in a larger one laden with horned stock and sheep; and they immediately despatched another vessel for 1000 more sheep.

### STATE OF THE CATTLE MARKET THERE.

Thus was a sort of communication established between the two colonies; but the profits arising from the sale of stock brought in a vessel were in a great measure absorbed by the expenses of transport, and in the winter season the passage is too rough to allow of the risk of shipping stock. Were they driven overland, instead of being transported by sea, horned stock could be sold at about 5 pounds per head, and sheep for 15 shillings per head less. Moreover the price of the different colonial markets would be equalised, and new settlers in all the colonies would start with an equal chance; whereas at present if two settlers with equal means go the one to Western and the other to Southern Australia, for every 100 head of horned stock and 100 head of sheep that the settler in Western Australia can buy with his capital the settler in Southern Australia can buy 200 head of horned cattle and 800 of sheep; this scarcely appears to create so vast a difference between the two as it really does until we regard the relative position of the two settlers at the end of some given term of years, for instance five; they would then stand thus:

<b>SHEEP.</b>			
<i>Western Australia.</i>		<i>Southern Australia.</i>	
Settler commencing with 100 Ewes.		Settler commencing with 300 Ewes.	
Ewes . . . .	180	Ewes . . . .	540
Maiden Ewes . . . .	56	Maiden Ewes . . . .	168
Wethers . . . .	164	Wethers . . . .	492
Ewe Lambs . . . .	72	Ewe Lambs . . . .	216
Wether Lambs . . . .	72	Wether Lambs . . . .	216
Value about £800		544 Total.	Value £2,400 1632

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£2,400 Southern Australia.

800 Western Australia.

---

£1,600 Balance in favour of Southern Australia.

### HORNED CATTLE.

<i>Western Australia.</i>	<i>Southern Australia.</i>
Settler commencing with 100 Cows—amount and value of his Stock at the end of five years.	Commencing with 200 cows—amount and value, &c. at the end of five years.
140 Cows.	280 Cows.
40 3-year old Cows.	80 3-year old.
80 Bullocks.	160 Bullocks.
40 2-year old Heifers.	80 2-year old Heifers.
40 2-year old Steers.	80 2-year old Steers.
57 1-year old Heifers.	114 1-year old Heifers.
57 1-year old Steers.	114 1-year old Steers.
75 Heifer Calves.	150 Heifer Calves.
75 Steer Calves.	150 Steer Calves.
604 Total.	1208 Total.
£6,644 Value.	£13,288 Value.
£13,288	
6,644	
£6,644 Value in favour of Southern Australia.	
1,600	
£8,244 Total in favour of Southern Australia.	

## GENERAL CONSEQUENCES OF THE SPREAD OF COMMERCE AND EMIGRATION.

The rapidity of communication from point to point has introduced such vast effects in the march of improvement among distant lands as only eye-witnesses can believe. The merchant in London who lays on a vessel for a certain port regards the affair as a mere mercantile speculation, but could he trace out the results he effects in their remotest ramifications he would stand astonished at the changes he produces. With the wizard wand of commerce he touches a lone and trackless forest, and at his bidding cities arise, and the hum and dust of trade collect, away are swept ancient races; antique laws and customs moulder into oblivion. The strongholds of murder and superstition are cleansed, and the Gospel is preached amongst ignorant and savage men. The ruder languages disappear successively, and the tongue of England alone is heard around.

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Such are the ultimate effects of the daily occupations of many men in the City of London, who, seated in a dark and dingy counting-house in pursuit of gain, form and execute schemes the eventual tenor and bearing of which are not to enrich themselves but the human race. No doubt amongst the mass are noble minds who have a perception of the true object of their calling, who feel a just and laudable pride that they are the employers and benefactors of mankind; whose names, even amongst distant hordes of untaught men, pass current, as a security for probity and honour; who write a few lines in London and move the antipodes; who within the last fifty years have either actually erected or laid the stable foundation of six great empires, offsets of that strong nation who, together with her progeny, is overspreading the earth, not by the sword but by the gentle arts of peace and beneficence.

### GENERAL RESULTS OF GREAT MERCANTILE OPERATIONS.

In the earlier Colonies, founded by the great maritime powers of the world, national hatred prevailed to a great degree, although war existed not between the parent states: still, at distant points removed from the immediate control of the law, the hatred of races found vent, cruelties were committed, reprisals took place, and Europeans warred one upon another. But England and America, as they progress in these regions, spread a common language and a common faith, and no national antipathies can be strictly said to exist between them.

### TRADE OF THE AMERICANS WITH OUT-STATIONS.

The Americans, who are decidedly a more enterprising mercantile people than ourselves, have almost engrossed the profits of the seas surrounding the Indian Archipelago and the western and south-western portions of New Holland. Their vessels in these parts are to ours in the ratio of at least ten to one. They constantly frequent the out-stations of Western Australia; supply the wants of those retired portions of the world, and where, legitimately, the British manufacturer should command the market, little besides the produce of America is to be seen. The settlers at these stations derive the largest portions of their supplies from the American whalers, who give them in exchange for potatoes and vegetables—and this species of barter is so profitable to both parties that it would be impossible to prevent it (nay the attempt would be cruel) by any other means than by inducing British whalers and merchant-vessels

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to secure some portion of those advantages which are at present wholly monopolized by others.

### EFFECTS OF THE SPIRIT OF SPECULATION.

The masters of the American whalers participate in a great degree in the feelings of the out-settlers; from the impressions generated in their infancy they are disposed to look with a fraternal eye upon the few adventurous spirits who have located themselves far from their fellow men to reclaim a home from the wilderness. They have seen, lived amongst, and shared the benefits which result from such commencements, and it is not therefore to be wondered at that at all the out-stations the most friendly relations exist between the settlers and the American whalers; and when, during the five months of the bay whaling season, an American vessel lays at anchor in some bay where there are one or two settlers' families, a constant exchange of mutual acts of kindness takes place, equally creditable to both parties; whence result friendship, and perhaps an intermarriage; and when the period of the vessel's sailing arrives there are numerous deserters from her crew, who readily find employment at the different sheep stations.

### DIFFUSION OF EMIGRATION.

Thus a species of emigration of which nothing is known in England takes place in the colonies. Men, from the force of poverty, from the desire of gain, or of founding a family and property in a new land, or for some other reason, quit their homes and enter another portion of the globe. There they find many who, having in the commencement of a settlement realized the largest profits, are discontented with the percentage they can now gain upon their capital; and what to the newcomer appears to be a highly remunerating return they despise; gladly therefore do they dispose of everything to the new emigrants and, animated by that restless spirit of adventure which is common to all first settlers, away they start for the last new colony or for unsettled lands—New Zealand, the Sandwich Islands, the Indian Archipelago, it matters not which—a fresh field of speculation has been opened, the tide of emigration from Europe seems to be setting towards a certain quarter where there are numerous new arrivals who can never compete with old and practised colonists. He who has seen several cities rise can judge to a nicety, from local circumstances, upon what site the capital of the new province must be built; and in the same way he can foresee which must become the

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business street, and hence knows exactly the relative value of every acre of land in the province. In vain for him are reports spread that the capital is to be built in such or such a spot, he but encourages them; in the meantime rapidly and noiselessly his purchases are made, and a fresh acquisition of fortune secured.

This class of men, amongst whom are many Overlanders, are never satisfied or settled; they are constantly engaged in contemplating changes in the prosperity of colonies and means of enriching themselves, they positively disregard personal comfort, and a restless spirit of activity and love of change animates them wholly. In these respects there is a great similarity of character between them and the Americans, and it is inconceivable in how short a period of time such a change is brought about.

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### THE ABORIGINES.

#### CHAPTER 9. NATIVE LANGUAGE.

##### RADICAL UNITY OF THE AUSTRALIAN LANGUAGE THROUGHOUT THE CONTINENT.

In the preceding narrative of my Expeditions I have occasionally introduced some casual incidents relating to the manners and social condition of the natives of Australia, a race generally considered to occupy too low a position in the scale of humanity to be worthy of any peculiar regard. In the following pages I shall bring together such observations as my intercourse with them enabled me to collect; arranging my remarks under the heads of Language, traditional or customary Laws, and social Habits and Manners; and to these I shall add some desultory anecdotes illustrative of their superstitions, and of some other peculiarities of thought and action; and shall conclude with a short review of the influence that the settlement of Europeans among them has, or is likely to have, on their condition.

##### CAUSES OF A CONTRARY OPINION.

It has hitherto been very generally believed that the languages spoken in different portions of the continent of Australia are radically distinct; and as such a circumstance, were it really the case, would tend to prove that its inhabitants originated from several separate races, it becomes rather an important matter to set this question at rest, and to endeavour to show from what cause so erroneous an opinion originated.

The arguments which prove that all the Australian dialects have a common root are:

1. A general similarity of sound and structure of words in the different portions of Australia, as far as yet ascertained
2. The recurrence of the same word with the same signification, to be traced, in many instances, round the entire continent, but undergoing, of course, in so vast an extent of country, various modifications;
3. The same names of natives occurring frequently at totally opposite portions of the continent. Now, in all parts of it which are known to



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Europeans, it is ascertained that the natives name their children from any remarkable circumstance which may occur soon after their birth; such being the case, an accordance of the names of natives is a proof of a similarity of dialect.

### CAUSES OF ERROR IN ENQUIRERS.

The chief cause of the misapprehension which has so long existed with regard to the point under consideration is that the language of the aborigines of Australia abounds in synonymes, many of which are, for a time, altogether local; so that, for instance, the inhabitants of a particular district will use one word for water, whilst those of a neighbouring district will apply another, which appears to be a totally different one. But when I found out that in such instances as these both tribes understood the words which either made use of, and merely employed another one, from temporary fashion and caprice, I felt convinced that the language generally spoken to Europeans by the natives of any one small district could not be considered as a fair specimen of the general language of that part of Australia, and therefore in the vocabulary which I compiled in Western Australia I introduced words collected from a very extensive tract of country.

Again, in getting the names of the parts of the body, etc., from the natives, many causes of error arise; for they have names for almost every minute portion of the human frame: thus, in asking the name for the arm, one stranger would get the name for the upper arm, another for the lower arm, another for the right arm, another for the left arm, etc.; and it therefore seems most probable that in the earlier stages of the inquiry into the nature of the language of this people these circumstances contributed mainly to the erroneous conclusion that languages radically different were spoken in remote parts of the continent.

### PROOFS OF IDENTITY OF THE LANGUAGE THROUGHOUT THE CONTINENT.

One singularity in the dialects spoken by the aborigines in different portions of Australia is that those of districts widely removed from one another sometimes assimilate very closely, whilst the dialects spoken in the intermediate ones differ considerably from either of them. The same circumstances take place with regard to their rites and customs; but as this appears rather to belong to the question of

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the means by which this race was distributed over so extensive a tract of country, I will not now enter into it, but merely adduce sufficient evidence to prove that a language radically the same is spoken over the whole continent.

If then we start from Perth in Western Australia, following the coast in a southerly direction, it will be found that between Perth and King George's Sound a common language is spoken, made up of several dialects, scarcely differing from one another in any material points and gradually merging into the dialects of these two places, as the points considered are nearer to one or the other.

The principal causes of difference between the dialects of these two places are, 1st, that at King George's Sound the terminating syllable of all names is dropped; and 2nd, that all verbs, with a very few exceptions, end in gur, instead of the varying termination which is given to them at Perth. Any person who can speak the Perth dialect will, by observing these two rules, be able to converse freely with the natives of King George's Sound.

### *Examples to illustrate this difference of dialects.*

ENGLISH.	SWAN RIVER.	K. GEORGE'S SOUND.
The head.	Kat-ta.	Kat.
The skin.	Mat-ta.	Mat.
The throwing stick.	Meer-ra.	Meer.
Good.	Gwab-ba.	Gwab.
To beat.	Booma.	Bomgur.
To eat.	Ngannow.	Nangur.

From these examples it will be seen that the King George's Sound dialect is the simplest of the two; and indeed I am inclined to believe that the dialect there spoken is more simple than that in use at any other portion of the continent.

If we now proceed to Adelaide in South Australia we still find the same language spoken, but the dialect here is considerably softened; the hard g of Perth is exchanged for k, and b becomes p and w. Many of the nouns take -anga as a termination, and the verbs take -andi and -endi. This addition of soft terminations and a general sweetness of sound appear to be the peculiar characteristics of the Adelaide dialect. No large vocabulary of this language has yet been published, but one-eighth of the words known as belonging to the Perth dialect

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have been found also in that of Adelaide; we may therefore fairly conclude that when the latter language is better known a still greater degree of identity will be found to exist.

Natives from several parts of the Murray and Murrumbidgee and from Port Phillip have been brought into communication with natives from King George's Sound, scanty vocabularies from some of these points are also extant, and the amount of evidence thus gained clearly establishes that the several dialects are all derived from a common root.

The labours of Mr. Threlkeld in the vicinity of Hunter's River and Lake Macquarie enable us to compare the language of that portion of Australia with those of the other points which we have just considered, and the result of this comparison also shows that the languages are radically the same.

### TABLES OF EXAMPLES.

The following Tables will give a sufficient number of words common to those four dialects to show the degree of similarity which exists among them.

### VARIATIONS OF DIALECT.

Now before proceeding farther and thus entering upon ground which is very little known, there are several important circumstances worthy of consideration. In the vast extent of country which is comprised between the points embraced in these tables it was to have been expected that very great variations of dialect would have been found. If we only reflect upon the differences of dialect existing between the several counties of England, so limited in extent, how much greater were the variations to have been reasonably anticipated in a country between two and three thousand miles across, where an unwritten language is in use, and where no communication whatever takes place between the inhabitants of distant portions: moreover in this great extent the vegetation becomes totally different; birds, reptiles, and quadrupeds inhabit one portion of the continent which are unknown in another, and external nature altogether changes. Under these circumstances many new words must have been invented, and new terms must constantly have been introduced as the population spread across the country, and as those who were constantly pushing on from the outskirts of

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I.—SUBSTANTIVES.

English.	Swan River.	King George's Sound.	South Australia.	Sydney.
The throwing stick .	Meerra .	Meer . .	Meedlah .	Wom-Murrur
Smoke .	Booyoo .	Poou . .	Puiyu . .	Poito.
Water . .	Kowin . .	Koin . .	Kowe . .	Ko-koin.
Wood . .	Kalla . .	Kal . .	Karla . .	Kollai.
Dung . .	Kona, or Konung .	Kwon . .	Kodna . .	Kona-ring or Konung
The hand .	Mara . .	Murr . .	Mur-ra . .	Mutterra.
The ribs .	Narra . .	Narr . .	. . . .	Narra.
The tongue .	Tdallung .	Tdallung .	Tadlanga .	Tullun.
The foot .	Tjenna . .	Tjenna . .	Tidna . .	Tiona.
The eye . .	Mail . .	Mil . .	Mena . .	Mael.

II.—VERBS.

To strike .	Pooma or Boma	Bombgur .	Poomandi .	Boon-billiko.
To see, to know	Nago . .	Nagkur .	Nakkondi .	Na-killiko.
To give . .	Yunga . .	Yungur .	Yungondi .	Ngu-killiko.
To blow . .	Bobun . .	Bwabun-gur .	Boontondi .	Bom-billiko.
To fly . .	Burdang .	Burdangutgur .	. . . .	Burkulliko.
To speak .	Wangow .	Wangur .	Wangondi .	Wirya-yelliko.
To fall . .	Guardo .	Gwartgur .	Wordnendi .	
To dung . .	Kona . .	Kwangur .	Kudnatendi.	
To be ailing .	Ngandyne .	Ngandynegur .	Ngandandi .	
To penetrate.	Taan . .	Taangur .	Tanandi . .	
To fear . .	Wyaine . .	Wyainegur .	Waiainendi .	
To call aloud.	Meerow . .	Marrangur .	Murkandi .	Marong- koiyelliko. }
To dig, or scrape	Pean or Bean	Pingur . .	. . . .	Pirilliko.
To move quickly	Yarragil .	Yarragil .	. . . .	Yarul kulliko
To tear . .	Jirran . .	Yirrangur .	Yirrendi . .	Yirir-kulliko.
To struggle .	Waubbow .	Wauppur . .	. . . .	Waipil-liko.
To depart .	Watto . .	Wat . . . .	. . . .	Waita.
To walk or go.	Yanna . .	Yan . . . .	. . . .	Yan.

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the inhabited parts ceased to communicate with the districts which had been first peopled, these changes must have been unknown to the original inhabitants of the continent and to those of their descendants who successively inhabited their territory.

If for instance this country was first peopled from the north or the tropical parts, the most remote inhabitants of the southern portions must have invented terms for snow, ice, hail, intense cold, etc., as well as for every tree and bird, for every fish and reptile, and for every insect; all the compound and comparative terms derived from these, as well as the original words, we ought therefore to expect to find totally different in the languages of the north and south, of the east and west; and from whatever portion of the continent we imagine the first inhabitants to have proceeded the same reasoning holds good.

### RADICAL IDENTITY OF THE PRONOUNS.

But personal terms, such as the parts of the body, the pronouns, etc., and also verbs describing ordinary actions, ought not to be expected to vary in the same degree; and we shall accordingly find that it is chiefly in words of these and similar classes that the greatest degree of resemblance is found to exist. With regard to the pronouns this is very remarkable. In the singular, plural, and dual numbers they almost coincide in Western Australia, South Australia, and Sydney. The following table of the pronouns as used in those places will show this:

WESTERN AUSTRALIA.	NEW SOUTH WALES.	SOUTH AUSTRALIA.
Nganya	Ngatoa	Ngaü
Ngianee	Ngintoa	Ninna
Bal		Ba
Ngalee	Ngalin	Ngadli
Nurang	Nura	Niwa
Boola	Bulo-ara	Burla
Nadjoo		Ngaidjo
Nimedoo		Nindo
Ngando	Nganto	Ngando
Ngannee	Ngan	Nganna
Nganno	Nganbo	Ngangko

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### DIFFERENCES OF DIALECT EXPLAINED. EXAMPLES.

To those who have not considered this circumstance languages have frequently appeared to be quite different which in reality are closely assimilated. Two instances will explain my meaning. The natives in the vicinity of Perth generally use the word gab-by, or kuyp-e, for water, but those inhabiting a district only twelve or fourteen miles distant from Perth adopt the word kow-win; the word used by the natives in the vicinity of Adelaide in South Australia for water is kauw-ee. Now, on comparing these words it might have been hastily concluded that the languages of West and South Australia were without affinity; but in fact the variation does not constitute any essential difference, for, considering the interchangeable nature of the consonants b, p, and w, and of g and k, which affect different dialects, we shall find the words gab-by, kuyp-e, kow-win and kauw-ee to be only different forms from one root. One instance of another kind may be given. The word for the sun at Perth is nganga, whilst at Adelaide it is tin-dee; but the word used by the natives at Encounter Bay, South Australia, thirty-six miles from Adelaide, is ngon-ge, and the word used in the southern districts of Western Australia for the stars is tiendee: thus by extending the vocabularies of the two places the identity of the language is shown.

### CAUSES OF ERROR IN FORMER ENQUIRERS.

Up to the present time we have had only very meagre vocabularies, collected by passing strangers, each of whom adopted his own system of orthography, and the comparisons formed from such compilations must necessarily have been erroneous in the highest degree. Moreover in many instances these strangers were grossly imposed upon. One gentleman published a vocabulary of the King George's Sound dialect which has been largely quoted from by other writers; in this the numerals as high as ten are given, although the natives only count to four; and the translations of some words which he has put down as numbers are very humorous, such as: What do you mean? Get out, etc.

### COMMON ORIGIN OF NATIVE POPULATION.

Many words spoken by the natives at Shark Bay are the same as those used by the natives at Perth, and the dialect in use in the Province of Victoria appears very nearly to assimilate to the latter, as is shown in the extracts from Mr. Moore's journal at page 120.

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Having thus traced the entire of the coastline of the continent of Australia, it appears that a language the same in root is spoken throughout this vast extent of country; and from the general agreement in this as well as in personal appearance, rites, and ceremonies, we may fairly infer a community of origin for the aborigines. This being admitted, two other questions will arise.

How were they disseminated over the continent?

and

At what period, and from what quarter, did they arrive upon it?

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### CHAPTER 10. THEIR TRADITIONAL LAWS.

#### ERRORS OF THEORETICAL WRITERS REGARDING THE SAVAGE STATE.

No question has, in as far as I can apprehend the subject, been so utterly misunderstood and misrepresented as the one relating to the customs and traditional laws of savage races. Deistical writers and philosophers of great note but small experience have built up whole theories, and have either overturned or striven to overturn ancient faiths and wholesome laws by arguments deduced, in the first instance, from the consideration of man in his simple or savage state; and from false premises they have deduced, logically, argument from argument, until even the most unwilling have begun to doubt.

#### COMPLEX LAWS OF SAVAGE LIFE.

But to believe that man in a savage state is endowed with freedom either of thought or action is erroneous in the highest degree. He is in reality subjected to complex laws which not only deprive him of all free agency of thought, but at the same time, by allowing no scope whatever for the development of intellect, benevolence, or any other great moral qualification, they necessarily bind him down in a hopeless state of barbarism from which it is impossible for man to emerge so long as he is enthralled by these customs; which, on the other hand, are so ingeniously devised as to have a direct tendency to annihilate any effort that is made to overthrow them.

This people reject in practice all idea of the equality of persons or classes; they make indeed no verbal distinctions upon this point, and if asked, were all men equal? they would be unable to comprehend the question; but there is no race that imposes more irksome restraints upon certain classes of the community.

#### CHARACTER OF THE NATIVE CUSTOMS. THEIR GENERALITY.

The whole tendency of their superstitions and traditional regulations is to produce the effect of depriving certain classes of benefits which are enjoyed by others; and this monopolizing of advantages often possesses amongst savages many characteristics which violate all the holier feelings of our nature, and excite a disgust of which it is divested in civilized life. In the latter case we see certain privileges even hereditarily enjoyed; but the weak and strong, the rich and



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poor, the young and old have paths of honourable ambition laid open to them by entering on which they can gain like immunities. While in the savage condition we find the female sex, the young, and the weak, condemned to a hopeless state of degradation and to a lasting deprivation of particular advantages merely because they are defenceless; and what they are deprived of is given to others merely because they are old or strong; and this is not effected by personal violence, depending upon momentary caprice and individual disposition (in which case it might be considered as the consequence of a state of equality) but it is enforced upon the natives of Australia by traditional laws and customs which are by them considered as valid and binding as our laws are by us.

### CONSIDERATIONS ON THEIR ORIGIN.

The laws and customs alluded to cannot be considered as mere local institutions, for travellers and residents in the northern provinces of the colony of New South Wales describe as existing there usages nearly identical with those which regulate the proceedings of the natives occupying the west of the continent. And these testimonies cannot be doubted for they are incidentally introduced without any theoretical bias and in ignorance of the conformity they tend to prove. Natives from the country about the Murrumbidgee have described to me Australian customs as being in force there which exhibit the same accordance with those I found in the west; and I have myself ascertained their existence on several other portions of the continent. But it is remarkable that, although so many persons have described isolated customs of this people, no one has yet taken the trouble to digest them into one mass, and to exhibit them in the aggregate, so that an inference might be drawn as to how far the state in which the natives of Australia are at present found is caused by the institutions to which they are subjected.

We find then, in Australia, the remarkable fact that the inhabitants of a tract of country nearly two thousand miles in breadth are governed by the same institutions: and what renders this more singular is that the people submitted to them are not subjected by written rules of faith, which the chiefs of each race may interpret and modify according to their will; as is the case with those who are governed by the Koran or other similar codes; but in this instance mere oral traditions are handed down, which teach that certain rules of conduct are to be observed under certain penalties, and without the aid of fixed records, or the intervention of a succession of authorized

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depositories and expounders these laws have been transmitted from father to son through unknown generations, and are fixed in the minds of the people as sacred and unalterable.

### DEISTICAL REVERIES CONFUTED BY EXPERIENCE.

One common mode of argument among deistical writers is to imagine barbarous man let loose upon the earth without undergoing any previous preparation for the scene upon which he was about to enter; and they then trace out how, urged on by his necessities and aided by his senses, he successively discovered the natural productions necessary for his subsistence and the arts which ministered to his wants, until step by step he mounted to the pinnacle of civilization. But these are merely reveries of the closet, dreams of the inexperienced, and have no real foundation in as far at least as Australia is concerned. That the first natives who were placed on that continent must have been instructed how to provide for their wants, how to form weapons suited to their circumstances, how to select roots, and to capture animals fitted for food, has been demonstrated over and over again, but at no time more forcibly than when the portion of my party, under Mr. Walker, were coming overland from Gantheaume Bay to Perth. In this case six full-grown men, provided with knives, fishing-hooks and lines, a kettle, vessels to hold water and cook their food, arms, and a small quantity of ammunition, and many of them possessing considerable experience in the bush, must all have perished from hunger had not timely assistance reached them; and this from their ignorance as to which of the productions surrounding them would serve to support life, and not from neglect in making the requisite experiments to endeavour to ascertain this, for the poor fellows ate everything they could find which appeared to afford sustenance; yet notwithstanding all the comparative advantages they were in possession of, if the relief sent from Perth had not reached them, death must have overtaken all. The same result has frequently occurred under nearly similar circumstances. If then men, full-grown, in the complete possession of all their faculties, provided with fire and many useful implements, and aided by considerable experience, from ignorance of the natural productions of a country, and the means of procuring these, die from hunger ere they can learn how to supply their wants, is it probable that an unarmed, naked, untaught man, who knew not even how to make his senses act in concert until he had from experience acquired this knowledge, could by any possibility have avoided a fate, which would inevitably overtake the European in possession of all his

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superior energies of mind and character, if he chance not to fall in with friendly natives.

### ENQUIRY INTO THE ORIGIN OF THE NATIVE LAWS.

The laws of this people are unfitted for the government of a single isolated family, some of them being only adapted for the regulation of an assemblage of families; they could therefore not have been a series of rules given by the first father to his children: again, they could not have been rules given by an assembly of the first fathers to their children, for there are these remarkable features about them that some are of such a nature as to compel those subject to them to remain in a state of barbarism, whilst others are adapted to the wants and necessities of savage RACES, as well as to prevent too close intermarriages of a people who preserve no written or symbolical records of any kind; and in all these instances the desired ends are obtained by the simplest means, so that we are necessitated to admit that, when these rules were planned it was foreseen that the race submitted to them would be savages, and under this foresight the necessary provision was made for the event.

We cannot argue that this race was originally in a state of civilization, and that from the introduction of certain laws amongst them, the tendency of which was to reduce them to a state of barbarism, or from some other cause, they had gradually sunk to their present condition; for in that case how could those laws which provide solely for the necessities of a people in their present state have been introduced amongst them? Neither could they have been invented according to necessities and emergencies which a savage state has produced, for under such circumstances it is impossible that they could have been promulgated and enforced throughout so wide a range of country, and amongst a dispersed race of barbarians of such a variety of dispositions, who acknowledge no chief or lawgiver, and are so characteristically impatient of restraint.

Without in this place attempting to form and to support any theories founded upon the views I have just put forward, I may state my impression that it would seem, from the laws and customs of the natives of Australia, to have been willed that this people should until a certain period remain in their present condition, which is consequently not the result of mere accident, or of the natural constitution of man. From the peculiar nature of their institutions it was impossible that they could emerge from a state of barbarism

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whilst these remained in force, and from the tenacity and undeviating strictness with which they are retained, and the strong power they hold over the savage mind, it seems equally impossible that they could have been abrogated, or even altered, until the race subjected to them came into contact with a civilized community whose presence might exercise a new influence, under which the ancient system would expire or be swept away.

We may, I think, fairly produce this as a proof that the progress of civilization over the earth has been directed, set bounds to, and regulated by certain laws framed by Infinite wisdom; and, although such views may by some be deemed visionary, I feel some confidence that these laws are as certain and definite as those which control the movements of the heavenly bodies. I believe moreover, that they are capable in some degree of being studied and reduced to order, although no attempt to do so has hitherto been made; and the institutions of barbarous races, their probable origin, the effects they have upon the people submitted to them, the evidences of design which they contain, and other similar questions, are those points to which in this enquiry attention should be particularly directed.

### CONCLUDING OBSERVATIONS.

The progress of events and the rapid march of science in our country are very wonderful, but the progress of events in the eastern hemisphere at the present moment is still more amazing: Christianity and civilization are marching over the world with a rapidity not fully known or estimated by any one nation; the English are scarcely aware what has been effected by their own missionaries and commerce, and they are utterly ignorant of what has been already done, and is now doing, by the Americans, Dutch, and Portuguese.

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### CHAPTER 11. LAWS OF RELATIONSHIP, MARRIAGE, AND INHERITANCE.

#### RELATIONSHIP AND MARRIAGE. DIVISION OF FAMILIES.

##### Traditional Laws of Relationship and Marriage.

One of the most remarkable facts connected with the natives is that they are divided into certain great families, all the members of which bear the same names, as a family, or second name: the principal branches of these families, so far as I have been able to ascertain, are the:

Ballaroke  
Tdondarup  
Ngotak  
Nagarnook  
Nogonyuk  
Mongalung  
Narrangur.

But in different districts the members of these families give a local name to the one to which they belong, which is understood in that district to indicate some particular branch of the principal family. The most common local names are:

Didaroke  
Gwerrinjoke  
Maleoke  
Waddaroke  
Djekoke  
Kotejumen  
Namyungo  
Yungaree.

These family names are common over a great portion of the continent; for instance, on the Western coast, in a tract of country extending between four and five hundred miles in latitude, members of all these families are found. In South Australia I met a man who said that he belonged to one of them, and Captain Flinders mentions Yungaree as the name of a native in the gulf of Carpentaria.

#### LAW OF MARRIAGE.

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These family names are perpetuated and spread through the country by the operation of two remarkable laws:

1. That children of either sex always take the family name of their mother.
2. That a man cannot marry a woman of his own family name.

### COINCIDENT INSTITUTIONS AMONGST THE NORTH AMERICAN INDIANS.

But not the least singular circumstance connected with these institutions is their coincidence with those of the North American Indians, which are thus stated in the *Archaeologia Americana*:<sup>35</sup>

Independent of political or geographical divisions, that into families or clans has been established from time immemorial. At what time and in what manner the division was first made is not known. At present, or till very lately, every nation was divided into a number of clans, varying in the several nations from three to eight or ten, the members of which respectively were dispersed indiscriminately throughout the whole nation. It has been fully ascertained that the inviolable regulations by which those clans were perpetuated amongst the southern nations were, first, that no man could marry in his own clan; secondly, that every child belongs to his or her mother's clan. Among the Choctaws there are two great divisions, each of which is subdivided into four clans, and no man can marry in any of the four clans belonging to his division. The restriction among the Cherokees, the Creeks, and the Natches, does not extend beyond the clan to which the man belongs.

There are sufficient proofs, that the same division into clans, commonly called tribes, exists among almost all the other Indian nations. But it is not so clear that they are subject to the same regulations which prevail amongst the southern Indians.

A similar law of consanguinity seems to be inferred in Abraham's reply to Abimelech (Genesis 20:12) And yet indeed she is my sister; she is the daughter of my father, but not the daughter of my mother, and she became my wife.

### FAMILY NAMES AND SIGNS. ORIGIN OF FAMILY NAMES.

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The origin of these family names is attributed by the natives to different causes, but I think that enough is not yet known on the subject to enable us to form an accurate opinion on this point. One origin frequently assigned by the natives is that they were derived from some vegetable or animal being very common in the district which the family inhabited, and that hence the name of this animal or vegetable became applied to the family. I have in my published vocabulary of the native language, under each family name, given its derivations as far as I could collect them from the statements of the natives.

But as each family adopts some animal or vegetable as their crest or sign, or Kobong, as they call it, I imagine it more likely that these have been named after the families than that the families have been named after them.

### SECOND COINCIDENCE.

A certain mysterious connection exists between a family and its kobong, so that a member of the family will never kill an animal of the species to which his kobong belongs, should he find it asleep; indeed he always kills it reluctantly, and never without affording it a chance to escape. This arises from the family belief that some one individual of the species is their nearest friend, to kill whom would be a great crime, and to be carefully avoided. Similarly a native who has a vegetable for his kobong may not gather it under certain circumstances and at a particular period of the year. The North American Indians have this same custom of taking some animal as their sign. Thus it is stated in the *Archaeologia Americana*:<sup>36</sup> "Each tribe has the name of some animal. Among the Hurons the first tribe is that of the bear; the two others of the wolf and turtle. The Iroquois nation has the same divisions, only the turtle family is divided into two, the great and the little." And again, in speaking of the Sioux tribes:<sup>37</sup> "Each of these derives its name from some animal, part of an animal, or other substance which is considered as the peculiar sacred object or medicine, as the Canadians call it, of each band respectively." To this we may add the testimony of John Long, who says,<sup>38</sup> "one part of the religious superstition of the savages consists in each of them having his totem, or favourite spirit, which he believes watches over him. This totem they conceive assumes the shape of some beast or other, and therefore they never kill, hunt, or eat the animal whose form they think the totem bears."

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Civilized nations, in their heraldic bearings, preserve traces of the same custom.

### BETROTHMENTS AND MARRIAGES.

Female children are always betrothed within a few days after their birth; and from the moment they are betrothed the parents cease to have any control over the future settlement of their child. Should the first husband die before the girl has attained the years of puberty she then belongs to his heir.

A girl lives with her husband at any age she pleases, no control whatever is in this way placed upon her inclinations.

### WIDOWS.

When a native dies his brother inherits his wives and children, but his brother must be of the same family name as himself. The widow goes to her second husband's hut three days after the death of her first.

The old men manage to keep the females a good deal amongst themselves, giving their daughters to one another, and the more female children they have the greater chance have they of getting another wife by this sort of exchange; but the women have generally some favourite amongst the young men, always looking forward to be his wife at the death of her husband.

### OBLIGATIONS OF RELATIONSHIP. DIVISION OF FAMILY BRANCHES.

But a most remarkable law is that which obliges families connected by blood upon the female side to join for the purpose of defence and avenging crimes; and as the father marries several wives, and very often all of different families, his children are repeatedly all divided amongst themselves; no common bond of union exists between them, and this custom alone would be sufficient to prevent this people ever emerging from the savage state.

As their laws are principally made up of sets of obligations due from members of the same great family towards one another—which obligations of family names are much stronger than those of blood—it is evident that a vast influence upon the manners and state of this



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people must be brought about by this arrangement into classes. I therefore devoted a great portion of my attention to this point, but the mass of materials I have collected is so large that it would occupy much more time to arrange it than I have been able to spare so as to do full justice to the subject; but in order to give an accurate idea of the nature of the enquiries I pursued I have given in the Appendix A a short genealogical list which will show the manner in which a native gives birth to a progeny of a totally different family name to himself; so that a district of country never remains for two successive generations in the same family. These observations, as well as others made with regard to the natives, can be only considered to apply, as yet, to that portion of Western Australia lying between the 30th and 35th parallels of south latitude unless the contrary is expressly stated; though I think there is strong reason to suppose that they will, in general, be found to obtain throughout the continent.

### DIFFICULTY OF PURSUING THE ENQUIRY.

It is impossible for any person not well acquainted with the language of the natives and who does not possess great personal influence over them to pursue an inquiry of this nature; for one of the customs most rigidly observed and enforced amongst them is never to mention the name of a deceased person, male or female. In an inquiry therefore which principally turns upon the names of their ancestors this prejudice must be every moment violated, and a very great difficulty has thus to be encountered in the outset. The only circumstance which at all enabled me to overcome this was that the longer a person has been dead the less repugnance do they evince in uttering his name. I therefore in the first instance endeavoured to ascertain only the oldest names on record; and on subsequent occasions, when I found a native alone and in a loquacious humour, I succeeded in filling up some of the blanks. Occasionally round their fires at night I managed to involve them in disputes regarding their ancestors, and on these occasions gleaned much of the information of which I was in want.

### LAWS OF LANDED PROPERTY. RIGHTS AND BOUNDARIES. PROPERTY VESTED IN INDIVIDUALS.

Traditional Laws relative to Landed Property.

Landed property does not belong to a tribe, or to several families, but to a single male; and the limits of his property are so accurately

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defined that every native knows those of his own land, and can point out the various objects which mark his boundary. I cannot establish the fact and the universality of this institution better than by the following letter addressed by Dr. Lang, the Principal of Sydney College, New South Wales, to Dr. Hodgkin, the zealous advocate of the Aboriginal Races:<sup>39</sup>

Liverpool, 15th November 1840.

My Dear Friend,

In reply to the question which you proposed to me some time ago in the course of conversation in London, and of which you have reminded me in the letter I had the pleasure of receiving from you yesterday, with the pamphlets and letters for America, namely, Whether the Aborigines of the Australian continent have any idea of property in land, I beg to answer most decidedly in the affirmative. It is well known that these Aborigines in no instance cultivate the soil, but subsist entirely by hunting and fishing, and on the wild roots they find in certain localities (especially the common fern) with occasionally a little wild honey; indigenous fruits being exceedingly rare. The whole race is divided into tribes, more or less numerous, according to circumstances, and designated from the localities they inhabit; for although universally a wandering race, with respect to places of habitation, their wanderings are circumscribed by certain well-defined limits, beyond which they seldom pass, except for purposes of war or festivity. In short, every tribe has its own district, the boundaries of which are well known to the natives generally; and within that district all the wild animals are considered as much the property of the tribe inhabiting, or rather ranging on, its whole extent, as the flocks of sheep and herds of cattle that have been introduced into the country by adventurous Europeans are held by European law and usage the property of their respective owners. In fact, as the country is occupied chiefly for pastoral purposes, the difference between the Aboriginal and the European ideas of property in the soil is more imaginary than real, the native grass affording subsistence to the kangaroos of the natives as well as to the wild cattle of the Europeans, and the only difference indeed being that the former are not branded with a particular mark like the latter, and are somewhat wilder and more difficult to catch.

EFFECTS OF EUROPEAN APPROPRIATION.

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Nay, as the European regards the intrusion of any other white man upon the cattle-run, of which European law and usage have made him the possessor, and gets it punished as a trespass, the Aborigines of the particular tribe inhabiting a particular district regard the intrusion of any other tribe of Aborigines upon that district, for the purposes of kangaroo hunting, etc., as an intrusion to be resisted and punished by force of arms. In short this is the frequent cause of Aboriginal, as it is of European wars; man, in his natural state, being very much alike in all conditions—jealous of his rights and exceedingly pugnacious. It is true the European intruders pay no respect to these Aboriginal divisions of the territory, the black native being often hunted off his own ground or destroyed by European violence, dissipation, or disease, just as his kangaroos are driven off that ground by the European's black cattle; but this surely does not alter the case as to the right of the Aborigines.

### UNIVERSALITY OF THIS CUSTOM.

But particular districts are not merely the property of particular tribes; particular sections or portions of these districts are universally recognised by the natives as the property of individual members of these tribes; and when the owner of such a section or portion of territory (as I ascertained was the case at King George's Island) has determined on burning off the grass on his land, which is done for the double purpose of enabling the natives to take the older animals more easily, and to provide a new crop of sweeter grass for the rising generation of the forest, not only all the other individuals of his own tribe, but whole tribes from other districts, are invited to the hunting party and the feast and dance, or corroboree that ensue; the wild animals on the ground being all considered the property of the owner of the land. I have often heard natives myself tell me, in answer to my own questions on the subject, who were the Aboriginal owners of particular tracts of land now held by Europeans; and indeed this idea of property in the soil, FOR HUNTING PURPOSES, is universal among the Aborigines. They seldom complain of the intrusion of Europeans; on the contrary, they are pleased at their sitting down, as they call it, on their land: they do not perceive that their own circumstances are thereby sadly altered for the worse in most cases; that their means of subsistence are gradually more and more limited, and their numbers rapidly diminished: in short, in the simplicity of their hearts, they take the frozen adder in their bosom, and it stings them to death. They look for a benefit or blessing from European intercourse, and it becomes their ruin.

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If I had had a little more leisure I would have written more at length and in a style more worthy of your perusal; but you may take it as certain, at all events, that the Aborigines of Australia HAVE an idea of property in the soil in their native and original state, and that that idea is, in reality, not very different from that of the European proprietors of sheep and cattle, by whom they have, in so many instances been dispossessed, without the slightest consideration of their rights or feelings.

Indeed the infinity of the native names of places, all of which are descriptive and appropriate, is of itself a prima facie evidence of their having strong ideas of property in the soil; for it is only where such ideas are entertained and acted on that we find, as is certainly the case in Australia, *Nullum sine nomine saxum*.

I am, my dear Friend,

Your's very sincerely,

JOHN DUNMORE LANG.

To Dr. Hodgkin.

### LAWS OF INHERITANCE AND TRESPASS. LINE OF INHERITANCE.

A father divides his land during his lifetime, fairly apportioning it amongst his several sons, and at as early an age as fourteen or fifteen they can point out the portion which they are eventually to inherit.

If the males of a family become extinct the male children of the daughters inherit their grandfather's land.

### CERTAIN LAWS REGARDING ARTICLES OF FOOD.

The punishment of trespass for the purpose of hunting, is invariably death, if taken in the fact, and at the very least an obstinate contest ensues. If the trespasser is not taken in the fact, but is recognised from his footmarks, or from any other circumstance, and is ever caught in a defenceless state, he is probably killed; but if he appears attended by his friends he is speared through the thigh, in a manner which will be mentioned under the head of punishments.

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There are other laws intended for the preservation of food, such as that which enjoins that:

1. No vegetable production used by the natives as food should be plucked or gathered when bearing seed.
2. That certain classes of natives should not eat particular articles of food; this restriction being tantamount to game laws, which preserve certain choice and scarce articles of food from being so generally destroyed as those which are more abundant.
3. The law regarding the family kobongs, mentioned above.

Independent of these laws there are certain articles of food which they reject in one portion of the continent and which are eaten in another; and that this rejection does not arise from the noxious qualities of the article is plain, for it is sometimes not only of an innocent nature but both palatable and nutritious: I may take for example the unio, which the natives of South-west Australia will not eat because, according to a tradition, a long time ago some natives ate them and died through the agency of certain sorcerers who looked upon that shellfish as their peculiar property.

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### CHAPTER 12. CRIMES AND PUNISHMENTS.

Laws relative to Deaths and Punishments.

#### SUPERSTITIOUS REVENGE OF NATURAL DEATH.

The natives do not allow that there is such a thing as a death from natural causes; they believe that were it not for murderers or the malignity of sorcerers they might live for ever: hence:

When a native dies from the effect of an accident or from some natural cause they use a variety of superstitious ceremonies to ascertain in what direction the sorcerer lives, whose evil practices have brought about the death of their relative; this point being satisfactorily settled by friendly sorcerers, they then attach the crime to some individual, and the funeral obsequies are scarcely concluded ere they start to avenge their supposed wrongs.

#### MURDER.

If a native is slain by another wilfully they kill the murderer or any of his friends they can lay hands on.

If a native kills another accidentally he is punished according to the circumstances of the case; for instance, if, in inflicting spear wounds as a punishment for some offence, one of the agents should spear the culprit through the thigh, and accidentally so injure the femoral artery that he dies, the man who did so would have to submit to be speared through both thighs himself.

#### CONSEQUENCES OF A CRIME COMMITTED.

The first great principle with regard to punishments is that all the relatives of a culprit, in the event of his not being found, are implicated in his guilt; if therefore the principal cannot be caught his brother or father will answer nearly as well, and failing these, any other male or female relatives who may fall into the hands of the avenging party.

When therefore it is known among the natives that any crime which calls for a very heavy measure of punishment has been committed great and widespread consternation prevails; and when it is further ascertained that the culprit has escaped everyone in the remotest

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degree connected with him becomes filled with anxiety, for it is impossible to tell in what direction the blow will fall. The brothers of the criminal conceive themselves to be quite as guilty as he is, and only those who are jee-dyte, or unconnected with the family of the guilty person, believe themselves in safety. Little children of seven or eight years old, if, whilst playing, they hear that some murder has taken place, can in a moment tell whether or not they are jee-dyte, and, even at this tender age take their measures accordingly.

### DUTY OF REVENGE.

The moment any great crime has been committed those who have witnessed it raise loud cries, which are taken up by more distant natives and are echoed widely through the woods. The nature of these cries indicates who has been the guilty party, who the sufferer, and those who are jee-dyte; whilst those who are involved in the guilt direct one another by their calls to what point to repair and muster their several forces: the culprit and generally his brothers and near relatives seek safety in a precipitate flight.

If a native has been slain his near male relations give way to the most violent paroxysms of rage, and are forcibly held by their friends to prevent them doing some injury to the bystanders; they then go and confront the body of those who are the relatives of the murderer, and a stormy altercation takes place; this generally however is terminated in an amicable way, by the parties uniting to go in search of the culprit. It is obviously the interest of every one that he should be caught and punished; for until this takes place the whole of his connexions are in danger.

The holiest duty a native is called on to perform is that of avenging the death of his nearest relation, for it is his peculiar duty to do so: until he has fulfilled this task he is constantly taunted by the old women; his wives, if he be married, would soon quit him; if he is unmarried not a single young woman would speak to him; his mother would constantly cry and lament she should ever have given birth to so degenerate a son; his father would treat him with contempt, and reproaches would constantly be sounded in his ear.

### PURSUIT OF A CRIMINAL.

Directly therefore the funeral ceremonies have been performed the avenging parties start in pursuit of the murderer, and follow his

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footsteps with rapidity and energy fitting so important an occasion; unweariedly and relentlessly they press like bloodhounds upon the track, and perform journeys of a great length with a speed which would scarcely be credited; forgetting in this instance their usual caution, they trespass on other natives' ground, and all other passions and feelings appear to be absorbed in a burning thirst for vengeance. They sleep at night upon the track which they had been prevented by the darkness from following further, and with the first pale light of morning pursue it from the same point.

### IMPLICATION OF A MURDERER'S FAMILY IN HIS CRIME.

When such energy is displayed success must of course often follow, and the overtaken criminal then falls, pierced by many spears; but should he elude his pursuers they wreak their vengeance on any native they meet. The murderer has naturally fled to the land of his friends to claim their hospitality; sometimes this is afforded him, and sometimes he is treacherously given up to his foes; but should the criminal escape, the pursuing party rarely return from an excursion of this nature without shedding blood: their not finding the guilty individual only inflames still more their anger, which they wreak on children or any unfortunate individual who may fall into their hands.

### BREACHES OF THE LAWS OF MARRIAGE. STEALING A WIFE.

Stealing a wife is generally punished with death. If the woman is not returned within a certain period either her seducer or one of his relatives is certain eventually to be slain.

### BREACH OF MARRIAGE LAWS.

The crime of adultery is punished severely, often with death. Anything approaching the crime of incest, in which they include marriages out of the right line, they hold in the greatest abhorrence, closely assimilating in this last point with the North American Indians, of whom it is said in the *Archaeologia Americana*:

They profess to consider it highly criminal for a man to marry a woman whose totem (family name) is the same as his own, and they relate instances when young men, for a violation of this rule, have been put to death by their own nearest relatives.<sup>40</sup>



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And again: According to their own account, the Indian nations were divided into tribes for no other purpose than that no one might ever, either through temptation or mistake, marry a near relation, which at present is scarcely possible, for whoever intends to marry must take a person of a different tribe.<sup>41</sup>

The same feeling was remarked by Dobrizhoffer in South America; for, speaking of an interview with a native tribe to whom he was preaching, he says:

The old man, when he heard from me that marriage with relations was forbidden, exclaimed, "Thou sayest well, father, such marriages are abominable; but that we know already." From which I discovered that incestuous connexions are more execrable to these savages than murder or robbery.<sup>42</sup>

### PUNISHMENT OF SECONDARY OFFENCES. ORDEAL AND PUNISHMENT FOR OTHER TRANSGRESSIONS.

Any other crime may be compounded for by the criminal appearing and submitting himself to the ordeal of having spears thrown at him by all such persons as conceive themselves to have been aggrieved, or by permitting spears to be thrust through certain parts of his body; such as through the thigh, or the calf of the leg, or under the arm. The part which is to be pierced by a spear is fixed for all common crimes, and a native who has incurred this penalty sometimes quietly holds out his leg for the injured party to thrust his spear through.

When a native, after having absconded for fear of the consequences of some crime which he has committed, comes in to undergo the ordeal of having spears thrown at him, a large assemblage of his fellows takes place; their bodies are daubed with paint which is put on in the most fantastic forms, their weapons are polished, sharpened, and rendered thoroughly efficient; at the appointed time young and old repair to the place of ordeal, and the wild beauty of the scenery, the painted forms of the natives, the savage cries and shouts of exultation which are raised as the culprit dexterously parries, or by rapid leaps and contortions of his body avoids the clouds of spears which are hurled at him, all combine to form a singular scene to which there is no parallel in civilized life. If the criminal is wounded in a degree judged sufficient for the crime he has committed his guilt is wiped away; or if none of the spears

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thrown at him (for there is a regulated number which each may throw) take effect he is equally pardoned.

But no sooner is this main part of the ceremony over than two or three duels take place between some individuals who have quarrels of their own to settle; after these combatants have thrown a few spears some of their friends rush in and hold them in their arms, when the etiquette on such occasions is to struggle violently for a few minutes, as if anxious to renew the contest, and then to submit quietly to superior force and cease the combat.

### NATIVE APATHY UNDER COMMON WOUNDS. ANECDOTE.

The natives pay but little regard to the wounds they receive in duels or which are inflicted on them as punishments; their sufferings from all injuries are much less than those which Europeans would undergo in similar circumstances; this may probably arise from their abstemious mode of life, and from their never using any other beverage than water. A striking instance of their apathy with regard to wounds was shown on one occasion in a fight which took place in the village of Perth in Western Australia. A native man received a wound in that portion of his frame which is only presented to enemies when in the act of flight, and the spear which was barbed remained sticking in the wound; a gentleman who was standing by watching the fray regarded the man with looks of pity and commiseration, which the native perceiving, came up to him, holding the spear (still in the wound) in one hand, and turning round so as to expose the injury he had received, said, in the most moving terms, "Poor fellow, sixpence give it 'um."

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### CHAPTER 13. SOCIAL CONDITION AND DOMESTIC HABITS.

#### POPULATION.

Several writers have given calculations as to the number of native inhabitants to each square mile in Australia. Now, although I have done my utmost to draw up tables which might even convey an approximate result, I have found the number of inhabitants to a square mile to vary so much from district to district, from season to season, and to depend upon so great a variety of local circumstances, that I am unable to give any computation which I believe would even nearly approach the truth; and as I feel no confidence in the results which I have obtained, after a great deal of labour, I cannot be expected to attach much importance to those which, to my own knowledge, have in several instances been arrived at by others from mere guesswork.

#### NATURAL PERIOD OF LIFE.

With regard to the age occasionally attained by the natives I believe very erroneous ideas have been prevalent, for so far am I from considering them to be short-lived that I am certain they frequently attain the age of seventy years and upwards. As they themselves have no knowledge whatever of their age it is manifest that merely speculative ideas upon this point must be useless; the means therefore that I adopted to arrive at a probable conclusion may be illustrated by an example: In the table I have given of a family descending from two natives, Nardooitch, and Kimbeynung (Appendix A) the name of Yenna will be found as one of Wundall's children; now (1840) Yenna is a young man of about twenty years of age, and from the usual habits of the natives we must allow that his father, Beewullo, was at least twenty-three years old by the time he had married and had a child; such being the case, Beewullo must now be about forty-three, and Jeebar his father must by the same reasoning be about sixty-six, yet he is alive and in perfect health, and his elder brother Nogongo is likewise alive, and as upright as possible, although the infirmities of old age are creeping on him. Nogongo must be now at least sixty-eight years old, yet I have seen two other natives who, by his and their own account, are older than he is; and on making a calculation, in the way I have just done, to ascertain their age, it appeared that one of them was sixty-nine and the other seventy-one; so that, although probably none of these estimates are quite correct, I still think that we are at liberty to infer,

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from various instances of this kind, that the natives sometimes attain a very advanced age; yet were these instances of longevity contrasted with the great number of deaths which take place during the period of infancy, there can be no doubt whatever that the average duration of life amongst these savage tribes falls far short of that enjoyed by civilized races. There is however one species of death unknown to these barbarians and that is suicide. I believe they have no idea that such a thing as a person's putting an end to his own life could ever occur: whenever I have interrogated them on this point they have invariably laughed at me and treated my question as a joke.

### CONDITION OF OLD AGE.

The period of old age must be as happy as any other time in the life of a savage, if not more so. Aged men are always treated with great respect; they rarely take a part in any fray; they are privileged to eat certain kinds of food which the young men may not touch; and they seldom appear to suffer much from the infirmities and diseases to which the aged are generally subject amongst us.

### CONDITION OF YOUNG WOMEN.

Should a female be possessed of considerable personal attractions the first years of her life must necessarily be very unhappy. In her early infancy she is betrothed to some man, even at this period advanced in years, and by whom, as she approaches the age of puberty, she is watched with a degree of vigilance and care which increases in proportion to the disparity of years between them; it is probably from this circumstance that so many of them are addicted to intrigues, in which, if they are detected by their husbands, death, or a spear through some portion of the body is their certain fate; indeed the bare suspicion of infidelity upon their part is enough to ensure to them the most cruel and brutal treatment. For these causes during youth they are compelled, whether pregnant or not, to accompany their husbands in all their excursions, and are thus subject to violent and continued exercise and fatigue at periods when repose is indispensable.

But even supposing a woman to give no encouragement to her admirers, many plots are always laid to carry her off, and in the encounters which result from these she is almost certain to receive some violent injury, for each of the combatants orders her to follow

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him, and in the event of her refusing throws a spear at her. The early life of a young woman at all celebrated for beauty is generally one continued series of captivity to different masters, of ghastly wounds, of wanderings in strange families, of rapid flights, of bad treatment from other females amongst whom she is brought a stranger by her captor; and rarely do you see a form of unusual grace and elegance but it is marked and scarred by the furrows of old wounds; and many a female thus wanders several hundred miles from the home of her infancy, being carried off successively to distant and more distant points.

These various circumstances render miscarriages more frequent amongst these uncivilized tribes than amongst European nations, and the first years and bloom of a female generally elapse before she has any children; but then a fresh cause exists to prevent their having very large families, which is that, from the nature of the food used by the natives, it is necessary that a child should have good strong teeth before it can be even partially weaned. The native women therefore suckle their children until they are past the age of two or three years, and it is by no means uncommon to see a fine healthy child leave off playing and run up to its mother to take the breast.

The native women suffer much less pain during the period of labour than Europeans; directly the child is born, it is wrapped in opossum skins, and strings made of the fur of this animal are tied like bracelets round the infant's wrists and ankles, with the intention of rendering it, by some supernatural means, a stronger and a finer child. They are always much prouder of a male than of a female child.

### AVERAGE NUMBERS AND PROPORTION OF BIRTHS.

Forty-one females, of whose families I have obtained (from themselves and others) lists upon the accuracy of which I can rely, had 188 children, or about 4.6 children each. The greatest number born by any one female was 7, and only three had had so large a family as this; but with the exception of one woman they had all born more than one child. All those who were included in this list were past the age of child-bearing at the time it was drawn up.

To ascertain the proportion of male to female children I drew up another list of 222 births, and out of these there were 93 females and 129 males, or about 1 female to every 1.3 males.

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I have known four instances of native women having twins, but I have never heard of a greater number of children at one birth. Should a child be born with any natural deformity it is frequently killed by its parents soon afterwards. In the only instances of this kind which have come within my own knowledge the child has been drowned.

### LUNATICS AND IDIOTS.

Idiots are rarely found amongst the natives; in two cases I however observed persons of very deficient intellect. Mad people are unknown, and this very naturally, for very few freaks of madness could be committed by a lunatic ere he would fall a sacrifice to the violence and indignation of his fellows. Persons of very delicate and feeble constitutions are also rare, as those who survive the hardships to which they are exposed in their childhood must possess an iron frame. The deaths amongst the children, particularly during early infancy, are as far as I can judge much more numerous in proportion to the number of births than they are in civilized nations.

### INFLUENCE OF POLYGAMY ON SOCIAL HABITS.

The social habits of the natives of Australia are necessarily modified by the extent to which polygamy is permitted and practised amongst them. The very unequal distribution of the female sex, which arises from this cause, has rendered prevalent the custom of stealing wives; and as women are of great value, not only on account of the personal attachment which they might be supposed to excite, but from the fact of all laborious tasks being performed, and a great portion of the food of the family being also collected by them, every precaution is taken to prevent them from forming any acquaintances which would be likely to terminate in their abduction.

A stern and vigilant jealousy is commonly felt by every married man; he cannot, from the roving nature of their mode of life, surround his wives with the walls of a seraglio, but custom and etiquette have drawn about them barriers nearly as impassable. When a certain number of families are collected together they encamp at a common spot; and each family has a separate hut, or perhaps two. At these huts sleep the father of the family, his wives, the female children who have not yet joined their husbands, and very young boys; occasionally female relatives, who from some temporary cause have no male protector with them, also sleep at this

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fire; but the young men and boys of ten years old and upwards are obliged to sleep in their own portion of the encampment, where they themselves, or more generally, some of their mothers, build for them two or three huts, in which those related within certain degrees of consanguinity sleep together.

### SOCIAL CUSTOMS.

When strangers are with a party upon a visit, if attended by their wives, they sleep in their own huts, which are placed among those of the married people; but if their wives are not with them, or if they are unmarried, they sleep at the fire of the young men.

### MODE OF CONVERSATIONAL INTERCOURSE. MODE OF RECITING EVENTS.

Under no circumstances is a strange native allowed to approach the fire of a married man; in the daytime they hunt or occupy themselves with the men, and at night they either sit at their own fire, or that of the young men. Their huts being placed at a little distance from one another, such an arrangement would appear to put an end to anything like social intercourse or conversation; but they have invented a means of overcoming this difficulty by making a species of chant, or recitative, their customary mode of address to each other. In an encampment at night the young men recount to one another their love adventures and stories; and the old men quarrel with their wives or play with their children; suddenly a deep wild chant rises on the ear, in which some newly-arrived native relates the incidents of his journey, or an old man calls to their remembrance scenes of other days, or reminds them that some death remains unavenged: this is done in a loud recitative, and the instant it is commenced every other sound is hushed. A native, while thus chanting, is rarely or never interrupted, and when he has concluded another replies in the same tone until the conversation, still conducted in this manner, becomes general.

### CONSEQUENCES OF JEALOUSY.

In the meantime individuals both male and female move about from fire to fire, paying visits, and whispering scandal to one another; but these visits are so arranged that none can approach a fire to which, by the established usages of society, they have not a right to go; the younger females however, who are much addicted to intrigue, find

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at times opportunity to exchange a word or a glance with some favoured lover, but woe to her if her watchful husband should detect her in the act. A spear through the calf of the leg is the least punishment that awaits her; and if her husband feels himself strong enough, either from personal skill or from the number of friends he has present, to inflict punishment upon her paramour, he does it in the most summary manner, throwing as many spears at his legs as he has an opportunity of doing before others catch hold of him and prevent his committing farther acts of violence. A good deal of tact is required under these circumstances to ascertain whether a spear can safely be thrown at a man or not; but I have remarked as a general rule that a native, if irritated by another, invariably throws a spear at him if he has a friend or brother near the offender at the time; the chances then being that this friend or brother will catch hold of the man attacked before he can throw a spear in return. As for the poor female no one takes her part whether she is innocent or guilty; the established and very equitable law with regard to women being, "If I beat your mother, then you beat mine: if I beat your wife, then you beat mine," etc. etc. So that by judiciously conducting arrangements a native can spear one aggressor himself and get the other speared for him without undergoing any personal trouble or inconvenience, or without in the least suffering in her good graces.

### DANCES.

Should it be the intention of the natives to have a dance the arrangements are somewhat different. In this case the young men retire early in the afternoon to some spot suited to their purpose, where they paint and deck themselves out in the most grotesque manner. After dark they return to the encampment near which the dance takes place. At these entertainments the same rules of etiquette are strictly observed: the females sit in a group apart, generally behind the old men; the performers are on the side of the fire opposite to them; in one or two dances the women take a part in the song, but they never dance themselves, nor are the young men allowed to approach them. It is all fair for the dancers to do their utmost, by the arrangement of paint and ornaments, to show off their personal attractions, and they sometimes avail themselves of this privilege in the most ludicrous manner; but they are permitted to hold no converse whatever with any but their mothers and sisters.

### CEREMONIES ON MEETING. CUSTOMS IN MEETING AFTER ABSENCE.



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The ceremonies they observe at first meeting one another after absence are remarkable. When a native and his wives enter an encampment of friends whom they have not for some time seen, they proceed straight to the hut of some relative or intimate friend without bestowing even a glance upon any others whom they may pass: having reached the hut the man at once seats himself at the fire without taking the least notice of anyone in it, whilst his wives crouch upon the earth at a respectful distance behind him, keeping their eyes fixed upon the ground; solemn silence now ensues, all countenances wear an unspeakable gloom and gravity and all eyes are directed to the earth; in about ten minutes the nearest blood relation of any individual who has died since the stranger has visited his friends advances to him with a measured pace, and without speaking seats himself cross-legged on his thighs, under which he places his hands, at the same time pressing his breast to the stranger's; thus seated they mournfully avert their faces from one another and preserve a perfect silence; no single word or sign of recognition passes between them, and after they have remained thus seated for several minutes the native who had come to announce the death rises slowly and retires with the same gravity with which he had approached; other males of the family now successively approach the stranger, going through precisely the same ceremonies, none of them venturing to interchange a single word with him.

This part of the ceremony having been completed, the nearest female relative of the deceased approaches the stranger and, throwing herself upon her knees before him, she embraces his knees with her left arm whilst with the nails of her right hand she scratches her cheek and nose until the blood drops from them, at the same time raising the most piteous cries and lamentations. After a few minutes she rises and approaches his wife and seats herself on the ground in front of her; the two now encircle one another with their left arms, resting their heads on each other's shoulders, whilst they scratch their faces with their right hands and cry and wail in a tone which excites in the minds of all who hear them sensations of deep grief; indeed I know of no sound (not even excepting the Irish howl) which so fully expresses the passion of deep sorrow as this lament of the native women. When their cry is completed the resident native woman rises from the ground and slowly walks from the wife of the one who has returned to the camp; the other female relatives of the deceased then advance in turn, and go through the same form.

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The returned absentee is now at liberty to speak, and some of the party in recitative recount to him all the leading facts that have occurred since their last meeting; they are however very careful not to mention the name of the person who is dead, but describe him by his attributes and family in such a manner as to leave no doubt in the mind of the hearer; but to name aloud one who is departed would be a gross violation of their most sacred prejudices, and they carefully abstain from it.

### CEREMONIES ON MEETING IN THE BUSH.

If natives meet in the bush the foregoing ceremonies are in part observed: both parties at their first meeting sit down at a distance from one another, preserving a profound silence and keeping their eyes fixed on the ground; after a time one of them commences a chant about himself and from what great family he has sprung; they then approach one another, and if there is a death to communicate the men press breast to breast, and knee to knee, remaining for some time with averted faces, lost in melancholy thoughts; when they separate the women approach and kneel, scratching their faces and crying in the way I have above described. Should no relative have died upon either side the men, after rising up, approach one another and enter into conversation; whilst the elder married females, if they like a stranger, embrace him affectionately and give him a loud-sounding kiss upon each cheek; on several occasions I have had to submit myself, with as good a grace as I could, to this salutation.

In these casual meetings of natives it occasionally happens that several women kneel together, crying and embracing the knees of some old savage, who stands erect in the midst of the group, with a proud and lordly air, whilst they cower to the earth around him; sometimes they have children slung at their backs, and these little things may be seen unconsciously playing with their mothers' hair whilst this mournful scene is enacting.

### PUNCTILIOS OF FORM.

Some old women are scrupulously punctilious about the performance of all these matters of etiquette, attaching a degree of importance to them which, in the eyes of civilized man, approaches the ludicrous; but they look upon them in a very different light. I have seen a number of these sticklers for form kneeling round a little boy not more than six or seven years old, lamenting most bitterly,

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the little fellow meanwhile preserving in his countenance and bearing all the gravity and dignity which a man could have exhibited.

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### CHAPTER 14. FOOD AND HUNTING.

#### ERRORS REGARDING SCARCITY OF FOOD OF NATIVES.

The mistake very commonly made with regard to the natives of Australia is to imagine that they have small means of subsistence, or are at times greatly pressed for want of food: I could produce many almost humorous instances of the errors which travellers have fallen into upon this point. They lament in their journals that the unfortunate Aborigines should be reduced by famine to the miserable necessity of subsisting on certain sorts of food which they have found near their huts; whereas in many instances the articles thus quoted by them are those which the natives most prize, and are really neither deficient in flavour nor nutritious qualities. I will give one remarkable example of an error of this kind into which a traveller of great ability has fallen; but this will only render palpable the ignorance that has prevailed with regard to the habits and customs of this people when in their wild state, for those who frequent European towns and the outskirts of population are soon compelled by the force of circumstances to depart, in a great measure, from their original habits.

Captain Sturt, to whom I allude, says in his travels (volume 1 page 118):

Among other things we found a number of bark troughs filled with the gum of the mimosa, and vast quantities of gum made into cakes upon the ground. From this it would appear that these unfortunate creatures were reduced to the last extremity, and, being unable to procure any other nourishment, had been obliged to collect this mucilaginous food.

The gum of the mimosa, thus referred to, is a favourite article of food amongst the natives, and when it is in season they assemble in large numbers upon plains of the character previously described by Captain Sturt in order to enjoy this luxury. The profusion in which this gum is found enables large bodies to meet together, which, from their subsistence being derived from wild animals and vegetables of spontaneous growth, they can only do when some particular article is in full season, or when a whale is thrown ashore. In order more fully to show how little the habits of this people have been understood I may state with regard to this very gum, called by the natives *kwon-nat*, that about the time the above account was

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published by Captain Sturt an expedition was sent out from King George's Sound in Western Australia in order to discover what was the nature of the article of food so loudly praised by them, and which they stated was to be found in certain districts in great profusion; the belief at that time being, from the accounts given of it, that it could be only a new and valuable species of grain. The exploring party did not attain their object, and to this day many of the settlers believe the kwon-nat to be a kind of corn.

### FOOD PLENTIFUL. VARIETIES OF IT IN DIFFERENT LATITUDES.

Generally speaking the natives live well; in some districts there may at particular seasons of the year be a deficiency of food, but if such is the case these tracts are at those times deserted. It is however utterly impossible for a traveller or even for a strange native to judge whether a district affords an abundance of food or the contrary; for in traversing extensive parts of Australia I have found the sorts of food vary from latitude to latitude, so that the vegetable productions used by the Aborigines in one are totally different to those in another; if therefore a stranger has no one to point out to him the vegetable productions, the soil beneath his feet may teem with food whilst he starves. The same rule holds good with regard to animal productions; for example in the southern parts of the continent the Xanthorrhoea affords an inexhaustible supply of fragrant grubs, which an epicure would delight in when once he has so far conquered his prejudices as to taste them; whilst in proceeding to the northward these trees decline in health and growth, until about the parallel of Gantheaume Bay they totally disappear, and even a native finds himself cut off from his ordinary supplies of insects; the same circumstances taking place with regard to the roots and other kinds of food at the same time, the traveller necessarily finds himself reduced to cruel extremities. A native from the plains, taken into an elevated mountainous district near his own country for the first time, is equally at fault.

### VARIED WITH THE SEASONS.

But in his own district a native is very differently situated; he knows exactly what it produces, the proper time at which the several articles are in season, and the readiest means of procuring them. According to these circumstances he regulates his visits to the different portions of his hunting ground; and I can only state that I have always found the greatest abundance in their huts.

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### CAUSES OF OCCASIONAL WANT.

There are however two periods of the year when they are at times subjected to the pangs of hunger: these are in the hottest time of summer and in the height of the rainy season. At the former period the heat renders them so excessively indolent that until forced by want they will not move, and at the latter they suffer so severely from the cold and rain that I have known them remain for two successive days at their huts without quitting the fire; and even when they do quit it they always carry a fire-stick with them, which greatly embarrasses their movements. In all ordinary seasons however they can obtain in two or three hours a sufficient supply of food for the day, but their usual custom is to roam indolently from spot to spot, lazily collecting it as they wander along.

### LIST OF EDIBLE ARTICLES.

That an accurate idea may be formed of the quantity and kinds of food which they obtain, I have given below a list of those in use amongst the aborigines of South-western Australia which I have seen them collect and eat; and I will, in the order in which they stand on this list, show the mode of obtaining them, and the way in which they are cooked.

Different articles of food eaten by the natives of Western Australia:

Six sorts of kangaroo.

Twenty-nine sorts of fish.

One kind of whale.

Two species of seal.

Wild dogs.

Three kinds of turtle.

Emus, wild turkeys, and birds of every kind.

Two species of opossum.

Eleven kinds of frogs.

Four kinds of freshwater shellfish.

All saltwater shellfish, except oysters.

Four kinds of grubs.

Eggs of every species of bird or lizard.

Five animals, something smaller in size than rabbits.

Eight sorts of snakes.

Seven sorts of iguana.

Nine species of mice and small rats.

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Twenty-nine sorts of roots.

Seven kinds of fungus.

Four sorts of gum.

Two sorts of manna.

Two species of by-yu, or the nut of the *Zamia* palm.

Two species of mesembryanthemum.

Two kinds of nut.

Four sorts of fruit.

The flower of several species of *Banksia*.

One kind of earth, which they pound and mix with the root of the mene.

The seeds of several species of leguminous plants.

It will be necessary however before commencing this sketch to give an outline of the weapons and implements with which the different animals are caught and killed, and the vegetable productions procured.

### EQUIPMENT FOR A HUNT. IMPLEMENTS FOR DESTROYING ANIMALS.

The natives nearly always carry the whole of their worldly property about with them, and the Australian hunter is thus equipped: round his middle is wound, in many folds, a cord spun from the fur of the opossum, which forms a warm, soft and elastic belt of an inch in thickness, in which are stuck his hatchet, his kiley or boomerang, and a short heavy stick to throw at the smaller animals. His hatchet is so ingeniously placed that the head of it rests exactly on the centre of his back, whilst its thin short handle descends along the backbone. In his hand he carries his throwing-stick and several spears, headed in two or three different manners so that they are equally adapted to war or the chase. A warm kangaroo skin cloak completes his equipment in the southern portions of the continent; but I have never seen a native with a cloak anywhere to the north of 29 degrees south latitude.

### DESCRIPTION AND USE OF THE WEAPONS.

These weapons, although apparently so simple, are admirably adapted for the purposes they are intended to serve. The spear when projected from the throwing-stick forms as effectual a weapon as the bow and arrow, whilst at the same time it is much less liable to be injured, and it possesses over the bow and arrow the advantage of

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being useful to poke out kangaroo-rats and opossums from hollow trees, to knock off gum from high branches, to pull down the cones from the Banksia trees, and for many other purposes.

The hatchet is used to cut up the larger kinds of game and to make holes in the trees the owner is about to climb. The kiley is thrown into flights of wild-fowl and cockatoos, and with the dow-uk, a short heavy stick, they knock over the smaller kinds of game much in the same manner that poachers do hares and rabbits in England.

### CONTENTS OF THE WOMEN'S BAG OR WALLET.

Thus equipped the father of the family stalks forth, and at a respectful distance behind him follow the women; a long thick stick, the point of which has been hardened in the fire, is in each of their hands, a child or two fixed in their bags or upon their shoulders, and in the deep recesses of these mysterious bags they carry moreover sundry articles which constitute the wealth of the Australian savage. These are however worthy of a particular enumeration, as this will make plain the domestic economy of one of these barbarian housewives.

The contents of a native woman's bag are: A flat stone to pound roots with; earth to mix with the pounded roots; quartz, for the purpose of making spears and knives; stones for hatchets; prepared cakes of gum, to make and mend weapons and implements; kangaroo sinews to make spears and to sew with; needles made of the shin-bones of kangaroos, with which they sew their cloaks, bags, etc.; opossum hair to be spun into waist belts; shavings of kangaroo skins to polish spears, etc.; the shell of a species of mussel to cut hair, etc., with; native knives; a native hatchet; pipe-clay; red ochre, or burnt clay; yellow ochre, a piece of paperbark to carry water in; waistbands and spare ornaments; pieces of quartz which the native doctors have extracted from their patients, and thus cured them from diseases; these they preserve as carefully as Europeans do relics. Banksia cones (small ones) or pieces of a dry white species of fungus to kindle fire with rapidly and to convey it from place to place; grease, if they can procure it from a whale, or from any other source; the spare weapons of their husbands, or the pieces of wood from which these are to be manufactured; the roots, etc., which they have collected during the day. Skins not yet prepared for cloaks are generally carried between the bag and the back, so as to form a sort of cushion for the bag to rest on.



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In general each woman carries a lighted fire-stick, or brand, under her cloak and in her hand.

### DIFFERENT METHODS OF CATCHING KANGAROOS.

Imagining several parties of this kind, headed by one of the young men, to be moving through the woods, let us follow them and watch their mode of procuring and cooking their different varieties of food.

### MANNER OF HUNTING A KANGAROO SINGLY.

The moment an Australian savage commences his day's hunting his whole manner and appearance undergo a wondrous change: his eyes, before heavy and listless, brighten up, and are never for a moment fixed on one object; his gait and movements, which were indolent and slow, become quick and restless yet noiseless; he moves along with a rapid stealthy pace, his glance roving from side to side in a vigilant uneasy manner, arising from his eagerness to detect signs of game and his fears of hidden foes. The earth, the water, the trees, the skies, each are in turn subjected to a rigid scrutiny, and from the most insignificant circumstances he deduces omens. His head is held erect and his progress is uncertain, in a moment his pace is checked, he stands in precisely the position of motion as if suddenly transfixed, nothing about him stirs but his eyes, they glance uneasily from side to side whilst the head and every muscle seem immovable; but the white eyeballs may be seen in rapid motion, whilst all his faculties are concentrated, and his whole soul is absorbed in the senses of sight and hearing. His wives, who are at some distance behind him, the moment they see him assume this attitude fall to the ground as if they had been shot; their children cower by them, and their little faces express an earnestness and anxiousness which is far beyond their years; at length a suppressed whistle is given by one of the women, which denotes that she sees a kangaroo near her husband. All is again silence and quietude; and an unpractised European would ride within a few yards of the group and not perceive a living thing.

Looking about a hundred yards to the right of the native, you will see a kangaroo erect upon its hind legs and supported by its tail; it is reared to its utmost height, so that its head is between five and six feet above the ground—its short fore-paws hang by its side, its ears are pointed, it is listening as carefully as the native, and you see a little head peering out from its pouch to enquire what has alarmed

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its mother; but the native moves not, you cannot tell whether it is a human being or the charred trunk of a burnt tree which is before you, and for several minutes the whole group preserve their relative position; at length the kangaroo becomes reassured, drops upon its fore-paws, gives an awkward leap or two, and goes on feeding, the little inhabitant of its pouch stretching its head farther out, tasting the grass its mother is eating, and evidently debating whether or not it is safe to venture out of its resting place and gamble about amongst the green dewy herbage.

Meantime the native moves not until the kangaroo, having two or three times resumed the attitude of listening, and having like a monkey scratched its side with its fore-paw, at length once more abandons itself in perfect security to its feed, and playfully smells and rubs its little one. Now the watchful savage, keeping his body unmoved, fixes the spear first in the throwing-stick, and then raises his arms in the attitude of throwing, from which they are never again moved until the kangaroo dies or runs away; his spear being properly secured, he advances slowly and stealthily towards his prey, no part moving but his legs; whenever the kangaroo looks round he stands motionless in the position he is in when it first raises its head, until the animal, again assured of its safety, gives a skip or two and goes on feeding; again the native advances, and this scene is repeated many times until the whistling spear penetrates the devoted animal; then the wood rings with shouts; women and children all join pell-mell in the chase; the kangaroo, weak from the loss of blood, and embarrassed by the long spear which catches in the brushwood as it flies, at length turns on its pursuers, and to secure its rear places its back against a tree, preparing at the same time to rend open the breast and entrails of its pursuer by seizing him in its fore-paws and kicking with its hind legs and claws; but the wily native keeps clear of so murderous an embrace, and from the distance of a few yards throws spears into its breast until the exhausted animal falls and is then soon despatched; when, with the assistance of his wives, he takes its forelegs over his left, and the hind legs over his right shoulder, and totters with his burden to some convenient resting place, where they can enjoy their meal.

### HUNTING IN PARTIES IN THE BUSH.

The chase of the kangaroo conducted by a number of natives is a much more lively and noisy affair, but it is not to my taste nearly so interesting. When a single native hunts you see the whole energy

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and perseverance of which a savage is capable called forth, and his graceful movements, cautious advance, the air of quietude and repose which pervade his frame when his prey is alarmed, all involuntarily call forth your admiration and compel you to murmur to yourself, "how beautiful, how very beautiful." But where a party hunt there is more bustle and animation in the scene; and this kind of hunting is called "Yowart-a-kaipoon," or kangaroo-surrounding. The animals which are to be killed by a party who proceed for this purpose are either surprised in a thick bushy place, where they have retired to lie down in the heat of the day, or else in an open plain; in the former case they are tracked to their retreat, and the party then encircling it first ascertain that they have not quitted it; as each native takes up his position he gives a low whistle, and when the blockade is completed they fire the bushes; the frightened animals now fly from the flames in the direction of the open plains, but no sooner do they reach the outskirts of the wood than the bushes are fired in the direction in which they are running, and they are driven back by loud calls and terrific cries, which augment their terror, and they run wildly about; until, becoming maddened by fear, they make a rush through the midst of their enemies, who allow but few of their victims to escape.

### IN THE PLAINS.

When kangaroos are surrounded upon a plain the point generally chosen is an open bottom surrounded by wood; each native has his position assigned him by some of the elder ones, and a great deal of art and caution are sometimes required to gain it; for this end they avail themselves of every inequality of the ground, of every bush, of every shrub, and as there are so many witnesses of their skill and cunning they put forth all their art to approach as near the kangaroos as possible without disturbing them, and thus the circle narrows in around the unconscious animals, till at last some one of them becomes alarmed and bounds away, but ere it has proceeded many yards its flight is arrested by a savage with fearful yells; terrified it sits down with its frightened comrades to look for a means of escape, but armed natives brandishing their spears and raising loud cries come running in upon them from every side; and ere the animals have recovered the first moments of terror and surprise a slaughter has already commenced, which seldom terminates before the greater number of them have fallen.

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These great public hunts or battues are conducted under certain rules. The proprietor of the land must have invited the other natives, and must be present himself, for should these regulations be violated a very bloody fight is certain to take place. The first spear which strikes a kangaroo determines whose property the dead animal is to be; it being no matter how slight the wound may have been; even if a boy threw the spear the rule holds good, and if the animal killed is one which by their laws a boy is not allowed to eat, then his right passes on to his father or eldest male relation. The cries of the hunters, as they ring through the ancient woods, are very expressive and beautiful, each different intonation belonging to a particular period of the hunt. And what renders them peculiarly effective is that, instead of beginning as we always do with a soft aspiration, as in *Hollo, Ho*, etc., their cries always commence with a harsh sound, as *kau*; and this circumstance enables them to talk at a great distance so as to be perfectly intelligible to one another. Sometimes in deep wooded valleys I have heard gentle fairy-like sounds coming down from the heights, and rendered so soft and sweet by distance that one might readily have fancied them to be supernatural, yet the natives with me readily understood them, and shouted back their reply: this harsh commencement of their shout gives one also a terrible start when surprised in a murderous attack.

### HUNTING KANGAROO BY THE TRACKS.

Four other modes of taking kangaroos are practised by the natives: these are, catching them in nets, in pitfalls, lying in wait near their watering places until they come to drink, and constantly following their tracks until the animals are so wearied out that they will allow the huntsman to approach near enough to spear them. Of these four modes the last two are the most interesting, and the former is thus practised: in a dry district, where numerous animals congregate from a great distance to drink at a solitary water, the huntsman constructs a rude shelter in which for hours he remains concealed and motionless until the thirsty animals approach; kangaroos, cockatoos, pigeons, and all other beings that run and fly are in this case indiscriminately sacrificed, and the patient endurance of the hunter is generally richly rewarded by the booty he obtains.

But the mode of tracking a kangaroo until it is wearied out is the one which beyond all others excites the admiration of the natives; this calls out every qualification prized by savages: skill in tracking, endurance of hunger and thirst, unwearied bodily exertion, and

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lasting perseverance. To perform this feat a native starts upon the tracks of a kangaroo, which he follows until he sights it, when it flies timidly before him; again he pursues the track, and again the animal bounds from him; and this is repeated until nightfall, when the native lights his fire and sleeps upon the track; with the first light of day the hunt is resumed, and towards the close of the second day, or in the course of the third, the kangaroo falls a victim to its pursuer. None but a skilful huntsman in the pride of youth and strength can perform this feat, and one who has frequently practised it always enjoys great renown amongst his fellows.

### COOKING A KANGAROO.

Before they commence cooking the kangaroo an incision is made round the base of the tail to the bone, and another incision skin deep round the tip. The skin is then pulled away from the other part with all the sinews of the tail attached to it, and these are drawn carefully out and at once rolled round the dowuk, so as to keep them stretched: their future use is either to sew cloaks and bags, or to make spears.

Two modes of cooking the kangaroo are common; the first is to make an oven by digging a hole in the sand, in which a fire is lighted; when the sand is well heated and a large heap of ashes is collected the hole is scraped out and the kangaroo is placed in it, skin and all; it is then covered over with ashes, and a slow fire is kept up above it; when sufficiently baked it is taken out and laid upon its back; the first incision is made directly down from between the forearms to the bottom of the abdomen, the intestines are then removed, and the whole of the juice or gravy is left in the body of the animal. This is carefully taken out and the body is then cut up and eaten.

The other mode is simply to kill the kangaroo and then to broil the different portions of it on the fire: certain parts are considered great delicacies, and these the young men are forbidden to eat; such are the blood, the entrails, and the marrow. The blood is always carefully collected in one of the intestines so as to form a long sausage and is afterwards eaten by the most influential man present.

### METHODS OF TAKING AND COOKING FISH.

It will be seen from the foregoing list that the smaller sorts of fish eaten by the natives are very numerous: there are however several

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kinds which from superstitious prejudices they will not touch; amongst these are the Bamba, or stingray. I should here observe that these prejudices are local, and I have seen them reject at one portion of the continent articles of food which at a distant part they will eat readily.

Three modes of taking fish are commonly practised: spearing them; catching them by means of a weir; and taking them in a net. A party of natives spearing fish in one of their large shallow estuaries is an extremely picturesque sight; they follow all the tortuous windings of the fish they are pursuing, as it darts about in the water, with great rapidity; and, the object of their pursuit being concealed from a distant spectator, they appear to be running about in the sea and dashing up the foam for no conceivable cause or reason. Notwithstanding the speed they are running with and the smallness of the object, in striking they rarely miss their aim. In deep rivers or in the sea the mode of spearing fish varies according to the circumstances of the case; sometimes it is done by diving, sometimes by sitting on a rock or tree and watching them as they pass underneath; but in all cases astonishment is excited to see the celerity and accuracy with which the eye and hand act in the nicest unison.

Weirs are only constructed across places which are left nearly dry at low-water, or when the floods subside; and the way in which fish are taken in the net offers nothing remarkable.

### METHODS OF COOKING FISH.

If the fish are not cooked by being merely thrown on the fire and broiled they dress them in a manner worthy of being adopted by the most civilized nations; this is called "Yudarn dookoon," or "tying-up cooking." A piece of thick and tender paperbark is selected and torn into an oblong form; the fish is laid in this, and the bark wrapped round it as paper is folded round a cutlet; strings formed of grass are then wound tightly about the bark and fish, which is then slowly baked in heated sand covered with hot ashes; when it is completed the bark is opened and serves as a dish: it is of course full of juice and gravy, not a drop of which has escaped. Several of the smaller sorts of freshwater fish, in size and taste resembling white-bait, are really delicious when cooked in this manner; they occasionally also dress pieces of kangaroo and other meats in the same way.

### FEASTING ON A STRANDED WHALE.

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A whale is the greatest delicacy that a native can partake of, and, whilst standing beside the giant frame of one of these monsters of the deep, he can only be compared to a mouse standing before a huge plum-cake; in either case the mass of the food compared to that of the consumer is enormous. It is impossible for civilized man to enter into the feelings of the savage under these circumstances, for he has never been similarly situated. He never has had such a quantity of food that he doats on placed at once before him; hence when a native proprietor of an estate in Australia finds a whale thrown ashore upon his property his whole feelings undergo a sudden revulsion. Instead of being churlishly afraid of the slightest aggression on his property his heart expands with benevolence, and he longs to see his friends about him; so he falls to work with his wives and kindles large fires to give notice of the joyful event.

This duty being performed, he rubs himself all over with the blubber, then anoints his favourite wives, and thus prepared cuts his way through the blubber into the flesh or beef, the grain of which is about as firm as a goose-quill, of this he selects the nicest morsels, and either broils them on the fire or cooks them as kabobs by cutting them into small pieces and spitting them on a pointed stick.

By and bye other natives come gaily trooping in from all quarters: by night they dance and sing, and by day they eat and sleep, and for days this revelry continues unchecked, until they at last fairly eat their way into the whale, and you see them climbing in and about the stinking carcase, choosing tit-bits. In general the natives are very particular about not eating meat that is fly-blown or tainted, but when a whale is in question this nicety of appetite vanishes. I attribute this to their disliking in the first instance to leave the carcase, and then gradually getting accustomed to its smell; but whatever may be the reason they remain by the carcase for many days, rubbed from head to foot with stinking blubber, gorged to repletion with putrid meat, out of temper from indigestion, and therefore engaged in constant frays, suffering from a cutaneous disorder by high feeding, and altogether a disgusting spectacle. There is no sight in the world more revolting than to see a young and gracefully formed native girl stepping out of the carcase of a putrid whale. When they at last quit their feast they carry off as much as they can stagger under, to eat upon the way, and to take as a rarity to their distant friends.

MODE OF KILLING SEALS AND WILD DOGS.

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Killing seals is, from the habits of these animals, necessarily an exciting species of hunting in the southern and western portions of the continent. It is only enjoyed by the natives when they can surprise a seal upon the beach or in the surf, or when they swim off to some of the small rocky islands which are connected with the main by reefs, and are at no great distance from it; they are themselves fond of this sport, and the clambering about the wild rocks of their native shore, at one time leaping from rock to rock, spearing fish that lie in the quiet pools, in the next moment dashing into the boisterous surf to spear a large fish, to battle with a seal, or to turn a turtle, cannot but be an exhilarating occupation; and when to this we add that their steps are followed by a wife and children, as dear to them as ours are to us, who are witnesses of their agility and prowess, and who, when the game is killed, will help to light the fire in which it is to be cooked, and drag it to the resting-place, where the father romps with the little ones until the meal is prepared, and that all this takes place in a climate so mild and genial that a house is not necessary, we shall perhaps the less wonder that it should be so difficult to induce a savage to embrace the customs of civilized life.

There is nothing peculiar in their mode of killing wild dogs; puppies are of course the greatest delicacy, and are often feasted on; they sometimes however save these in order to keep them in a domesticated state, and in this case one of the elder females of the family suckles them at her own breast and soon grows almost as fond of them as of children. A dog is baked whole in the same manner as a kangaroo; it is laid on its back in the hole in the heated sand, and its nose, fore-paws and hind-paws are left sticking out of the ashes which are scraped over it, so that it bears rather a ludicrous appearance.

### MODE OF KILLING TURTLE AND COCKATOOS.

The green turtle are surprised by the natives on the beach when they come to lay their eggs, and are very rarely taken much to the south of Shark Bay, but freshwater turtle are extremely abundant, and are in high season about December and January. At this time the natives assemble near the freshwater lakes and lagoons in large numbers; these natural reservoirs are then shrunk to their lowest limits from evaporation and other causes, and are thickly overgrown with reeds and rushes. Among these the natives wade with stealthy pace, so stealthy that they even creep upon wild-fowl and spear them. The habits of the turtle are to swim lazily along near the surface of the



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water, about half immersed, biting and smelling at the various aquatic plants which they pass, and turning their long ungainly necks in all directions. When alarmed by the approach of a native the turtle instantly sinks to the bottom like a stone, and its pursuer, putting out his foot, the toes of which he uses to seize anything, just as we do our fingers, gropes about with it in the weeds, until he feels the turtle, and then, holding it to the ground, plunges his hands and arms in and seizes his prey. I have known two or three of them to catch fourteen turtle, none of which weighed less than one, and many of them as much as two or three pounds, in the course of a very short time.

These freshwater turtle are cooked by being baked, shell and all, in the hot ashes; when they are done a single pull removes the bottom shell, and the whole animal remains in the upper one, which serves as a dish. They are generally very fat, and are really delicate and delicious eating; the natives are extremely fond of them, and the turtle season is looked forward to by them as a very important period of the year.

### BIRDS.

Birds form a very considerable article of food for the natives, and their modes of killing them are so various that it would be impossible to enumerate them all. Emus are killed in precisely the same manner as kangaroos, but as they are more prized by the natives a greater degree of excitement prevails when an emu is slain; shout succeeds shout, and the distant natives take up the cry until it is sometimes re-echoed for miles: yet the feast which follows the death is a very exclusive one; the flesh is by far too delicious to be made a common article of food, hence heavy penalties are pronounced against young men and unauthorized persons who venture to touch it, and these are invariably rigidly enforced.

### KILLING COCKATOOS.

Perhaps as fine a sight as can be seen in the whole circle of native sports is the killing cockatoos with the kiley, or boomerang. A native perceives a large flight of cockatoos in a forest which encircles a lagoon; the expanse of water affords an open clear space above it, unencumbered with trees, but which raise their gigantic forms all around, more vigorous in their growth from the damp soil in which they flourish; and in their leafy summits sit a countless number of

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cockatoos, screaming and flying from tree to tree, as they make their arrangements for a night's sound sleep. The native throws aside his cloak so that he may not even have this slight covering to impede his motions, draws his kiley from his belt, and with a noiseless, elastic step approaches the lagoon, creeping from tree to tree, from bush to bush, and disturbing the birds as little as possible; their sentinels however take the alarm, the cockatoos farthest from the water fly to the trees near its edge, and thus they keep concentrating their forces as the native advances; they are aware that danger is at hand but are ignorant of its nature. At length the pursuer almost reaches the edge of the water, and the scared cockatoos, with wild cries, spring into the air; at the same instant the native raises his right hand high over his shoulder, and, bounding forward with his utmost speed for a few paces to give impetus to his blow, the kiley quits his hand as if it would strike the water, but when it has almost touched the unruffled surface of the lake it spins upwards with inconceivable velocity, and with the strangest contortions. In vain the terrified cockatoos strive to avoid it; it sweeps wildly and uncertainly through the air, and so eccentric are its motions that it requires but a slight stretch of the imagination to fancy it endowed with life, and with fell swoops is in rapid pursuit of the devoted birds, some of whom are almost certain to be brought screaming to the earth.

But the wily savage has not yet done with them. He avails himself of the extraordinary attachment which these birds have for one another, and, fastening a wounded one to a tree, so that its cries may induce its companions to return, he watches his opportunity by throwing his kiley or spear to add another bird or two to the booty he has already obtained.

### MODE OF KILLING WILD-FOWL.

The various kinds of wild-fowl with which the rivers and lagoons of Australia abound afford a never-failing supply of food to the natives, and many are the arts to which they have recourse to entrap these wary birds. During the period of the moulting season they catch many black swans. Some of the young men lie for hours in ambush on the banks until the unconscious swans have ventured so far into shallow water that they can run round them and cut off their retreat. When this auspicious moment arrives, with loud shouts the men dash in, and whilst one party intercepts the birds, so that they cannot get into the deeps, a second soon runs them down. In the same manner they take the young cygnets; and these I believe to be as

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good eating and as delicate an article of food as any country can produce.

It is also an interesting sight to see the natives creep after wild-fowl, and under cover of the reeds and bushes get so near that they can either spear them or catch them with a noose. A reedy lagoon lies at your feet, almost surrounded by rocky cliffs and dusky woods; there are some small open spaces of water, but generally it is so thickly overgrown with high reeds that it looks rather like a swampy wood than a lake; in the distance you see curling up a thin cloud of blue smoke, which indicates that a native encampment is at hand. The forms of many wild-fowl are seen swimming about among the reeds, for a moment caught sight of, and in the next lost in the dusky green of the vegetation. Every now and then a small party of them rise up, and after winging their way two or three times round the lagoon, at the same time giving a series of their quack, quack, which are loudly responded to from the recesses of the reeds, they again settle down in another part of it.

This circumstance and a few other signs induce a sportsman to suspect that there is some mischief afloat, and his doubts are soon set at rest: upon some bough of a tree, which stretches far out over the water and thus affords its occupant a view of all that is passing in the lake below, he sees extended the form of an aged native, his white locks fluttering in the breeze; he is too old to take a part in the sport that is going on, but watches every movement with the most intense interest, and by well-known signs directs the movements of the hunters, who may now be seen creeping noiselessly through the water, and at times they appear so black and still that even a practised huntsman doubts for a moment whether it is a man or the stump of a tree which he looks on. The natives are sometimes very successful in this kind of hunting: I have known a single man spear or noose ten wild-fowl, of different sorts, in an hour and a half or two hours' time.

One very dexterous feat which the natives perform is to kill a bird as it flies from the nest. This is executed by two men, one of whom, placing himself under the nest, throws a spear through its centre, so as to hit the bird in the breast, which, frightened and slightly wounded, flies out, and is then struck to the ground by the dow-uk, which the other native hurls at it as it quits the tree. They are such good shots with these short, heavy sticks that pigeons, quails, and even the smallest birds, are usually knocked over with them; and I

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have often seen them kill a pigeon with a spear, at the distance of about thirty paces.

### MODES OF COOKING BIRDS.

Birds are generally cooked by plucking them and throwing them on the fire, certain portions of the entrails being considered a great delicacy: but when they wish to dress a bird very nicely they first of all draw it and cook the entrails separately; a triangle is then formed round the bird by three red-hot pieces of stick, against which ashes are placed. Hot coals are also stuffed into the inside of the bird, and it is thus rapidly cooked and left full of gravy. Wild-fowl dressed in this way on a clean piece of bark form as good a dish as I have ever eaten.

### OPOSSUM HUNTING.

Opossum hunting is pursued either by day or during a moonlight night. A stranger cannot but be favourably impressed with regard to the quickness of a native in discovering whether or not an opossum has ascended a tree. The savage carelessly walks up to some massive trunk which he thinks bears a suspicious appearance, his hands are placed thoughtlessly behind his back, whilst his dark eye glances over the bark; suddenly it is for one moment stationary, and he looks eagerly at the tree, for he has detected the holes made by the nails of an opossum in its ascent; he now seeks for one of these foot-marks, which has a little sand attached to it, and gently blows the sand, but it sticks together, and does not easily move away, this is a proof that the animal has climbed the tree the same morning, for otherwise the sand would have been dried up by the heat of the sun, and, not being held together by dampness, would have been readily swept away before his breath. Having by this examination of signs, which an unskilled European in vain strains his eyes to detect, convinced himself that the opossum is in some hole of the tree, the native pulls his hatchet from his girdle and, cutting a small notch in the bark about four feet from the ground, he places the great toe of his right foot in it, throws his right arm round the tree, and with his left hand sticks the point handle of the hatchet into the bark as high up as he can reach, and thus forms a stay to drag himself up with; having made good this step he cuts another for his left foot, and thus proceeds until he has ascended to the hole where the opossum is hid, which is then compelled by smoke, or by being poked out, to quit its hiding-place, when, the native catching hold of its tail, dashes it

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down on the ground and quietly descends after it. As the opossum gives a very severe and painful bite the natives are careful to lay hold of it in such a manner as to run the least possible danger of being seized by its teeth.

Opossum hunting by moonlight, excepting in the beauty of the spectacle, offers no feature different from what I have above described; the dusky forms of the natives moving about in the gloomy woods and gazing up into the trees to detect an animal feeding, whilst in the distance natives with firesticks come creeping after them, is a picturesque sight, and it is also pretty to see the dark body of the native against the moonlight as he climbs the tree, forcing the poor opossum to retreat to the very end of some branch, whence he is shaken off or knocked down with a stick. The natives themselves like these moonlight expeditions and speak with enthusiasm of them. They are particularly fond of spearing fish at certain seasons of the year, in which case they go along the shoal water with a light, and proceed exactly in the manner still practised in Scotland and Ireland.

### CATCHING FROGS. METHOD OF TAKING SHELLFISH.

The season of the year in which the natives catch the greatest quantity of frogs and freshwater shellfish is when the swamps are nearly dried up; these animals then bury themselves in holes in the mud, and the native women with their long sticks and long thin arms, which they plunge up to the shoulder in the slime, manage to drag them out; at all seasons however they catch some of these animals, but in summer a whole troop of native women may be seen paddling about in a swamp, slapping themselves to kill the mosquitoes and sandflies, and every now and then plunging their arms down into the mud, and dragging forth their prey. I have often seen them with ten or twelve pounds weight of frogs in their bag.

Frogs are cooked on a slow fire of wood ashes. They are then held in one hand by the hind legs, and a dexterous pinch with the finger and thumb of the other at once removes the lower portion of the intestines. The remainder of the animal is then taken at a mouthful and fairly eaten from the head to the toes.

The freshwater shellfish vary in size from that of a prawn to a large crayfish; the smallest are the best, and when nicely roasted there is no difference in taste between them and a shrimp. It is worthy of

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remark that the natives in the south-western part of Australia will not touch freshwater mussels, which are very abundant in the rivers, whilst in the north-western part of the continent they form a staple article of food.

### GRUBS AND WALLABIES.

Grubs are principally procured by the natives from the Xanthorrhoea or grass-tree, but they are also found in wattle-trees, and in dead timber; those found in the grass-tree have a fragrant aromatic flavour and taste very like a nice nut. Their presence in a tree is thus ascertained: if the top of the tree is observed to be dead the native gives it a few sharp kicks with his foot, when, if it contains any barde or grubs, it begins to give, and if this takes place he pushes the tree over, and, gradually breaking it to pieces with his hammer, he extracts the grubs, of which sometimes more than a hundred are found in a single tree.

Until the top of the tree is dead it is not a proper receptacle for these animals. The natives are therefore in the habit of breaking off the tops of the grass-trees on their land at a particular season of the year in order that they may have an abundance of this highly-prized article of food. If two or more men have a right to hunt over the same portion of ground, and one of them breaks off the tops of certain trees, by their laws the grubs in these are his property and no one else has a right to touch the tree. No mistake on this point can occur, for if the top of the tree dies naturally it still remains in its original position, whereas a native who thus prepares the tree knocks it off altogether; an instance occurred at King George's Sound of a native travelling between thirty and forty miles to lay a complaint before the Resident that another had been guilty of this unpardonable breach of honesty, and, notwithstanding it had been clearly brought home to him, still stoutly refused to make any amends.

When there is a grub in a wattle-tree its diseased state, which produces excrescences, soon betrays this circumstance to the watchful eyes of a native, and an animal much larger than those found in the grass-tree is soon extracted; they seldom however find more than one or two of these in the same tree.

Grubs are either eaten raw or roasted; they are best roasted tied up in a piece of bark in the manner in which I have before stated that they cook their fish. If the natives are taunted with eating such a

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disgusting species of food as these grubs appear to Europeans they invariably retort by accusing us of eating raw oysters, which they regard with perfect horror.

### HUNTING THE SMALLER ANIMALS.

The smaller species of animals are either caught by surprising them in their seats or by burning the bush. A native hunting for food has his eyes in constant motion and nothing escapes them; he sees a kangaroo-rat sitting in a bush, and he walks towards it as if about to pass it carelessly, but suddenly, when on one side of it, he stamps on the bush with all his force, and crushes the little animal to death; should it be rapid enough in its movements to avoid this blow he hurls his dow-uk at it as it scampers off, and should he not hit it he runs after and tracks it to some dead hollow tree, lying on the ground, in which it has taken shelter, and with the aid of his spear, which is about ten feet long, he draws it out.

Another very ingenious mode of taking wallaby and the smaller kind of kangaroos is to select a thick bushy place where there are plenty of these animals; the bushes are then broken down in a circle round the spot where they intend to hunt, so as to form a space of broken scrub about ten feet wide all round a thick bush, they thus not only destroy the runs of the animals but form with the fallen bushes a place which so embarrasses and entangles them that they find great difficulty in passing it; indeed when these preparations have been made the natives fire the bush and the frightened animals, finding their runs stopped up, rush into the fallen branches, where every jump which they make upon their hind legs only involves them in greater difficulties, so that they fall an easy prey to their pursuers.

Some of the smaller animals such as the dal-gyte, an animal about the size of a weasel, burrow in the earth; these the natives surprise when they are feeding or dig them from their burrows. They are all cooked by having their fur singed off and being roasted on the fire; to the taste of a native the skinning a small animal would be an abomination, and I must really confess that a kangaroo-rat, nicely singed and cooked by them, is not a bad dish for a hungry traveller.

Although the natives could in many districts procure native salt, and most certainly from its abundance cannot be unacquainted with it, they never use it until they have seen Europeans do so, and even

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then do not at first like it. They also dislike mustard, sauces, etc., when they first eat them, and indeed nothing can be more ludicrous than their grimaces are the first time mustard is given to them upon a piece of meat.

### ROOTS EATEN BY NATIVES. EDIBLE ROOTS AND SEEDS.

The roots eaten by the natives belong to the following genera:

Dioscorea, two species.

Haemadorum, several species, as the Mene, Ngool-ya, Mudja, etc. etc.

Geranium, several species.

Boerhaavia, two species.

Typha, two species.

Orchis, several species.

### RULES FOR GATHERING ROOTS AND PLANTS.

Some of these are in season in every period of the year and the natives regulate their visits to the different districts accordingly. Those plants which grow in a stiff soil cannot be dug up by their implements without great difficulty in the heat of the dry season, but those which grow in a loose sandy soil can be obtained at all times. The natives have however a law that no plant bearing seeds is to be dug up after it has flowered; they then call them (for example) the mother of Bohn, the mother of Mudja, etc.; and so strict are they in their observance of this rule that I have never seen a native violate it unless requested by an European, and even then they betray a great dislike to do so.

The abundance of these roots varies, of course, with the nature of the soil, etc., but when there is a scarcity of any one of them this is amply provided for by the abundance of others. In the Province of Victoria, as already stated, I have seen tracts of land, several square miles in extent, so thickly studded with holes where the natives had been digging up yams (*Dioscorea*) that it was difficult to walk across it. Again, in the sandy desert country which surrounds for many miles the town of Perth, in Western Australia, the different species of *Haemadorum* are very plentiful.

### GATHERING AND COOKING ROOTS. MODE OF COOKING AND PREPARING THEM.



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It is generally considered the province of women to dig roots, and for this purpose they carry a long pointed stick which is held in the right hand and driven firmly into the ground, where it is shaken so as to loosen the earth, which is scooped up and thrown out with the fingers of the left hand, and in this manner they dig with great rapidity. But the labour in proportion to the amount obtained is great. To get a yam about half an inch in circumference and a foot in length they have to dig a hole above a foot square and two feet in depth; a considerable portion of the time of the women and children is therefore passed in this employment. If the men are absent upon any expedition the females are left in charge of one who is old or sick; and in traversing the bush you often stumble on a large party of them, scattered about in the forest, digging roots, and collecting the different species of fungus.

The roots are eaten raw or roasted in the fire; in either case they are, most of them, very good. Some have the taste of a mild onion, and others have almost the taste and appearance of a small English potato, but of these only a single root is attached to each plant: the mene has rather an acid taste and when eaten alone is said, by the natives, to cause dysentery; they never use it in the southern districts without pounding it between two stones and sprinkling over it a few pinches of an earth which they consider extremely good and nutritious; they then pound the mould and root together into a paste, and swallow it as a *bonne bouche*, the noxious qualities of the plant being destroyed by the earth.

Many other roots are pounded between flat stones into a paste and are then made into a cake and baked. The two roots which taste the best, when cooked in this way, are the jee-ta and yunjid.

The former of these resembles in appearance and taste the unripe seeds of Indian corn; it is in season in June and is really very palatable. The latter is the root of a species of flag, and consists of a case enclosing a multitude of tender filaments, with nodules of farinaceous matter adhering to them. These are collected into a mass by pounding the root, and the cake formed from the paste is very nice. The natives must be admitted to bestow a sort of cultivation upon this root, as they frequently burn the leaves of the plant in the dry seasons in order to improve it.

EDIBLE FUNGI AND GUMS.

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The different kinds of fungus are very good. In certain seasons of the year they are abundant and the natives eat them greedily.

Kwon-nat is the kind of gum which most abounds and is considered the nicest article of food. It is a species of gum-tragacynth. In the summer months the acacias growing in swampy plains are literally loaded with this gum, and the natives assemble in numbers to partake of this favourite esculent. As but few places afford a sufficient supply of food to support a large assemblage of persons these Kwon-nat grounds are generally the spots at which their annual barter meetings are held, and during these fun, frolic, and quarrelling of every description prevail.

### POISONOUS NUTS.

No article of food used by the natives is more deserving of notice than the by-yu. This name is applied to the pulp of the nut of a species of palm which, in its natural state, acts as a most violent emetic and cathartic; the natives themselves consider it as a rank poison: they however are acquainted with a very artificial method of preparing it, by which it is completely deprived of its noxious qualities and then becomes an agreeable and nutritious article of food. Europeans who are not acquainted with this mode of preparing the nut, the stones of which they find lying about the fireplaces of the natives, are frequently tempted to eat it in its natural state, but they invariably pay a severe penalty for the mistake. The following extract, from Captain Cook's<sup>43</sup> first voyage, gives one instance of this:

The third sort, which, like the second, is found only in the Northern parts, seldom grows more than ten feet high, with small pinnated leaves, resembling those of some kind of fern; it bears no cabbage, but a plentiful crop of nuts, about the size of a large chestnut, but rounder. As the hulls of these were found scattered round the places where the Indians had made their fires it was taken for granted that they were fit to eat; however those who made the experiment paid dear for their knowledge to the contrary, for they operated both as an emetic and cathartic, with great violence: still however it was not doubted but they were eaten by the Indians, and, in order to determine this more clearly, they were carried to the hogs, who might be supposed to have a constitution as strong as the Indians, although the ship's people had not. The hogs ate them indeed, and for some time apparently without suffering any inconvenience, but

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in about a week they were so much disordered that two of them died; the rest were recovered with great difficulty. It is probable however that the poisonous quality of these nuts may lie in the juice, like that of the cassada of the West Indies, and that the pulp, when dried, may be not only wholesome but nutritious.

### MODE OF RENDERING THEM INNOXIOUS.

The native women collect the nuts from the palms in the month of March, and, having placed them in some shallow pool of water, they leave them to soak for several days. When they have ascertained that the by-yu has been immersed in water for a sufficient time they dig, in a dry sandy place, holes which they call mor-dak; these holes are about the depth that a person's arms can reach, and one foot in diameter; they line them with rushes and fill them up with the nuts, over which they sprinkle a little sand, and then cover the holes nicely over with the tops of the grass-tree; in about a fortnight the pulp which encases the nut becomes quite dry, and it is then fit to eat, but if eaten before that it produces the effects already described. The natives eat this pulp both raw and roasted; in the latter state they taste quite as well as a chestnut. The process which these nuts undergo in the hands of the natives has no effect upon the kernel, which still acts both as a strong emetic and cathartic.

I have taken some trouble to ascertain if any traditional notion exists amongst the natives which would in any way account for their having first obtained a knowledge of the means by which they could render the deleterious pulp of the Zamia nut a useful article of food; but in this, as in all other similar instances, they are very unwilling to confess their ignorance of a thing, and rather than do so will often invent a tradition. Hence many intelligent persons have raised most absurd theories and have committed lamentable errors.

### ROVING HABITS DEPENDANT ON FOOD.

The other kinds of food which I have mentioned on the list scarcely require a particular description. They are collected by the people as they rove from spot to spot, and are rather used as adjuncts to help out a meal than as staple articles of provision; several of them are however much liked by the natives, and they always regulate the visits to their hunting grounds so as to be at any part which plentifully produces a certain sort of food at the time this article is in full season: this roving habit produces a similar character in the

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kangaroos, emus, and other sorts of game which are never driven more from one part than from another. In fact they are kept in a constant state of movement from place to place; but directly a European settles down in the country his constant residence in one spot soon sends the animals away from it, and although he may in no other way interfere with the natives the mere circumstance of his residing there does the man on whose land he settles the injury of depriving him of his ordinary means of subsistence.

### EDIBLE PRODUCTIONS VARY IN DIFFERENT DISTRICTS. COMMON RIGHTS IN CERTAIN FOOD.

If the land of any native is deficient in any particular article of food, such as, by-yu, mun-gyte (*Banksia* flowers) etc., he makes a point of visiting some neighbour whose property is productive in this particular article at the period in which it is in perfection; and there are even some tracts of land which abound in gum, kwon-nat, etc., which numerous families appear to have an acknowledged right to visit at the period of the year when this article is in season, although they are not allowed to come there at any other time. This is a curious point and might throw some further light upon the subject of their families or lines of descent.

It must be borne in mind that the articles of food I have enumerated in this chapter belong only to a particular district of about two hundred miles in extent, for every degree of latitude some articles would disappear from the list, whilst other new ones would enter into it. For instance on the north-west coast they eat a species of oyster (*unio*) the almonds of the pandanus, wild grapes, guavas, the excellent fruit of a species of *capparis*, and many other articles which are not known upon the south-west coast; but these are procured and cooked in the same manner as the articles which I have already enumerated. My object being merely to give such an outline as would enable the reader to understand well the mode of life of an Australian savage, I did not think such particular details necessary as I should have been led into, had I enumerated all the sorts of food which I have seen eaten by the natives in Australia.

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### CHAPTER 15. SONGS AND POETRY.

#### GENERAL PRACTICE OF SINGING. TRADITIONAL SONGS.

Like all other savage races the natives of Western Australia are very fond of singing and dancing: to a sulky old native his song is what a quid of tobacco is to a sailor; is he angry, he sings; is he glad, he sings; is he hungry, he sings; if he is full, provided he is not so full as to be in a state of stupor, he sings more lustily than ever; and it is the peculiar character of their songs which renders them under all circumstances so solacing to them. The songs are short, containing generally only one or two ideas, and are constantly repeated over and over again in a manner doubtless grating to the untutored ear of a European, but to one skilled in Australian music lulling and harmonious in the extreme, and producing much the same effect as the singing of a nurse does upon a child.

#### SONG OF AN OLD MAN IN WRATH. SCENE PRODUCED BY IT.

Nothing can give a better idea of the character of these people than their songs. In England an elderly gentleman, who has been at all put out of his way by encroachments and trespasses upon his property, sits over his fire in the evening, sipping his port and brooding over vengeance by means of the law; but the law is tortuous, expensive, and uncertain; his revenge is very distant from him; under these circumstances the more the elderly gentleman talks the more irate he becomes. Very different is the conduct of the elderly Australian gentleman. He comes to his hut at night in a towering passion; tucks his legs under him, and seats himself upon his heels before the fire; he calls to his wife for pieces of quartz and some dried kangaroo sinews, then forthwith begins sharpening and polishing his spears, and whilst thus occupied, sings to himself:

I'll spear his liver,  
I'll spear his lights,  
I'll spear his heart,  
I'll spear his thigh, etc. etc. etc.

After a while he pauses and examines the point he has been working at; it is very sharp, and he gives a grunt of satisfaction. His wives now chime in:

The wooden-headed,

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Bandy-legged,  
Thin-thighed fellows—  
The bone-rumped,  
Long-shinned,  
Thin-thighed fellows.

The old gentleman looks rather more murderous but withal more pleasant, and as he begins to sharpen his second spear he chants out:

I'll spear their liver,  
I'll spear their bowels,  
I'll spear their hearts,  
I'll spear their loins.

As he warms on the subject he ships his spear in the throwing-stick, quivers it in the air, and imitates rapidly the adventures of the fight of the coming day: then the recollections of the deeds of his youth rush through his mind; he changes his measure to a sort of recitative, and commences an account of some celebrated fray of bygone times; the children and young men crowd round from the neighbouring huts, the old gentleman becomes more and more vociferous, first he sticks his spear point under his arm and lies on his side to imitate a man dying, yet chanting away furiously all the time, then he grows still more animated, occasionally adjusting his spear with his throwing-stick and quivering it with a peculiar grace. The young women now come timidly up to see what is going on; little flirtations take place in the background, whereat the very elderly gentlemen with very young wives, whose dignity would be compromised by appearing to take an interest in passing events, and who have therefore remained seated in their own huts, wax jealous, and despatch their mothers and aged wives to look after the younger ladies. These venerable females have a dread of evil spirits, and consequently will not move from the fire without carrying a fire-stick in their hands; the bush is now dotted about with these little moving points of fire, all making for a common centre, at which are congregated old and young; jest follows jest, one peal of laughter rings close upon the heels of another, the elderly gentleman is loudly applauded by the bystanders, and, having fairly sung the wrath out of himself, he assists in getting up the dances and songs with which their evening terminates.

INFLUENCE OF THEIR SONGS.

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Is a native afraid, he sings himself full of courage; in fact under all circumstances he finds aid and comfort from a song. Their songs are therefore naturally varied in their form; but they are all concise and convey in the simplest manner the most moving ideas: by a song or wild chant composed under the excitement of the moment the women irritate the men to acts of vengeance; and four or five mischievously inclined old women can soon stir up forty or fifty men to any deed of blood by means of their chants, which are accompanied by tears and groans, until the men are worked into a perfect state of frenzy.

### NATIVE POETS.

A true poet in Australia is highly appreciated. Simple as their songs appear, there are in them many niceties which a European cannot detect; it is probable that what is most highly estimated by this people is that the cadence of the song, and the wild air to which it is chanted, should express well to their ideas the feelings and passions intended to predominate in the mind at the moment in which it is sung: hence we find that the compositions of some of these poets pass from family to family, and from district to district, until they have very probably traversed the whole continent; the natives themselves having at last no idea of the point where they originated, or of the meaning of the words which they sing, successive changes of dialect having so altered the song that probably not one of the original words remains; but they sing sounds analogous to these, to the proper air. And this is not confined to Western Australia, for Mr. Threlkeld, in his *Australian Grammar*,<sup>44</sup> says:

There are poets among them who compose songs which are sung and danced to by their own tribe in the first place, after which other tribes learn the song and dance, which itinerates from tribe to tribe throughout the country, until, from change of dialect, the very words are not understood by the blacks.

A family seldom make a distant friendly visit to other tribes, but they bring back a new song or two with them, and these, for a time, are quite as much the rage as a new fashionable song in England. Occasionally the songs also bear the name of the poet who composed them, though this is not often the case; there are however two or three poets in Australia who enjoy a great celebrity, but whether they are living, or belonged to ancient times, or whether they are merely imaginary beings I have never been able to discover.

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### DISREGARD OF EUROPEAN MUSIC. NATIVE OPINION OF EUROPEAN SINGING.

Their own songs are, according to their idea, the very perfection of harmony, rude and discordant as they are to our ears; perhaps no more extraordinary instance of the force of habit and diversity of taste than this could be advanced. A native sings joyously the most barbarous and savage sounds, which rend asunder the refined ears of the European, who turns away in agony from the discordant noise while the surrounding natives loudly applaud as soon as the singer has concluded. But should the astounded European endeavour to charm these wild men by one of his refined and elegant lays they would laugh at it as a combination of silly and effeminate notes, and for weeks afterwards entertain their distant friends, at their casual meetings, by mimicking the tone and attitude of the white man; an exhibition which never fails to draw down loud shouts of applause.

Some of the natives are not however insensible to the charms of our music. Warrup, a native youth who lived with me for several months as a servant, once accompanied me to an amateur theatre at Perth, and when the actors came forward and sang *God save the Queen* he burst into tears. He certainly could not have comprehended the words of the song, and therefore must have been affected by the music alone.

### ADAPTATION OF DANCES TO THEIR SONGS.

The only accompaniment to their songs used in the southern parts of the continent is the clapping of hands or the beating of a short round stick against the flat board with which they throw their spears; in this latter case the rounded stick is held in its centre, between the fingers and thumb of the right hand, and its ends are alternately struck against the flat board in such a manner as to produce a rude kind of music, in time to the air they are singing. Although this appears to be so very simple an instrument it requires some practice to beat the time accurately, and by young men who desire to have the reputation of being exquisites this is considered to be a very necessary accomplishment.

Some songs have a peculiar dance connected with them; this however is not always the case, and I have occasionally seen the same dance adapted to different songs.



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Having given this general outline of their songs I will now add such a selection of them as will convey some idea of the character of their poetry, at the same time there is reason to believe that a good deal of it is traditional, and may date its origin from a very remote epoch. Some of their dances have also a very peculiar mystical character about them, and these they very unwillingly exhibit in the presence of Europeans.

The following is a very favourite song of the natives to the north of Perth; it is sung to a wild and plaintive air, and relates to some action of a native who lived in that part of the continent, of the name of Warbunga. A little boy, a descendant of his, is still living, who bears the same name.

### SPECIMENS OF SONGS. EXAMPLES OF SONGS FOR VARIOUS OCCASIONS.

Kad-ju bar-dook,  
War-bung-a-loo,  
War-bung-a-loo.  
Kad-ju bar-dook,  
War-bung-a-loo,  
War-bung-a-loo,  
War-bung-a-loo.

They then commence again, constantly repeating these words in the same order.

### TRANSLATION.

Thy hatchet is near thee,  
Oh Warbunga,  
Oh Warbunga.  
Thy hatchet is near thee,  
Warbunga-ho,  
Warbunga-ho,  
Warbunga-ho.

A favourite song of the natives in the district of the Murray in Western Australia is:

Kar-ro yool, i, yool-a!  
Kar-ro yool, i, yool-a! etc. etc. etc.

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And these words they go on singing for an hour together, in the event of the absence of any of their relatives or friends upon a hunting or war excursion.

TRANSLATION.

Return hither, hither ho!  
Return hither, hither ho!

The following is a very good specimen of one of their comic songs. It is often sung by the natives in the vicinity of King George's Sound.

Mat-ta, mat-ta,  
Yungore bya,  
Mat-ta, mat-ta,  
Yungore bya, etc. etc. etc.

TRANSLATION.

Oh what legs, oh what legs,  
The Kangaroo-rumped fellows,  
Oh what legs, oh what legs, etc. etc. etc.

FUNERAL CHANT.

Nothing can awake in the breast more melancholy feelings than the funeral chants of these people. They are sung by a whole chorus of females of all ages and the effect produced upon the bystanders by this wild music is indescribable. I will give one chant which I have heard sung upon several occasions.

The young women sing: Kar-dang.  
The old women sing: Mam-mul.  
Together: gar-ro.  
Me-la nad-jo  
Nung-a-broo.  
Kar-dang.  
Mam-mul.  
Together: gar-ro.  
Me-la nad-jo  
Nung-a-broo. etc. etc. etc.

TRANSLATION.

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My young brother  
My young son (again)  
In future shall I never see.  
My young brother  
My young son (again)  
In future shall I never see.

### WAR-CHANTS. INFLUENCE OF SONGS IN ROUSING THE ANGRY PASSIONS OF THE MEN.

In this chant the old and young women respectively sing "my young son," and, "my young brother:" the metre and rhyme are also very carefully preserved, and the word Kardang is evidently expressly selected for this purpose; for were they speaking in prose they would use a term denoting eldest brother, youngest brother, second brother, or some similar one; whilst I have heard the word Kardang always used in this chant whether the deceased was the first, second, or third brother.

The men have also certain war-chants or songs; these they sing as they go walking rapidly to and fro, quivering their spears in order to work themselves up into a passion. The following is a very common one:

Yu-do dan-na,  
Nan-do dan-na,  
My-eree dan-na,  
Goor-doo dan-na,  
Boon-gal-la dan-na,  
Gonog-o dan-na,  
Dow-al dan-na,  
Nar-ra dan-na. etc. etc. etc.

### TRANSLATION.

Spear his forehead,  
Spear his breast,  
Spear his liver,  
Spear his heart,  
Spear his loins,  
Spear his shoulder,  
Spear his thigh,  
Spear his ribs, etc. etc. etc.

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Thus rapidly enumerating all the parts in which they intend to strike their enemies.

It is very rarely that any remarkable circumstance occurs but songs are composed in order to perpetuate the remembrance of it. For example, when Miago, the first native who ever quitted Perth, was taken away in H.M. surveying vessel Beagle in 1838, the following song was composed by a native and was constantly sung by his mother (at least so she says) during his absence, and it has ever since been a great favourite:

Ship bal win-jal bat-tar-dal gool-an-eeen,  
Ship bal win-jal bat-tar-dal gool-an-eeen. etc. etc. etc. etc.

Whither is that lone ship wandering,  
Whither is that lone ship wandering, etc. etc. etc. etc.

Again, on Miago's safe return, the song given below was composed by a native after he had heard Miago recount his adventures:

Kan-de maar-o, kan-de maar-a-lo,  
Tsail-o mar-ra, tsail-o mar-ra-lo. etc. etc. etc. etc.

Unsteadily shifts the wind-o, unsteadily shifts the wind-o, The sails-o handle, the sails-o handle-ho.

I will now add several other songs which are composed in different dialects; these will serve both as examples of their metre and style of poetry and as specimens for the purpose of comparison with the songs of the natives of the other portions of the continent.

Number 1.

One voice: Djal-lee-lee-na.

Chorus: Mong-a-da, mong-a-da,  
Mong-a-da, mong-a-da,  
Mong-a-da, mong-a-da.

One voice: Eee-dal-lee-na.

Chorus: Wun-a-da, wun-a-da,  
Wun-a-da, wun-a-da,

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Wun-a-da, wun-a-da. etc. etc. etc.

They all join in the chorus of:

Mong-a-da, etc. etc.

Wun-a-da, etc. etc.

And clap their hands in time to the air to which this chorus is sung, so that the effect produced is very good. I am unable to render this song into English.

Number 2.

Dow-al nid-ja kotiy bool-a,

Woor-ar wur-rang-een,

Dow-al nid-ja kotiy bool-a,

Woor-ar wur-rang-een

Dow-al nid-ja kotiy bool-a,

Woor-ar wur-rang-een.

These lines are repeated three times more, and then follows the chorus:

Chorus: Ban-yee wur-rang-een,

Koong-arree, wur-rang-een,

Ban-yee wur-rang-een,

Koong-arree, war-rang-een. etc. etc. etc.

Number 3.

Kat-ta ga-roo,

Ngia Bur-na-ri-noo.

Yar-dig-o-roo,

Ngia Bur-na-ri-noo. etc. etc. etc.

Number 4.

Yerib-a-balo, may-il boyne ga-ree,

Yerib-a-balo, may-il boyne ga-ree. etc. etc. etc.

Number 5.

Mar-ra boor-ba, boor-ba nung-a,

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Mar-ra gul-ga, gul-ga nung-a.

### SONGS AND EXTEMPORANEOUS CHANTS.

These songs give however no idea of the manner in which they chant forth their feelings. When irritated by any passionate emotions they then pour out with the greatest volubility torrents of reproach, all in a measured cadence and with at least the same number of syllables in each line, but even the rhyme is generally preserved; the two following translations of chants of this sort are rendered as literally into English as the great difference between the languages permits.

### CHANTS OF JEALOUSY AND REPROACH.

The reader must imagine a little hut, formed of sticks fixed slanting into the ground with pieces of bark resting against them, so as to form a rude shelter from the wind; underneath this were seated round a fire five persons—an old man, and his four wives; one of these was considerably younger than the others, and being a new acquisition, all but herself were treated with cold neglect. One of her rivals had resolved not to submit patiently to this, and when she saw her husband's cloak spread to form a couch for the newcomer she commenced chanting as follows, addressing old Weer-ang her husband:

Wherefore came you, Weerang,  
In my beauty's pride,  
Stealing cautiously  
Like the tawny boreang,<sup>45</sup>  
On an unwilling bride.  
'Twas thus you stole me  
From one who loved me tenderly:  
A better man he was than thee,  
Who having forced me thus to wed,  
Now so oft deserts my bed.

Yang, yang, yang, yoh—

Oh where is he who won  
My youthful heart,  
Who oft used to bless,  
And call me loved one:  
You Weerang tore apart,

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From his fond caress,  
Her, whom you now desert and shun;  
Out upon thee faithless one:  
Oh may the Boyl-yas<sup>46</sup> bite and tear,  
Her, whom you take your bed to share.

Yang, yang, yang, yoh—

Wherefore does she slumber  
Upon thy breast,  
Once again to-night,  
Whilst I must number  
Hours of sad unrest,  
And broken plight.  
Is it for this that I rebuke  
Young men, who dare at me to look?  
Whilst she, replete with arts and wiles,  
Dishonours you and still beguiles.

This attack upon her character was more than the younger female could be expected to submit to, she therefore in return chanted:

Oh, you lying, artful one,  
Wag away your dirty tongue,  
I have watched your tell-tale eyes,  
Beaming love without disguise:  
I've seen young Imbat nod and wink,  
Oftener perhaps than you may think.

What further she might have said I know not; but a blow upon the head from her rival, which was given with the stick the women dig up the roots with, brought on a general engagement, and the dispute was finally settled by the husband beating several of his wives severely about the head with a hammer.

The ferocity of the women when they are excited exceeds that of the men; they deal dreadful blows at one another with their long sticks, and if ever the husband is about to spear or beat one of his wives the others are certain to set on her and treat her with great inhumanity.

CHANT EXCITING TO REVENGE.

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The next translation is that of a chant sung by an old woman to incite the men to avenge the death of a young man who died from a natural cause, but whose death she attributed to witchcraft and sorcery; the natives, who listened to her attentively, called her chanting goranween, or abusing. She stood with her legs wide apart, waving her wanna, or long digging stick in the air, and rocking her body to and fro, whilst her kangaroo-skin cloak floated behind her in the wind. She was thus quite the beau ideal of a witch. The following is the sense of the words she used, at least as nearly as it is possible to express their force and meaning in English.

The blear-eyed sorcerers of the north,  
Their vile enchantments sung and wove,  
And in the night they issued forth,  
A direful people-eating drove.  
Feasting on our loved one,  
With gore-dripping teeth and tongue,  
The wretches sat, and gnawed, and ate,  
Whilst their victim soundly slept.

Yho, yang, yho yang, yang yho.

Aye—unconsciously he rested  
In a slumber too profound;  
The vile boyl-yas sat and feasted  
On the victim they had bound  
In resistless lethargy.  
Mooli-go, our dear young brother,  
Where is another like to thee?  
Tenderly loved by thy mother,  
We again shall never see  
Mooli-go, our dear young brother,

Yho, yang yho, ho, ho.

Men, who ever bold have been,  
Are your long spears sharpened well?  
Is the keen quartz fixed anew?  
Let each shaft upon them tell.  
Poise your meer-ros long and true:  
Let the kileys whiz and whirl  
In strange contortions through the air;  
Heavy dow-uks at them hurl;



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Shout the yell they dread to hear.  
Let the young men leap on high,  
To avoid the quivering spear;  
Light of limb, and quick of eye,  
Who sees well has nought to fear.  
Let them shift, and let them leap,  
When the quick spear whistling flies;  
Woe to him who cannot leap!  
Woe to him who has bad eyes!

### FEMALE ENERGY IN CHANTING.

When one of these old hags has entered upon a chant of this kind nothing but complete exhaustion induces her to stop, and the instant she pauses another takes up the burden of her song. The effect some of them produce upon the assembled men is very great; in fact these addresses of the old women are the cause of most of the disturbances which take place. The above translations, without being exactly literal, are as near the original as I could render them. As they are entirely uttered on the spur of the moment there is generally abundant evidence of passion and feeling about them; and although I might have added a great variety, I think that the above will give the English reader as good an idea of the peculiar mode of address of this people as it is in my power to do.

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### CHAPTER 16. FUNERAL CEREMONIES, SUPERSTITIONS, AND REMARKABLE CUSTOMS.

#### DEATH AND BURIAL OF A NATIVE NEAR PERTH.

Friday June 14 1839.

Yenna came to me this afternoon to tell me that Mulligo was now so ill there was but little chance of his living for many hours longer, and further to request that I would accompany him to see the sufferer. Nearly two months had elapsed since Mulligo had severely injured his spine by a fall from a tree; and immediately after the occurrence of this accident he had completely lost the use of his lower extremities, and had day by day declined until he was now reduced to a perfect skeleton. I was therefore but little surprised at the intelligence which Yenna brought me; and as I was anxious to see the ceremonies that would accompany his last moments I at once started for the native encampment.

#### CONTENTION FOR MULLIGO'S WIDOWS.

Mulligo was a Ngotak and had two wives, Kokoobung and Mugarwit, both of the Ballaroke family, and neither of them deficient either in youth, or in such personal charms as find favour in the eyes of the natives. I anticipated therefore that from some quarter or the other objections would be raised to allowing Miago, the uterine brother of Mulligo (and therefore also a Ngotak) to carry off unmolested two such attractive young widows. According to native custom however they of right, upon their husband's death, became the wives of Miago.

On approaching the point where Mulligo was lying, distant about a mile from Perth, I found that my anticipations were correct. I fell in with the encampment of the friends of a native named Bennyowlee, of the Tdonarup family. This native had signified his intention of asserting his claims to the possession of one of these young women, and even some of Miago's friends were disposed to favour him. Bennyowlee was absent at the Canning River with a party of natives for the purpose of procuring spears, and thus preparing himself for coming events. His friends however had constructed their huts within a few hundred yards of those of Mulligo's relatives, so that in the event of the arrival of the Murraymen, who they were apprehensive would make an attempt to carry off Mulligo's wives,

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they might be able to assist Miago in his endeavours to prevent such an outrage, whilst at the same time their proximity to his party enabled them to see that no foul play took place.

As I passed them they endeavoured to impress upon my mind that one wife was enough for Miago, and that if he surrendered the other to Bennyowlee they would assist him against the Murraymen. I however resolved not to interfere in the business, and thus telling them I bent my steps to the other encampment.

### DYING SCENE IN HIS TENT.

On my arrival I found poor Mulligo sinking fast; his two wives and his mother were watching by his side. He just recognised me, and faintly and slowly said, "men-dyke boola nganya" (I am very ill.) The native women near him were much alarmed because he could not swallow, and to support him were slowly dropping water into his ear. His last moment was evidently near at hand, and, after having felt his pulse and paid him a few little attentions, which always gratify them much, I turned away to examine the dispositions of the encampment.

I found that Miago's hut was close to Mulligo's, and he himself was present, ready to assert his right to the wives of his dying brother should anyone appear to dispute his claims; he was evidently well supported, for the Nagarnook family mustered strong around his hut, and the two half-brothers of one of the ladies in dispute were members of it. Weyup, the half-brother of the other native girl, was also present, and therefore evidently favoured Miago's cause. They were all in anxious expectation of the return of Moorroongo, who had gone off with a party for the purpose of cutting spears, with which the friends of his stepson (Miago) might be able to act either offensively or defensively as circumstances should require. As I conceived that there was every possibility of Mulligo's having sufficient strength left to linger through the night, and as the evening was fast closing in, after a little casual conversation with the natives I returned home.

### MOURNING WOMEN. THEIR SONGS AND CEREMONIES.

June 15.

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Soon after daybreak I reached the entrance of Mulligo's hut: he was alive but his respiration was scarcely visible. His head rested on his mother's knees, and her withered breasts now rested on his lips as she leant crying over him; other women were seated round, their heads all verging to a common centre over the wasted frame of the dying man; they were crying bitterly and scratching their cheeks, foreheads, and noses with their nails until the blood trickled slowly from the wounds. The men in the front of the huts were busied in finishing off their spears, ready for the coming fight.

I stood for some time watching the mournful scene, but other native females soon began to arrive; they came up in small parties, generally by threes, marching slowly forward with their wan-nas (a long stick they use for digging up roots) in their hands; the eldest female walked first, and when they approached within about thirty or forty yards of the hut in which the dying man lay they raised the most piteous cries, and, hurrying their pace, moved rapidly towards the point where the other women were seated, recalling the custom alluded to by Jeremiah (9:17, 18) Call for the wailing women that they may come, and let them make haste, and take up a wailing for us, that our eyes may run down with tears, and our eyelids gush out with waters.

### CEREMONY ON MULLIGO'S DEATH.

As they came up to the bark hut many of them struck it violently with their wan-nas, producing by the blow a dull hollow sound; they then seated themselves in the circle, scratching their faces and joining in mournful chants, of which the one already given above was that most frequently uttered, and which, as I sat by the young men's fire, they slowly repeated to me.

The female relatives standing in the relation of mothers to Mulligo, sang:

Mam-mul, Mam-mul,  
My son, my son.

Those in the relation of sister, sang:

Kar-dang, kar-dang.

And the next part was sung indifferently by both of them:

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Garro. Nad-joo,  
Meela,  
Nung-a-broo.

Again, I shall  
Not see in future.

Then one of the women, having worked herself to a pitch of frenzy, would now and then start up and, standing in front of the hut whilst she waved her wan-na violently in the air, would chant forth dire imprecations against certain boyl-yas, or magicians, or rather wizards, who she believed to be the cause of the death of poor Mulligo. Whilst thus chanting she faced and addressed her words to the men who were grouped around their huts, and it was strange to see the various effects produced on their minds by these harangues working in their savage countenances: one while they sat in mournful silence; again they grasped firmly and quivered their spears; and by-and-bye a general "Ee-Ee" (pronounced in their throat with the lips closed) burst forth as sign of approbation at some affecting part of the speech.

Time wore on. Each withered beldame by turns addressed the party, whilst the poor wretch, the tranquillity of whose dying moments was interrupted by these scenes, gradually sank. At last the vital spark departed, and that moment an old woman started up, mad with grief and rage, tore the hut in which he had lain to atoms, saying, "this is now no good;"<sup>47</sup> and then poured forth a wild strain of imprecations against the before-mentioned boyl-yas.

As she proceeded the men became more and more excited, and at last Moondee, the most violent of them, started forward and was on the point of spearing one of Mulligo's wives; none of the men attempted to interfere with him; but, as I anticipated, the women seized him, and held him, so as to prevent him from executing his purpose. This conduct on his part at first appeared to me to arise from passion alone, but the reason of it was soon explained.

### SUPPOSED CAUSE OF HIS DECEASE.

It appears that some two or three months before this period Weenat, a native of the upper part of the Swan, had stolen a cloak belonging to Miago, Mulligo's brother, and had, according to their belief, from malicious motives given this cloak to one of the native sorcerers, or

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boyl-yas, who by this means acquired some mysterious power over either Miago or his brother, but selected the latter for his victim, when he fell and broke his back. Another of these boyl-yas (according to the usual custom) was called in to give his advice, and he applied fire to the injured part. This treatment not succeeding, and the poor fellow wasting daily away, the natives became convinced that the unfriendly boyl-yas were in the habit of rendering themselves invisible, and nightly descending for the purpose of feasting on poor Mulligo's flesh whilst he slept, and being under the influence of a charm he was not aware of what was taking place; but Moondee chose to imagine that if his wife had been more vigilant the boyl-yas might have been detected, and hence intended to spear her in the leg as a punishment for her imputed neglect.

As I have before stated the women prevented this outrage from having effect, and the two trembling girls, neither of whom could have been more than fifteen, fled into Perth, to take refuge in some European's house. The native men and women, after their departure, indulged in the most unlimited abuse of boyl-yas in general, and of the Guildford boyl-yas in particular, against whom, according to the idea of the natives, they had very strong presumptive evidence from the circumstance of the cloak having been stolen by a Guildford man. It was still very doubtful what boyl-yas were the actual perpetrators of the crime, so they were contented with vowing to kill a great many of them in some direction or the other, as soon as anyone could detect that in which the suspected ones retired. This resolution having been formed the men went into Perth in order to see that no strange natives stole either of the young widows, whilst the women lay weeping over the dead body.

### PREPARATIONS FOR THE FUNERAL. FORMATION OF THE GRAVE.

I accompanied the men into Perth, and in the course of an hour was summoned by the natives to witness the funeral ceremony. They had moved the body about half a mile from the spot where the man died; the women still leant over it, uttering the words, yang, yang, yang, and occasionally chanting a few sentences.

There were but few men present, as they were watching the widows in Perth. Yenna and Warrup, the brothers-in-law of Mulligo, were digging his grave, which as usual extended due east and west; the Perth boyl-ya, Weeban by name, who, being a relation of the

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deceased, could of course have had no hand in occasioning his death, superintended the operations. They commenced by digging with their sticks and hands several holes in a straight line, and as deep as they could; they then united them, and threw out the earth from the bottom of the pit thus made; all the white sand was thrown carefully into two heaps, nearly in the form of a European grave, and these heaps were situated one at the head and the other at the foot of the hole they were digging, whilst the dirty-coloured sand was thrown into two other heaps, one on each side. The grave was very narrow, only just wide enough to admit the body of the deceased. Old Weeban paid the greatest possible attention to see that the east and west direction of the grave was preserved, and if the least deviation from this line occurred in the heaps of sand, either at the head or foot, he made some of the natives rectify it by sweeping the sand into its proper form with boughs of trees.

Before the digging of the grave was completed many Europeans had arrived at the spot for the purpose of witnessing the ceremony; the natives were not a little annoyed at this, however they proceeded rapidly in their work, occasionally employing a spade, but from the extreme narrowness of the grave, it was by no means easy to make use of this tool. During the process of digging, an insect having been thrown up, its motions were watched with the most intense interest, and as this little animal thought proper to crawl off in the direction of Guildford, an additional proof was furnished to the natives of the guilt of the boyl-yas of that place.

### SUPERSTITIOUS RITES.

When the grave was completed, they set fire to some dried leaves and twigs, then throwing them in they soon had a large blaze in it: during this part of the ceremony old Weeban knelt on the ground at the foot of the grave with his back turned towards the east, and his head bowed to the earth, his whole attitude denoting the most profound attention; the duty he had now to perform was a very important one, being no less than to discover in which direction the boyl-yas, when drawn out of the earth by the fire, would take flight. Their departure was not audible to common ears or visible to the eyes of ordinary mortals, but his power of boyl-ya gaduk enabled him to distinguish these sights and sounds which were invisible and inaudible to the bystanders.

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The fire roared for some time loudly in the grave, and every eye rested anxiously on old Weeban; the hollow, almost mysterious, sound of the flames as they rose from the narrow aperture evidently had a powerful effect upon the superstitious fears of the natives, and when he suddenly raised his meerro and then let it fall over his shoulder in a due east direction (the direction of Guildford) a grim smile of satisfaction passed over the countenances of the young men, who now knew in what direction to avenge the foul witchcraft which they felt assured had brought about the death of their brother-in-law.

### THE BURIAL.

The next part of their proceedings was to take the body of Mulligo from the females: they raised it in a cloak; his old mother made no effort to prevent its being removed, but passionately and fervently kissed the cold rigid lips, which she could never press to hers again. The body was then lowered into the grave and seated upon a bed of leaves which had been laid there directly the fire was extinguished, the face being, according to custom, turned towards the east. The women still remained grouped together, sobbing forth their mournful songs, whilst the men placed small green boughs upon the body until they had more than half filled up the grave with them; cross-pieces of wood of considerable size were then fixed in the opposite sides of the grave, green boughs placed on these, and the earth from the two side heaps thrown in, until the grave was completed; which then, owing to the heaps at the head and foot, presented the appearance of three graves, nearly similar in size and form, lying in a due east and west direction.

The men having now completed their task the women came with bundles of blackboy tops which they had gathered, and laid these down on the central heap so as to give it a green and pleasing appearance; they placed neither meerro nor spear on the grave, but whilst they were filling in the earth old Weeban and another native sat on their hams at the head of it, facing the one to the north, and the other to the south, their foreheads leaning on their clasped hands, which rested on one end of a meerro whilst the other end was placed on the ground. The ceremonies having been thus concluded I returned to Perth.

### WATCHING THE GRAVE.

Sunday June 16.



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This evening I walked out to Mulligo's grave and found his old mother seated there, crying bitterly. She had indeed good reason to weep, for those infamous boyl-yas, not content with eating the flesh of her son during his lifetime, and thereby causing his death, had been detected by her in the very act of sitting round his grave for the purpose of preying on his miserable remains. There could, it appears, be no doubt of the truth of this strange fact, for the poor old lady triumphantly pointed out their tracks, at the spot from whence they sprang into the air, in the direction of Guildford; but my eyes unfortunately were not good enough to detect the slightest vestige of any traces, either human or spiritual. However much this might have made me suspect the old lady's veracity it had no such effect upon the natives, and being now firmly convinced that the Guildford boyl-yas were the guilty parties, they announced their intention of starting in a few days for the purpose of putting Weenat to death.

### CONTEST FOR MULLIGO'S WIDOWS.

June 17.

Miago ought, according to custom, to have allowed three full days to elapse before his brother's widows entered his hut, but as Bennyowlee appeared resolved not to renounce his intention of claiming the hand of one of the ladies Miago's friends thought it more prudent to bring matters to a speedy issue, lest, in the interim, his rival might carry off Mugawit, the young lady he was desirous of possessing. On Monday evening therefore when I went to the native encampment I found that the first forms of the marriage ceremony had taken place, which were as follows:

Miago ordered the two widows of his brother to prepare his hut, that as soon as the sun had set he might sleep there. Bennyowlee, who, with his friends and supporters were encamped within a few yards of the other party, went up to Mugawit and ordered her to follow him to his Mya, or bark hut; this she declined doing, and he immediately speared her in the thigh. Miago now, as in duty bound, threw a quartz-headed spear at Bennyowlee, which, if the latter had not most dexterously avoided, must have proved fatal. A general disturbance would have taken place had not I and several other Europeans come up at the same moment and pacified Miago, whilst Bennyowlee took advantage of this temporary calm to evacuate the field, followed by insulting shouts of laughter from Miago's friends.

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A circumstance strongly illustrating the peculiar family customs of this people occurred this evening. Moorroongo, Miago's stepfather, was a Tdondarup, and as such stood in the relation of matta-gyne to Bennyyowlee; his hut stood therefore amongst those of this native's friends, and Miago's future wives remained in the care of his mother, and of course amongst the friends of his rival. When however Bennyyowlee departed Miago's mother and the two native girls went over to the Ngotak and Nagarnook party, who were, on this occasion, united. They then built a hut for Miago and lighted a fire; the old mother herself swept out the hut, so as to make it perfectly clean and nice; the brides then laid down in it, one on each side, so as to leave a vacant place in the centre for their new lord and master; and Miago's mother, having seen all these arrangements completed, returned once more to the hut of her husband. This was a remarkable instance of a stepfather and son being by custom compelled to espouse opposite sides of a quarrel because they bore different family names.

### BURIAL OF A NATIVE IN THE LESCHENAULT DISTRICT. BURIAL AT THE VASSE.

As these forms of interment have considerable interest and are somewhat varied in their details in different localities, I have subjoined the following account of the burial of a native, as described in an extract of a letter from Mr. Bussel, a gentleman resident near the Vasse River in Western Australia:

### PROCESSION TO THE GRAVE.

The funeral is a wild and fearful ceremony. Before I had finished in the stockyard the dead man was already removed and on its way to the place of interment, about a quarter of a mile from where the death took place,<sup>48</sup> and I left our house entirely guided by the shrill wailing of the female natives as they followed, mourning, after the two men who bore the body in their arms.

The dirge, as distance blended all the voices, was very plaintive, even musical; nor did the diminution of distance destroy the harmony entirely; some of the chants were really beautiful, but rendered perhaps too harsh for our ears in actual contact: for as I joined myself to the procession, and became susceptible of the trembling cadence of each separate performer—the human voice in every key which the extremes of youth and age might produce, there

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was a sensation effected which I cannot well describe—a terrible jarring of the brain. The fact that the involuntary tears rolled down the cheeks of those infants who sat passively on their mothers' shoulders, not appreciating the cause of lament, but merely as listeners, must prove that these sounds are calculated to affect the nervous system powerfully.

### CEREMONIES ON INTERMENT.

The procession moved slowly on and at length arrived at the place fixed upon for the burial. There had been a short silence previous to coming thus far, as if to give the voice a rest; for as the body touched the ground, and the bearers stood erect and silent, a piercing shriek was given, and as this died away into a chant some of the elder women lacerated their scalps with sharp bones until the blood ran down their furrowed faces in actual streams. The eldest of the bearers then stepped forward and proceeded to dig the grave. I offered to get a spade, but they would not have it; the digging stick was the proper tool, which they used with greater despatch than from its imperfect nature could have been expected at first sight. The earth being loosened with this implement was then thrown out with the hands with great dexterity, in complete showers so as to form, in the same line with the grave, at both ends, two elongated banks, the sand composing them so lightly hurled as to seem almost like drift-sand on the seashore. In the throw, if perchance the right limit was outstepped, the proper form was retained by sweeping.

The digging, notwithstanding the art displayed, was very tedious: they all sat in silence, and there were no chants to understand, or to fancy one understood, or perhaps to make meanings to.

But at length the grave was finished, and they then threw some dry leaves into it, and, setting fire to them, while the blaze was rising up, everyone present struck repeatedly a bundle of spears with the mearu which they held with the butts downwards, making a rattling noise. Then, when the fire had burnt out, they placed the corpse beside the grave, and gashed their thighs, and at the flowing of the blood they all said, "I have brought blood," and they stamped the foot forcibly on the ground, sprinkling the blood around them; then, wiping the wounds with a wisp of leaves, they threw it, bloody as it was, on the dead man; then a loud scream ensued and they lowered the body into the grave, resting on the back, with the soles of the feet on the ground and the knees bent; they filled the grave with soft

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brushwood, and piled logs on this to a considerable height, being very careful all the time to prevent any of the soil from falling into the apertures; they then constructed a hut over the woodstack, and one of the male relations got into it and said, "Mya balung einya ngin-na" ("I sit in his house.") One of the women then dropped a few live coals at his feet, and, having stuck his dismantled meerro at the end of one of the mounds, they left the place, retiring in a contrary direction from that in which they came, chanting.

### BURIAL AT KING GEORGE'S SOUND.

The two foregoing descriptions exhibit the native funeral ceremonies as practised at Perth, and at the Vasse on the sea-coast to the south of Perth. I shall now add a third description of the usages at King George's Sound as given by Mr. Scott Nind in the first volume of the Journal of the Royal Geographical Society page 46:

Their funeral solemnities are accompanied by loud lamentations. A grave is dug, about four feet long and three wide, and perhaps a yard in depth; the earth that is removed is arranged on one side of the grave in the form of a crescent; at the bottom is placed some bark, and then small green boughs, and upon this the body, ornamented and enveloped in its cloak, with the knees bent up to the breast, and the arms crossed.<sup>49</sup> Over the body are heaped more green boughs and bark, and the hole is then filled with earth. Green boughs are placed over the earth, and upon them are deposited the spears, knife, and hammer of the deceased, together with the ornaments that belonged to him; his throwing-stick on one side, and his curl (kiley) or towk (dowak) on the other side of the mound. The mourners then carve circles in the bark of the trees that grow near the grave, at the height of six or seven feet from the ground; and, lastly, making a small fire in front, they gather small boughs and carefully brush away any portion of the earth that may adhere to them. The face is coloured black or white, laid on in blotches across the forehead, round the temples, and down the cheek bones, and these marks of mourning are worn for a considerable time. They also cut the end of the nose, and scratch it for the purpose of producing tears.

### CUSTOMS OF SELF-LACERATION, AND OF REMAINING WATCHING AMONG THE GRAVES.

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The foregoing relations of the ceremonies practised at a native funeral exhibit some instances of the way in which they lacerate themselves in the exercise of certain superstitious rites, a custom very prevalent throughout all the yet known parts of Australia, and according with those described in the first book of Kings chapter 18 verse 28: And they cried aloud, and cut themselves after their manner with knives and lancets till the blood gushed out upon them.

And again, Jeremiah chapter 48 verse 37: For every head shall be bald, and every beard clipped; upon all the hands shall be cuttings, etc.

The natives of many parts of Australia when at a funeral cut off portions of their beards, and, singeing these, throw them upon the dead body; in some instances they cut off the beard of the corpse, and, burning it, rub themselves and the body with the singed portions of it.

“It may be also remarked,” says Major Mitchell,<sup>50</sup> “that a superstitious custom prevailed among the Gentiles in mourning for the dead. They cut off their hair, and threw it into the sepulchre with the bodies of their relations and friends, and sometimes laid it upon the face or breast of the dead as an offering to the infernal gods, whereby they thought to appease them, and make them kind to the deceased.” See Maimonides de Idol 112 1, 2, 5.

It is enjoined in Deuteronomy chapter 14 verse 1: Ye are the children of the Lord your God, ye shall not cut yourselves, nor make any baldness between your eyes for the dead. Now the native females invariably cut themselves and scratch their faces in mourning for the dead; they also literally make a baldness between their eyes, this being always one of the places where they tear the skin with the finger nails.

The custom of remaining amongst the graves is found among the natives of nearly all known portions of Australia. A similar practice is reprehended in Isaiah chapter 45 verses 4 and 5: A people that provoke me to anger continually to my face, that sacrificeth in gardens, and burneth incense upon altars of brick, which remain among the graves, and lodge in the monuments. See also on this subject, Lewis's *Origines Hebraeae*, volume 3 page 381.

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In Australia the object supposed to be obtained by this custom is a revelation as to what individual caused the death of the deceased; this revelation is made either by the means of actual visions or by dreams.

### MYSTERIOUS BONES.

Although the natives of the different portions of Australia have various modes of effecting the discovery of the sorcerers who caused the death of the deceased, as well as different modes of avenging his death, I feel sure that they have all one common object in view. In another part of this work I have given an account of an old woman watching by a grave with this intention; I have frequently however seen their sorcerers fulfil this duty; and the following extract from Mr. Threlkeld's Vocabulary will show the prevalence of this custom on the eastern side of the continent:<sup>51</sup>

Mur-ro-kun, the name of a mysterious bone which is obtained by the Ka-ra-kul, a doctor or conjuror, three of which sleep on the grave of a recently interred corpse; when in the night, during their sleep, the dead person inserts a mysterious bone into each thigh of the three doctors, who feel the puncture not more severe than that of the sting of an ant. The bones remain in the flesh of the doctors without any inconvenience to them, until they wish to kill any person, when by unknown means, it is said and believed, they destroy in a supernatural manner their ill-fated victim by the mysterious bone, causing it to enter into their bodies, and so occasion their death.

### THE BOYL-YAS OR NATIVE SORCERERS.

I have already had occasion to mention incidentally, on more than one occasion, the Boyl-yas, or native sorcerers, and their supposed powers have a mighty influence upon the minds and actions of the natives of Western Australia, in whose superstitious belief the boyl-yas are objects of mysterious dread. It is supposed that they can transport themselves through the air at pleasure, and can render themselves invisible to all but other boyl-yas. If they have a dislike to a native they can kill him by stealing on him at night and consuming his flesh. They enter him like pieces of quartz, and the pain they occasion is always felt. Another boyl-ya has however the power of drawing them out and curing the affected person by certain processes of disenchantment. When this operation is effected the boyl-yas are drawn out in the form of pieces of quartz, which are

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kept and considered as great curiosities by the natives. All natural illnesses are attributed to these boyl-yas, or to the Wau-guls, hence the reason of some native being killed when another dies. The individual dies either by the hands of another native, from the effects of accident, or from some natural cause. In the first case his death is avenged on his murderer, or on some near relative of his; in either of the other two cases it is avenged on some connexion of the supposed boyl-yas against whom they have a spite.

### KAIBER'S ACCOUNT OF THE BOYL-YAS.

Interested by an account I had received of the boyl-yas from the women, after Mulligo's death, I endeavoured to obtain from Kaiber a more ample statement of their belief relative to these people. The difficulty I laboured under upon this head, as well as the dread they entertain of these sorcerers, will be best shown by the following account of his answers to my questions, together with his incidental remarks:<sup>52</sup>

The boyl-yas are natives who have the power of boyl-ya; they sit down to the northward, the eastward, and southward; the boyl-yas are very bad, they walk away there (pointing to the east). I shall be very ill presently.

The boyl-yas eat up a great many natives, they eat them up as fire would; you and I will be very ill directly. The boyl-yas have ears: by-and-by they will be greatly enraged. I'll tell you no more.

The boyl-yas move stealthily, you sleep and they steal on you, very stealthily the boyl-yas move. These boyl-yas are dreadfully revengeful; by-and-by we shall be very ill. I'll not talk about them.

They come moving along in the sky, cannot you let them alone. I've already a terrible headache, by-and-by you and I will be two dead men.

The natives cannot see them. The boyl-yas do not bite, they feed stealthily; they do not eat the bones, but consume the flesh. Just give me what you intend to give, and I'll walk off.

The boyl-yas sit at the graves of natives in great numbers. If natives are ill, the boyl-yas charm, charm, charm, charm, and charm, and by and by the natives recover.

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I could learn nothing further from him.

The Wau-gul is an imaginary aquatic monster, residing in fresh water and endowed with supernatural power which enables it to consume the natives, although it generally attacks females. The person it selects for its victim pines away almost imperceptibly and dies.

### SUPERSTITION AND THEIR OPINION REGARDING THE NIGHTMARE.

The natives believe that the nightmare is caused by some evil spirit. The way in which they get rid of this evil being is by jumping up, seizing a lighted brand from the fire, twirling it round the head, and muttering a variety of imprecations; they then throw the stick away in the direction they conceive the spirit to be in. Some of them have explained this custom to me by stating that this evil spirit wants a light, and that when he gets it he will go away. They however also take the precaution of moving their position and getting as far as they can into the group of natives who are sleeping round the fire.

If they are obliged to move away from the fire after dark, either to get water or for any other purpose, they carry a light with them and set fire to dry bushes as they go along.

### VENERATION FOR CRYSTAL STONES.

The natives of South-western Australia likewise pay a respect, almost amounting to veneration, to shining stones or pieces of crystal, which they call Teyl. None but their sorcerers or priests are allowed to touch these, and no bribe can induce an unqualified native to lay his hand on them.

The accordance of this word in sound and signification with the Baetyli mentioned in the following extract from Burder's Oriental Customs (volume 1 page 16) is remarkable:

And Jacob rose up early in the morning, and took the stone that he had put for his pillow, and set it up for a pillar, and poured oil upon the top of it, and he called the name of that place Bethel. Genesis 28:18.



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From this conduct of Jacob and this Hebrew appellation, the learned Bochart, with great ingenuity and reason, insists that the name and veneration of the sacred stones called Baetyli, so celebrated in all Pagan antiquity, were derived.

These Baetyli were stones of a round form, they were supposed to be animated by means of magical incantations, with a portion of the Deity; they were consulted on occasions of great and pressing emergency as a kind of divine oracle, and were suspended either round the neck or some other part of the body.

That this veneration for certain pieces of quartz or crystal is common over a very great portion of the continent is evident from the following extracts from Threlkeld's Vocabulary, page 88:

Mur-ra-mai: The name of a round ball, about the size of a cricket-ball, which the Aborigines carry in a small net suspended from their girdles of opossum yarn. The women are not allowed to see the internal part of the ball; it is used as a talisman against sickness, and it is sent from tribe to tribe for hundreds of miles on the sea-coast, and in the interior; one is now here from Moreton Bay, the interior of which a black showed me privately in my study, betraying considerable anxiety lest any female should see its contents.

After unrolling many yards of woollen cord made from the fur of the opossum, the contents proved to be a quartz-like substance of the size of a pigeon's egg, he allowed me to break it and retain a part. It is transparent like white sugar-candy; they swallow the small crystalline particles which crumble off as a preventative of sickness. It scratches glass, and does not effervesce with acids. From another specimen the stone appears to be agate of a milky hue, semi-pellucid, and strikes fire. The vein from which it appears broken off is one inch and a quarter thick. A third specimen contains a portion of cornelian, partially crystallized, a fragment of chalcedony, and a fragment of a crystal of white quartz.

And again in Mitchell's Expeditions into Australia, volume 2 page 338: In these girdles the men, and especially their coradjes or priests, frequently carry crystals of quartz or other shining stones, which they hold in high estimation, and very unwillingly show to anyone; invariably taking care, when they do unfold them, that no woman shall see them.

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### FORMS ON MAKING VOWS AND PLEDGES.

Genesis chapter 24 verse 9. And the servant put his hand under the thigh of Abraham his master, and swore to him concerning that matter.

This is exactly the form that is observed in South-western Australia, when the natives swear amity to one another, or pledge themselves to aid one another in avenging a death.

One native remains seated on the ground with his heels tucked under him, in the Eastern manner; the one who is about to narrate a death to him approaches slowly and with averted face, and seats himself cross-legged upon the thighs of the other; they are thus placed thigh to thigh, and squeezing their bodies together they place breast to breast. Both then avert their faces, their eyes frequently fill with tears, no single word is spoken; and the one who is seated uppermost places his hands under the thighs of his friend; having remained thus seated for a minute or two he rises up and withdraws to a little distance without speaking, but an inviolable pledge to avenge the death has by this ceremony passed between the two.

One remarkable custom prevalent equally amongst the most ancient nations of whom any records are preserved, and the modern Australians, is that of naming children from some circumstance connected with their birth or early infancy. Thus in Genesis chapter 30 verse 11: And Leah said, A troop cometh, and she called his name Gad; etc. etc. etc.

Burckhardt observed the same custom among the Bedouins and says:

A name is given to the infant immediately on his birth; the name is derived from some trifling accident, or from some object which had struck the fancy of the mother or any of the women present at the child's birth. Notes on the Bedouins, page 55.

### CUSTOM OF CIRCUMCISION.

The natives of the Gulf of Carpentaria, and also those on the eastern shores of St. Vincent's Gulf, practise the rite of circumcision. That is, this remarkable rite is known to be observed in two points of the

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continent of Australia exactly opposite to one another, and which are separated by a distance of about twelve hundred miles.

### OTHER SCRIPTURAL CUSTOMS.

The injunctions contained in Deuteronomy chapter 23 verses 12 and 13 are literally fulfilled by the natives in several parts of the continent. In addition to my own testimony on this point I will refer to Wilson's Voyage round the World, page 165, where he states:

They are clearly in their manners, and in some respects superior to the Europeans, fulfilling the injunction of Moses in the twelfth and thirteenth verses of the twenty-third chapter of Deuteronomy.

This passage relates to the natives of Raffles Bay on the extreme north of the continent of Australia, whereas I have observed the custom in the South-western parts of Australia.

They also conform strictly to the injunctions in Leviticus chapter 15 verse 19.

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### CHAPTER 17. CHARACTERISTIC ANECDOTES.

The following casual anecdotes, though trivial in themselves, will assist in illustrating some of the peculiarities of the native mind and character.

#### MIAGO'S IMAGINARY SPEECH AS GOVERNOR.

Speech that the native Miago would have addressed to the aborigines of Perth if he had landed as Governor instead of His Excellency Mr. Hutt. He came into my room directly after the Governor had landed, and made this imaginary address.

Yiee, nap yongar Perth bak-ad-jee yuado—Moon-dee Moondee gurrang, gurrang boola: Mir-ga-na, Mir-ga-na gurrang, gurrang boola: Yal-gon-ga, Yal-gon-ga, gurrang, gurrang boola; yarn bal?

Buck-il-bury Wattup gidjee, yam bal gurrang boola?

Bun-bury gurrang, gurrang boola.

Golam-bidie gwab-ba: Mam-me-rup wan-gow-een boola.

Goo-lam-bidie wilgey nab-bow, yago mial, Goo-lam-bidie donga broo: mam-me-rup meno been boola, mam-me-rup gurrang gaduck, golambidie gid-jee; Dule.

Waumma Governor yool: yahi Perth yongar bak-ad-jee yu-a-do; gwab-ba-litch.

#### MIAGO'S SPEECH AS GOVERNOR.

Henceforth this people of Perth must not fight. Moon-dee, Moon-dee, you are always quarrelling. Mir-ga-na, Mir-ga-na, you are always quarrelling. Yal-gon-ga, Yal-gon-ga, you are quarrelsome—what is the reason of this?

Bucklebury speared Wattup, what reason had he to be in such a passion (or, why was he so very angry)?

Bun-bury, you are very quarrelsome.

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The young men behave very well, the old ones are always wrangling.

The young men paint themselves, and the women look at them; the young men are not aware of this, but the old men are very jealous—and being in a passion spear the young men—this is very wrong.

Now another Governor is come, and you people of Perth must fight no more. This is very good.

### WARRUP'S ACCOUNT OF HIS JOURNEY WITH MR. ROE.

The following is Warrup's account of his journey with Mr. Roe in search of the party left by me under Mr. Walker. (See above.):

1st day.

At Dundalup we ate fish; then onwards, onwards, onwards, till we slept at Neerroba.

2nd day.

Onwards, onwards, till we reached Nowergoop, where the horses drank water; then onwards, onwards, onwards, until Manbabee, where we ate flesh and bread. Onwards, onwards, onwards, until Yungee, where we shot ducks, and the horses drank water. Onwards, onwards, onwards, onwards, to Boongarrup, where we slept one sleep.

3rd day.

Onwards through a forest, onwards through a forest, onwards through a forest. We slept at Neergammy, a pleasant resting-place; the land was good, the herbage good; pleasant was our resting-place, and our hut was good.

4th day.

Onwards, onwards, onwards, we entered a woody country. Onwards, through a forest, onwards through a forest; we now see the waters of Kajeelup: we eat flesh and bread. Onwards through the forest, onwards through the forest, onwards through the forest. We

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see the tracks of natives; we shout aloud, and then proceed conversing with natives; they sit down.<sup>53</sup>

Onwards go we, onwards, onwards, onwards; the horses drink water; by-and-bye we see tracks. Onwards, onwards, onwards; we see a large water; we shoot ducks. On the one side we see two waters, on the other side one water we see. Onwards, onwards, onwards, onwards, onwards; we see no other water. Onwards through the forest, onwards through the forest, onwards through the forest; we see a river. You had here eaten freshwater mussels: at this river we sleep. Barramba is the place's name.

5th day.

Onwards through the forest, through the forest, through the forest, through the forest onwards; water we see not. Through the forest onwards; through the forest onwards; we see a water, but a worthless water. Yours and Kaiber's footsteps we see. Here there is no grass. You had here shot a bird—a cockatoo you shot. Maribara was this place's name.

Onwards through the forest, through the forest onwards, through the forest onwards; we see no other water; the herbage is worthless. We still go onwards, onwards through the forest. We see natives; a few natives we see: the men are two, the women one, the children two. We see the place called Nowergup.

We say, "Where is there water? here the water is bad." The natives say, "Yonder the water is good, here it is bad: at Boranyup the water is good."

We go onwards, onwards, onwards: at Boranyup we sleep; rain falls as we sleep at Boranyup.

6th day.

Onwards through the forest, onwards through the forest, onwards through the forest some of the others sit down; Auger sits down; Hunt sits down. Mr. Roe, Mr. Spofforth, and I on horseback, go onwards, onwards, onwards, onwards, through the forest onwards, through the forest onwards, through the forest onwards, through the forest onwards. We see the sea; then onwards, onwards, onwards;

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along the sea-shore onwards, along the sea-shore onwards, along the sea-shore onwards. We see the tracks of white men.

Then we turn back again, away we go back again, back again away; through the forest away, through the forest away, through the forest away; back again. We move, move, till we sit at Boranyup; we then eat kangaroo; Hunt and Auger had brought it in. At Boranyup we lie down: we sleep.

7th day.

The next day away, away, away, away, returning, returning, on our tracks returning, on our tracks returning, on our tracks returning. At Barramba we sit down: we eat bread and meat; they eat freshwater mussels; the natives eat not freshwater mussels.

Away, away, away, away, away; we see the water of Djunjup; we shoot game. Away, away, away, through a forest away, through a forest away; we see no water. Through a forest away; along our tracks away, along our tracks away, along our tracks away, along our tracks away. We sleep at Ka-jil-up: rain falls; the water here is good: the horses feed, well did the horses feed.

8th day.

Away, away; along our tracks away, along our tracks away; hills ascending: then pleasantly away, pleasantly away, away; through a forest away, through a forest away, through a forest away; we see a water—the water of Goonmarrarup. Along the river away, along the river away; a short distance along the river we go: then away, away, away, through a forest away; a short distance through a forest we go.

Then along another river away, away; we cross the river; away, a short distance away. At Neergammy we sleep, raising huts.

The others continue returning; we go away, away: in the forest we see no water; we see no footsteps; we see some papers, the papers put by Mr. Mortimer we see: still we go onwards, along the sea away, along the sea away, along the sea away: through the bush away, through the bush away: then along the sea away, along the sea away. We see white men—three of them we see; they cry out, "Where is water;" water we give them—brandy and water we give them. We sleep near the sea.

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Away, away go we (I, Mr. Roe, and Kinchela) along the shore away, along the shore away, along the shore away. We see no fresh water; along the shore away, along the shore away. We see a paper, the paper of Mortimer and Spofforth. Away we go, away, away, along the shore away, away, away, a long distance we go. I see Mr. Smith's footsteps ascending a sandhill, onwards I go regarding his footsteps. I see Mr. Smith dead. We commence digging the earth.

Two sleeps had he been dead; greatly did I weep, and much I grieved. In his blanket folding him, we scraped away the earth.

We scrape earth into the grave, we scrape the earth into the grave, a little wood we place in it. Much earth we heap upon it, much earth we throw up. No dogs can dig there, so much earth we throw up. The sun had just inclined to the westward as we laid him in the ground.

The following are extracts from a journal kept by me whilst resident at King George's Sound.

### ROBBERY BY PEERAT'S WIVES. TRANSACTIONS WITH THE NATIVES IN A CASE OF POTATO STEALING.

Thursday January 23.

Directly after breakfast a soldier came to me with a complaint that the natives had last night robbed his garden in the settlement of nearly one hundred weight of potatoes; I was determined to have here no repetition of scenes similar to what had recently taken place; and therefore resolved to act promptly and vigorously upon this first offence.

My first object was, in my punishment, not to involve the innocent and guilty together, which is too often done by the Europeans in these colonies.

I therefore got hold of an intelligent native of the name of Moyee-e-nan, and, accompanied by him, visited the garden whence the potatoes had been stolen; he found the tracks of three natives and, availing himself of the faculty which they possess of telling who has passed from their footmarks, he informed me that the three thieves had been the two wives of a native of the name Peerat, and a little boy named Dal-be-an, the son of Peerat. Being now well acquainted



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with the natives I was well satisfied that this evidence was of the most conclusive nature, and proceeded to act upon it by trying to arrest the delinquents; but I found that they had, immediately after committing the theft, walked off into the bush, thereby hoping to avoid suspicion and with the intention of remaining absent until the affair had blown over.

### MEASURES FOR APPREHENDING THEM.

My mind was soon made up to pursue my friend Peerat and his fugitive wives, but it was necessary that I should proceed with great caution in order not to alarm the guilty parties when they saw us approaching, in which case I should have had no chance of apprehending them; and I did not intend to adopt the popular system of shooting them when they ran away. I therefore determined to take no Europeans, but only four natives who could track the delinquents.

Previously however to my quitting the town one gentleman joined me, and thus reinforced we started on Peerat's tracks; these we followed for about seven miles in a west by north direction from the settlement, when we suddenly saw the bush set on fire and thus became aware of our proximity to a party of natives. My European friend was here unfortunately taken ill, and, as the natives were evidently more numerous than I expected to have found them, I was sorry to lose his services at this period; he however faithfully promised to await my return, and I thus knew that I had a point d'appui to retire on in the event of anything taking place.

Accompanied by the natives I now pressed forward in the direction of the fire, and, after proceeding for about two miles further in a west by north direction, I fell in with several natives, one of whom was old Tooleegatwalee, well known in the settlement. I at once intimated to Mr. Tooleegatwalee and his friends the object of my mission; I told them that Peerat's wives and son had stolen potatoes, that I had come out to make them prisoners, that if they were given up to me they should only undergo the regular punishment for petty theft; but if they were not delivered over that I would stop the regular allowance of flour which was issued to all the natives every two months, thus punishing them all; and that I would moreover return home, and then come out with a party of soldiers and fire upon Peerat and his party wherever I found them. This last part of

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my announcement was made in a very decided tone, and with a most ferocious look.

### NATIVE DELIBERATIONS.

The natives hereupon entered into a deliberation amongst themselves, and eventually were unanimously agreed on several points, as follows:

1. That stealing potatoes was a very heinous offence, more particularly in women.
2. That women were notorious thieves, and altogether worse characters than men.
3. That beating women was an every-day occurrence.
4. That losing flour was a great bore; and
5. That in consequence of the above considerations, they would give Peerat, his wives, and son, up to me.

Each of these propositions was lengthily discussed by them, but when they were all agreed to, they came in a body and asked me, did I speak the truth, and lie not, when I said that I myself was not angry with Peerat and his wives, and that they should not be killed but only slightly punished? I assured them that I told the truth, and lied not. We then proceeded in a body in search of Peerat, whom we found with some more natives about half a mile further on.

### DISCUSSION WITH PEERAT.

He waited quietly to receive us, not having indeed the slightest idea of what was the object of my unexpected visit; when however he heard what I wanted he abused his wives in most unmeasured terms, and assured me that he would thrash them soundly, but as to giving them up prisoners, or his son either, that he declared he would not do; and then very openly and fairly challenged any one of the other natives, or all of them together, to take him up, assuring them that he would spear the first man through the heart that attempted to lay a finger on him. I interfered so far in this dispute as to announce to Peerat that I considered my own person as sacred,

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and I then cocked both barrels of my double-barrelled gun and concluded by assuring him I should shoot him if he resisted me.

All native altercations are vociferous and noisy in the extreme, and are usually accompanied with a great deal of running and leaping about and quivering of spears; these circumstances I now took advantage of, and, whilst the others threatened to spear one another in all imaginable places, I wended my solitary way towards Peerat's fire, where I discovered Master Dalbean, but could see nothing whatever of the ladies, who, I presume, were absent digging roots.

### HIS PLEADINGS FOR HIS SON.

The young native was seized hold of before he could attempt to escape, and, as I told him if he now moved I should shoot him, he accompanied me very quietly; the others meanwhile capering about and abusing one another in the distance. Peerat however soon found out what had taken place and came running after me. These natives are always ardently attached to their children, and this the boy's father now evinced in the strongest manner: he first of all declared that the boy had been asleep with him, and that it was the mother only who had stolen; and he produced about a dozen witnesses who all asserted that this was the case. I however refuted this evidence by mentioning the fact of his footmarks being in the garden. They then urged that Peerat's second wife had also been engaged in the theft, and that she was just the size of the boy; this however again was over-ruled from the fact of her footmarks having been also seen there.

### PEERAT'S SON SECURED.

The father now urged upon me the youth of the boy, and that he was under the influence of the mother, and then fairly wept upon his child's neck, who begged his father, and all the other natives by name, to save him. I was now holding him by the wrist, for the feeling of the public began at this affecting exhibition to turn against me, even my own natives urging me to let the little fellow go; had I followed the dictates of my own heart I should have done so, but I knew that by being in this instance very determined I should effect eventually much good. I therefore held fast by my prisoner. I now saw some of the other natives giving Peerat spears, which is always a sign that they espouse a man's quarrel and expect him to make use of the weapons they give him. As matters therefore now were rather

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a serious aspect, I again told Peerat that I personally had no cause of quarrel with him, but that I was resolved not to allow either the natives to wrong the Europeans or the Europeans to wrong the natives; that it was far better for the natives themselves that I, an impartial person, should see that they were properly punished for theft, than that the Europeans should fire indiscriminately upon them, as had lately been done in another quarter; that I should now talk no more, but that if he did not instantly take himself off and bring his wives in to the settlement to be punished I would shoot him. He proceeded again to answer me, but I cut him short by saying that if he spoke again I would shoot him at once; I thus had the last speech and therefore, as a matter of course, was in possession of the public favour: Peerat was consequently hurried off by his friends, whilst myself, the young prisoner, and two of the natives who had accompanied me, started on our return for the settlement.

Although the affair had so far terminated well I was by no means sure that Peerat might not after my departure induce the others to attempt a rescue. I therefore hurried on to the spot where I had left my European friend, but I only found a slip of paper on a tree, with the following words on it: "Returned slowly to the settlement." We moved rapidly on again and reached Albany without further adventure, and on our arrival I lodged Dalbean in the jail.

January 24.

Peerat did not bring in his wives, and to all the solicitations which were offered me on the part of the natives for the release of my little prisoner I answered that, when Peerat's wives were brought in and given over to the hands of justice, I would punish the boy and release him; but if the other delinquents were not given up I should conceive it to be a sign that the natives were not satisfied with my decision, and therefore send the boy on to Swan River to be tried. I further added that, if Peerat did not in the course of the next day appear with his wives, I should cease to act as mediator, and taking a party of soldiers would go out and apprehend him.

HIS ATTEMPT TO ESCAPE.

January 25.

This morning information was given me that little Dalbean had made an attempt to break out of jail. I therefore went up to the jail

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with another magistrate and found that the little fellow had yesterday, during the absence of the turnkey, taken up a loose stone from the floor and had battered a hole in the door with it. It evinced altogether more strength and determination than one could have supposed such a boy to have been endowed with. When I taxed him with it he stoutly denied it, asserting that whilst he was asleep sorcerers from the north, who had a spite against him, had entered the cell through some airholes in the wall and had done this; and in spite of all our cross-questioning and charging him with falsehood he still persisted in the same tale, and really appeared to think that he could persuade us of the truth of the assertion. I told him that it was his duty to have taken care that these sorcerers had not injured the door, and that in future if he did not give the alarm when they came he should be well whipped for neglect, and that in the meantime I had a great mind to have him whipped for telling a story; I however satisfied myself by giving him a severe lecture upon the crime of lying. He defended himself upon this head by ingenious arguments, altogether overlooking the abstract question of whether lying was a virtue or a vice, and defending himself solely upon the plea of its general usefulness and prevalence in the world. I got rather worsted in the argument, and therefore, confining myself to admonitions and a few common-place maxims, I departed.

### PEERAT'S WIVES SURRENDERED. THEIR PUNISHMENT.

In the course of the forenoon Peerat presented himself at my window. The tale he told was a very pitiful one. He had two wives, and to govern them both required no ordinary ability; he assured me that he had beaten them both soundly, but notwithstanding he could not induce them to come into the settlement until, finally losing his temper, he had threatened to spear them, and had thus induced them to follow him; he assured me that he had done nothing but weep and lament since he had last seen me, at one time for the loss of his son, and then again at the obstinacy and bad temper of his wives, and as some recompense for his sufferings he begged to be allowed to beat his wives himself.

I told him to bring them at once to the garden they had robbed, and then, followed by several natives, I repaired to the appointed place. The native women soon appeared, dreadfully cut and mangled from the beating they had already suffered. One was a nice-looking girl, about fourteen, but an incorrigible thief. Peerat threw back his skin to give his arm fair play, and then, brandishing his meerro, was

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going to hit her a tremendous blow upon the head, which must have laid it open. The poor girl stood with her back towards her husband, trembling and crying bitterly. I caught Peerat's arm, picked up a little switch from the ground, and told him to beat her on the shoulders with that. He gave her two slight blows, or rather taps, in order to know where it was I meant him to strike; but the poor girl cried so bitterly from fear that I stopped him, told her that for this time she should be pardoned, and then called the other woman up, but she had already been severely beaten and had at that moment a little child sitting on her shoulder, who cried piteously when he saw his mother weeping, so I let her also go free. Before they started however I gave them and the assembled natives a lecture, talking to them in a ferocious style about my future intentions in the event of robbery being committed, and warning them not to judge of me from my present clemency.

During the five months I had been at King George's Sound this was the first act of petty theft, or indeed of theft of any kind, committed by the natives; there had on several occasions been as many as two hundred in the settlement who had no means of subsistence but a chance job from the colonists, and the spontaneous productions of the earth, yet during that period the only criminals had been those above mentioned, namely, a woman, a girl, and a boy, who had rooted up some potatoes from a retired garden, and they had even purposely left the large potatoes and had only taken away the small ones, in the hope that by so doing they would lessen the crime.

### RELEASE OF PEERAT'S SON.

In the afternoon I walked up to the jail attended by Peerat, his wives, and a crowd of natives, to release little Dalbean. Peerat and myself alone entered the jail; I told the jailor to hand him the whip, he took it, and said, "Yes, yes, I will strike him; let not another beat him, Governor."

The door of the cell was then opened and the little boy was led out: his father ran up to him, caught him in his arms, and began kissing him; having done this he told him he was going to beat him. The little fellow did not answer a word, but, standing as firm and erect as possible, presented his back to him, the father gave him one blow, and it was ended—justice was satisfied; the criminals had surrendered to salutary laws, of which they had but a vague and undefined knowledge. It was their first offence; I explained to them

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the nature of the laws they had broken, warned them to be careful in their future conduct, and let them go. Little Dalbean, directly we got outside the jail, walked up to me, took my hand, and squeezed it, and then turned to his mother; he just looked at her, she cried, but did not dare to kiss him, or to show any symptom of emotion; and the whole party, after showering thanks innumerable upon my head, moved off, saying, "What a good fellow—what a good fellow;" or, to give a literal translation, "One good man—one good man."

Sunday January 26.

Old Manniotte, a native dressed in an old uniform, attended the church service as usual this day and was apparently as attentive as any other member of the congregation.

### JUDICIAL CASE OF ASSAULT.

February 14.

This evening a native came up to me as I was in the Commissary's house, and said: "Djanga kain nganya goree bomb-gur"; "A white man has just struck me." At the same time he showed me his side which was severely bruised. I accompanied him to the beach and there found a number of liberty men from some American whalers walking about. There were also several natives on the beach who were in a state of great excitement, and came hurrying up to me. I had sent for the constable, and as I was coming up I saw a sailor moving off to the boats, on which the natives all shouted out, "Now, now, walk away."

The natives were soon satisfied that strict justice would be done them, and as the sailor who had struck the native was a man belonging to the Russel, commanded by Captain Long, who had previously taken me to Shark Bay, it was arranged with him that the offender should be brought before me at 11 o'clock the next day to answer the charge.

February 15.

This morning Taalwurt the native, attended by his various friends, came to me before I went to the Courthouse, to insist upon his right to speak first, as he appeared to think that a great deal depended upon his having this advantage over his opponent. I explained to

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him that, as plaintiff, this right of course belonged to him, and he thereupon withdrew, followed by his adherents. At the appointed hour I repaired to the Courthouse and found the natives assembled; the Europeans had not yet arrived. I called therefore upon Taalwurt for an information, which was as follows:

### THE ACCUSATION. ATTEMPTS AT ELOQUENCE. ADJUDICATION OF THE CASE.

Colony of Western Australia, to wit: The information and complaint of Taalwurt Tdondarup, of Albany, in the said Colony, made before me, George Grey, Esquire, one of H.M. Justices of the Peace in and for the said Colony, the fifteenth day of February, in the year of our Lord one thousand eight hundred and forty.

The said Taalwurt Tdondarup complaineth and saith:

“Nganya kype yoor-ril gool-gur, boye bomb-gur.”

“I in the water carelessly walked along, a stone struck me.”

But at this point his eloquence totally deserted him, and he was pulled back by his friends, who pushed forward another native, and who stated as follows:

Lindoll Mongalung saith: “Wal-bur wat-to Taalwurt: Djanga Taalwurt kyle-gut bomb-gur.

“Taalwurt djanga neyp bomb-gur, kyle-gut Taalwurt neyp bomb-gur: Waum djanga Taalwurt matta boorn boola bomb-gur: Taalwurt yoor-ril watto, waum djunga nar-rail ngob-barn boye koombar bomb-gar.”

“Along the beach was walking Taalwurt; one of the dead struck him under the ear. Taalwurt then very slightly struck this one of the dead; under the ear Taalwurt very lightly struck him. Another of the dead then struck Taalwurt very forcibly on the legs with a stick: Taalwurt went walking along quickly; another of the dead, in the ribs with an exceedingly big stone, extremely hard hit him.”

A murmur of applause ran through the assembled natives. The ngob-burn boye, koom-bur bomb-gur, or exceedingly big-stone, extremely hard hit, was evidently regarded by them as a masterpiece



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of eloquence; and the contrast between this and the neyp bomb-gur, very gently struck, of Mr. Taalwurt, undoubtedly evinced its superiority in their estimation; but as Taalwurt was a stout able fellow, and one by no means given to deal gentle blows when in a passion, I did not place implicit faith in this poetical narration. I had however no doubt that Taalwurt had been first struck and was thus the injured party; but now I knew he had returned the blow I was also sure that he had given at least as good a one as he had taken.

The case therefore did not tell in Taalwurt's favour as much as I expected it would; and on the offender being produced, I found that he was a native from the island of Timor, and not much more civilized than his opponent. The mate of the vessel who came up with him stated that the man bore an excellent character, and that he was willing to make any compensation Taalwurt might require. Before the case came on I had explained this to the King George's Sound native, who compounded the matter for half-a-crown, and then walked off with his friends, fully resolved to get assaulted again upon the first good opportunity.

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### CHAPTER 18. INFLUENCE OF EUROPEANS ON THE NATIVES.

#### CAUSES WHY IT HAS NOT HITHERTO BEEN BENEFICIAL. INFLUENCE OF EUROPEANS ON THE NATIVES.

After reviewing the condition of the Aborigines of Australia as it appears to have existed from time immemorial it will not be irrelevant to examine what change or melioration of their social state is likely to arise from the settlement of a civilised European race among them.

The colony of Swan River differing materially in the elements of its population from those established in the eastern parts of this continent and in Van Diemen's Land, a corresponding change in the intercourse existing between the natives and the white population might naturally be looked for.

In modern times, with the exception of the new settlement of South Australia, no colony has been established upon principles apparently so favourable for the development of the better qualities of the Aborigines, and with so fair a chance of their ultimate civilization.

The apparent advantages are that no convicts have been brought to Western Australia to corrupt the manners of either sex, or to lead them astray by their vicious example; and that a great want of labour has been always felt, so that any assistance that could have been procured from the natives would have been a material benefit to the settlers. With these advantages we might have hoped to see some important results.

I wish not to assert that the natives have been often treated with wanton cruelty, but I do not hesitate to say that no real amelioration of their condition has been effected, and that much of negative evil and indirect injury has been inflicted on them.

The first great fault committed was that no distinct rules and regulations were drawn up for the protection of the Aborigines. Their land is taken from them, and the only benefit given in return is that they are made British subjects, that is, having a right to the protection of British Laws, and at the same time becoming amenable to them.

#### WRETCHED STATE OF THE NATIVE POPULATION.

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All past experience has shown that the existence of two different races in a country, one of which, from any local circumstances, is considered inferior to the other, is one of the greatest evils under which a nation can labour; a more striking instance of which could not be adduced than is shown in the present state of the free coloured population in America.

In contemplating, then, the future destiny of the Australian races, at the same time laying aside all thought of their amalgamation with Europeans, the prospect is most melancholy. Only two cases can arise; either they must disappear before advancing civilization, successively dying off ere the truths of christianity or the benefits of civilization have produced any effect on them, or they must exist in the midst of a superior numerical population, a despised and inferior race; and none but those who have visited a country in which such a race exists can duly appreciate the evils both moral and physical which such a degraded position entails upon them.

### CAUSES OF THEIR DEPRESSED CONDITION. PREJUDICES AGAINST THEM.

If we enquire into the causes which tend to retain them in their present depressed condition we shall find that the chief one is prejudice. The Australians have been most unfairly represented as a very inferior race, in fact as one occupying a scale in the creation which nearly places them on a level with the brutes, and some years must elapse ere a prejudice so firmly rooted as this can be altogether eradicated, but certainly a more unfounded one never had possession of the public mind.

### INADEQUACY OF SUPPORT BY LABOUR.

Amongst the evils which the natives suffer in their present position one is an uncertain and irregular demand for their labour, that is to say, they may one day have plenty of means for exerting their industry afforded them by the settlers, and the next their services are not required; so that they are necessarily compelled to have recourse to their former irregular and wandering habits.

Another is the very insufficient reward for the services they render. As an example of this kind I will state the instance of a man who worked during the whole season as hard and as well as any white man at getting in the harvest for some settlers, and who only

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received bread and sixpence a day whilst the ordinary labourers would earn at least fifteen shillings. In many instances they only receive a scanty allowance of food, so much so that some settlers have told me that the natives left them because they had not enough to eat.

The evil consequence of this is that a native, finding he can gain as much by the combined methods of hunting and begging as he can by working, naturally prefers the former and much more attractive mode of procuring subsistence to the latter one.

Many of the natives have not only a good idea of the value of money but even hoard it up for some particular purpose; several of them have shown me their little treasure of a few shillings, and have told me it was their intention to save more until they had enough to buy a horse, a gun, or some wished-for article, but their improvidence has always got the better of their thriftiness, and this sum has eventually been spent in treating their friends to bread and rice.

### EVIL EFFECTS FROM THEIR FEROCIOUS CUSTOMS REMAINING UNCHECKED.

Another evil is the very extraordinary position in which they are placed with regard to two distinct sets of laws; that is, they are allowed to exercise their own laws upon one another, and are again held amenable to British law where British subjects are concerned. Thus no protection is afforded them by the British law against the violence or cruelty of one of their own race, and the law has hitherto only been known to them as the means of punishment, but never as a code from which they can claim protection or benefit.

The following instances will prove my assertion: In the month of October 1838 I saw early one morning some natives in the public street in Perth, in the act of murdering a native woman, close to the store of the Messrs. Habgood; many Europeans were present, amongst others a constable; but there was no interference on their part until eventually the life of the woman was saved by the courage of Mr. Brown, a gardener in Perth, who rushed in amongst the natives and knocked down the man who was holding her; she then escaped into the house of the Messrs. Habgood, who treated the poor creature with the utmost humanity. She was however wounded in several places in the most severe and ghastly manner.

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A letter I received from Mr. A. Bussel (a settler in the southern part of the colony) in May 1839 shows that the same scenes are enacted all over it. In this case their cow-keeper (the native whose burial is narrated above) was speared by the others. He was at the time the hired servant of Europeans, performing daily a stated service for them; yet they slew him in open daylight, without any cause of provocation being given by him.

Again, in October, 1838, the sister of a settler in the northern district told me that, shortly before this period, she had, as a female servant, a most interesting little native girl, not more than ten or eleven years of age. This girl had just learned all the duties belonging to her employment, and was regarded in the family as a most useful servant, when some natives, from a spirit of revenge, murdered this inoffensive child in the most barbarous manner, close to the house; her screams were actually heard by the Europeans under whose protection and in whose service she was living, but they were not in time to save her life. This same native had been guilty of many other barbarous murders, one of which he had committed in the district of the Upper Swan, in the actual presence of Europeans. In June 1839 he was still at large, unmolested, even occasionally visiting Perth.

### CAUSES OF THEIR ATTACHMENT TO THEIR ROVING AND SAVAGE LIFE.

Their fondness for the bush and the habits of savage life is fixed and perpetuated by the immense boundary placed by circumstances between themselves and the whites, which no exertions on their part can overpass, and they consequently relapse into a state of hopeless passive indifference.

I will state a remarkable instance of this: The officers of the *Beagle* took away with them a native of the name of Miago, who remained absent with them for several months. I saw him on the north-west coast, on board the *Beagle*, apparently perfectly civilized; he waited at the gun-room mess, was temperate (never tasting spirits) attentive, cheerful, and remarkably clean in his person. The next time I saw him was at Swan River, where he had been left on the return of the *Beagle*. He was then again a savage, almost naked, painted all over, and had been concerned in several murders. Several persons here told me, "you see the taste for a savage life was strong in him, and he took to the bush again directly." Let us pause for a moment and consider.

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Miago, when he was landed, had amongst the white people none who would be truly friends of his. They would give him scraps from their table, but the very outcasts of the whites would not have treated him as an equal, they had no sympathy with him, he could not have married a white woman, he had no certain means of subsistence open to him, he never could have been either a husband or a father if he had lived apart from his own people; where amongst the whites was he to find one who would have filled for him the place of his black mother, whom he is much attached to? what white man would have been his brother? what white woman his sister? He had two courses left open to him: he could either have renounced all natural ties and have led a hopeless, joyless life amongst the whites, ever a servant, ever an inferior being; or he could renounce civilization and return to the friends of his childhood, and to the habits of his youth. He chose the latter course, and I think that I should have done the same.

### SUGGESTIONS ON THE MEANS OF PROMOTING THEIR CIVILIZATION.

The information I had collected regarding the Aborigines of Western Australia encouraged me to address a report to Lord John Russell, the Secretary of State for the Colonies, embracing the general principles which I considered would best promote the civilization of the race. This report having been approved, copies of it were sent to the Governors of the Australian and New Zealand settlements, and with a transcript of it I shall now conclude my work:<sup>54</sup>

Mauritius, June 4 1840.

MY LORD,

I have the honour to submit to your Lordship a report upon the best means of promoting the civilization of the aboriginal inhabitants of Australia, which report is founded upon a careful study of the language, prejudices, and traditional customs of this people.

Feeling anxious to render this report as complete as possible I have delayed transmitting it to your Lordship until the latest possible period; portions of it have in the interim been laid before some of the local governments in Australia, and a few of the suggestions contained in it have been already acted upon.

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But as so small a portion of Australia is as yet occupied, and the important task of so conducting the occupation of new districts as to benefit the aborigines in the greatest possible degree yet remains to be performed, I have thought that it would be agreeable to your Lordship to be put in possession of all such facts relating to this interesting subject as are at present known.

None but general principles, equally applicable to all portions of the continent of Australia, are embodied in this report; and I am particularly solicitous that that portion of it which commences at the 21st paragraph should receive consideration from your Lordship, as the whole machinery required to bring this plan into operation now exists in the different Australian colonies, and its full development would entail no expense whatever upon either the Home or local Governments.

I have, etc.,

(Signed) G. GREY,

Captain 83rd Regiment,

Commanding Australian Expedition.

Right Honourable Lord John Russell, etc. etc. etc.

### REPORT UPON THE BEST MEANS OF PROMOTING THE CIVILIZATION OF THE ABORIGINAL INHABITANTS OF AUSTRALIA.

1. The aborigines of Australia having hitherto resisted all efforts which have been made for their civilization, it would appear that, if they are capable of being civilized, it can be shown that all the systems on which these efforts have been founded contain some common error, or that each of them involved some erroneous principle; the former supposition appears to be the true one, for they all contained one common element, they all started with one recognized principle, the presence of which in the scheme must necessarily have entailed its failure.

2. This principle was that, although the natives should, as far as European property and European subjects were concerned, be made amenable to British laws, yet so long as they only exercised their

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own customs upon themselves, and not too immediately in the presence of Europeans, they should be allowed to do so with impunity.

3. This principle originated in philanthropic motives and a total ignorance of the peculiar traditional laws of this people, which laws, differing from those of any other known race, have necessarily imparted to the people subject to them a character different from all other races; and hence arises the anomalous state in which they have been found.

4. They are as apt and intelligent as any other race of men I am acquainted with; they are subject to the same afflictions, appetites, and passions as other men, yet in many points of character they are totally dissimilar to them; and, from the peculiar code of laws of this people, it would appear not only impossible that any nation subject to them could ever emerge from a savage state, but even that no race, however highly endowed, however civilized, could in other respects remain long in a state of civilization if they were submitted to the operation of such barbarous customs.

5. The plea generally set up in defence of this principle is that the natives of this country are a conquered people, and that it is an act of generosity to allow them the full power of exercising their own laws upon themselves; but this plea would appear to be inadmissible; for, in the first place, savage and traditional customs should not be confounded with a regular code of laws; and secondly, when Great Britain insures to a conquered country the privilege of preserving its own laws, all persons resident in this territory become amenable to the same laws, and proper persons are selected by the Government to watch over their due and equitable administration; nothing of this kind either exists or can exist with regard to the customs of the natives of Australia; between these two cases then there is no apparent analogy.

6. I would submit therefore that it is necessary from the moment the aborigines of this country are declared British subjects, they should, as far as possible, be taught that the British laws are to supersede their own, so that any native who is suffering under their own customs may have the power of an appeal to those of Great Britain; or, to put this in its true light, that all authorized persons should, in all instances, be required to protect a native from the violence of his fellows, even though they be in the execution of their own laws.



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7. So long as this is not the case the older natives have at their disposal the means of effectually preventing the civilization of any individuals of their own tribe, and those among them who may be inclined to adapt themselves to the European habits and mode of life will be deterred from so doing by their fear of the consequences that the displeasure of others may draw down upon them.

8. So much importance am I disposed to attach to this point that I do not hesitate to assert my full conviction that, whilst those tribes which are in communication with Europeans are allowed to execute their barbarous laws and customs upon one another, so long will they remain hopelessly immersed in their present state of barbarism: and, however unjust such a proceeding might at first sight appear, I believe that the course pointed out by true humanity would be to make them from the very commencement amenable to the British laws, both as regards themselves and Europeans; for I hold it to be imagining a contradiction to suppose that individuals subject to savage and barbarous laws can rise into a state of civilization which those laws have a manifest tendency to destroy and overturn.

9. I have known many instances of natives who have been almost or quite civilized being compelled by other natives to return to the bush; more particularly girls who have been betrothed in their infancy and who, on approaching the years of puberty, have been compelled by their husbands to join them.

10. It is difficult to ascertain the exact effect the institutions of a country produce upon the character of its inhabitants; but it may be readily admitted that, if two savage races of equal mental endowments, and with the same capacity for civilization, were subject to two distinct sets of laws, the one mild and favourable to the development of civilization, the other bloodthirsty and opposed to it, the former race might gradually be brought to a knowledge of Christianity and civilization, whilst precisely similar efforts made with regard to the latter might be attended with no beneficial result.

11. Again, it would be unfair to consider the laws of the natives of Australia as any indication of the real character of this people; for many races who were at one period subject to the most barbarous laws have, since new institutions have been introduced amongst them, taken their rank among the civilized nations of the earth.

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12. To punish the aborigines severely for the violation of laws of which they are ignorant would be manifestly cruel and unjust; but to punish them in the first instance slightly for the violation of these laws would inflict no great injury on them, whilst by always punishing them when guilty of a crime, without reference to the length of period that had elapsed between its perpetration and their apprehension, at the same time fully explaining to them the measure of punishment that would await them in the event of a second commission of the same fault, would teach them gradually the laws to which they were henceforth to be amenable, and would show them that crime was always eventually, although it might be remotely, followed by punishment.

13. I imagine that this course would be more merciful than that at present adopted; namely, to punish them for the violation of a law they are ignorant of, when this violation affects a European, and yet to allow them to commit this crime as often as they like when it only regards themselves; for this latter course teaches them not that certain actions, such, for instance, as murder, etc., are generally criminal, but only that they are criminal when exercised towards the white people, and the impression consequently excited in their minds is that these acts only excite our detestation when exercised towards ourselves, and that their criminality consists not in having committed a certain odious action, but in having violated our prejudices.

14. In the vicinity of towns where there is a certain judicial force, and where, on account of the facility of obtaining food, the natives always congregate, it would, by a steady and determined line of conduct, be comparatively easy to enforce an observance of the British laws; but, even partially to attain this object in the remote and thinly settled districts, it is necessary that each colony should possess an efficient mounted police, a portion of whom should be constantly in movement from district to district, whilst another portion, resident in a central situation, should be ready to act instantly in any direction where their presence was required. I do not apprehend that this body need be numerous, for their utility would depend more on their activity and efficiency than on their numbers. It is absolutely necessary, for the cause of humanity and good order, that such a force should exist; for so long as distant settlers are left unprotected and are compelled to take care of and avenge themselves, so long must great barbarities necessarily be committed; and the only way to prevent great crime on the part of the natives, and massacres of these

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poor creatures as the punishment of such crimes, is to check and punish their excesses in their infancy: it is only after becoming emboldened by frequent petty successes that they have hitherto committed those crimes which have drawn down so fearful a vengeance upon them.

15. The greatest obstacle that presents itself in considering the application of the British laws to these aborigines is the fact that, from their ignorance of the nature of an oath, or of the obligations it imposes, they are not competent to give evidence before a court of justice; and hence in many cases it would be extremely difficult, if not impossible, to obtain evidence on which a prisoner could be convicted.

16. One mode of evading this difficulty would be to empower the court to receive evidence from the natives in all cases relating solely to themselves without the witness being sworn, only allowing testimony of this nature to hold good when borne out by very strong circumstantial evidence; secondly to empower the court always to receive evidence from natives called on by a native prisoner in his defence, such evidence being subject to the before-named restrictions.

17. The fact of the natives being unable to give testimony in a court of justice is a great hardship on them, and they consider it as such; the reason that occasions their disability for the performance of this function is at present quite beyond their comprehension, and it is impossible to explain it to them. I have been a personal witness to a case in which a native was most undeservedly punished, from the circumstance of the natives who were the only persons who could speak as to certain exculpatory facts not being permitted to give their evidence.

18. There are certain forms in our colonial courts of justice as at present conducted which it is impossible to make a savage comprehend. I attended one quarter-sessions at which a number of natives were tried on a great variety of charges. Several of them were induced to plead guilty, and on this admission of their having committed the crime sentence was pronounced upon them. But when others denied their guilt, and found that this denial produced no corresponding result in their favour, whilst at the same time they were not permitted to bring forward other natives to deny it also, and to explain the matter for them, they became perfectly

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confounded. I was subsequently applied to by several intelligent natives to explain this mystery to them, but I failed in giving such an explanation as would satisfy them.

19. The natives being ignorant of our laws, of the forms of our courts of justice, of the language in which the proceedings are conducted, and the sentence pronounced upon them, it would appear that but a very imperfect protection is afforded them by having present in the court merely an interpreter (very often an ignorant man) who knows nothing of legal proceedings and can be but very imperfectly acquainted with the native language: it must also be borne in mind that the natives are not tried by a jury of their peers, but by a jury having interests directly opposed to their own, and who can scarcely avoid being in some degree prejudiced against native offenders. From these considerations I would suggest that it should be made binding upon the local government in all instances (or at least in such instances as affect life) to provide a counsel to defend native prisoners.

20. Some other principal preventives to the civilization of the aborigines, in addition to those I have already stated, are:

1. The existence of an uncertain and irregular demand for their labour: thus they may have one day sufficient opportunity afforded them for the exertion of their industry, whilst the next day their services are not required, so that they are compelled once more to have recourse to their former irregular and wandering habits.

2. Their generally receiving a very inadequate reward for the services they render; this, combined with their natural fondness for the bush, induces them to prefer that mode of subsistence which, whilst it is infinitely more agreeable and less laborious, procures for them nearly as great a reward as living with white people.

3. Their not being taught that different values are attached to different degrees of labour, as well as to the skill and neatness with which it is performed.

21. These impediments might all either be removed or modified in some districts by the establishment of native institutions and schools, but in forming a general plan for their removal which would be equally applicable to all parts of a colony, a very novel difficulty presents itself.

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22. Imagining that a native child is perfectly capable of being civilised, let it also be granted that, from proper preventive measures having been adopted, this child has nothing to fear from the vengeance of the other natives, so that it stands in these respects nearly or altogether in the position of a European.

23. If this native child is a boy who is to pay the individual who undertakes to teach him some calling the fee usually given with an apprentice; who will indemnify this person for the time he spends in instructing the boy before he can derive any benefit from his labour, or for the risk he incurs of the boy's services being bestowed elsewhere as soon as they are worth having?

24. Until this difficulty is got over it appears evident that the natives will only be employed in herding cattle, or in the lowest order of manual labour which requires no skill, and for which the reward they receive will be so small as scarcely to offer an inducement to them to quit their present wandering mode of life.

25. The remedy I would suggest for this evil would have another advantage besides a tendency to ameliorate it, for it would give the settlers a great and direct interest in the aborigines without entailing any expense upon the Government. It is founded on the following fact:

26. The Government, in order to create a supply of labour in the colonies, have been in the habit of giving certain rewards to those individuals who introduced labourers into them. Now it would appear that he who reclaims one of the aborigines not only adds another labourer to those who are already in the colony, but further confers such a benefit on his fellow-settlers by rendering one who was before a useless and dangerous being a serviceable member of the community, that this circumstance alone entitles him to a reward.

27. I would therefore propose that, on the production of the hereafter-named documents, a settler should receive a certificate entitling him to a certain sum, which should either be allowed to reckon towards the completion of location duties, or else as a remission certificate in the purchase of land, or, in lieu of this, a grant of land; and that this sum or grant should be regulated according to a table specifying the various circumstances that are likely to occur, and drawn up by the local government of each place where such regulation should be introduced.

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28. The documents to which I allude are these:

1. A deposition before the nearest magistrate to such settler's house that a native or natives have been resident with him constantly for the last six months, and have been employed in stated species of labour.

2. A certificate from the government resident of the district that, to the best of his belief, such statement is true, for that, on his visiting this settler's house, the stated number of natives were there, and were respectively occupied in the kinds of labour described.

3. A certificate from the protector of aborigines that he has visited this settler's house; that the stated number of natives were resident there, and appeared to be progressing in the knowledge of that branch of industry in which they were respectively stated to be employed.

29. It would be further necessary that any settler who intended to endeavour to reclaim natives should give a short notice to the protector of aborigines previously to the commencement of the first six months.

30. Could this plan be brought into operation the work of the civilization of the aborigines would at once be commenced upon a great scale; it would not be confined to a single institution, but a variety of individuals, endowed with different talents and capacities for this work, would at once be employed on it: it is indeed rather suited and intended for the outskirts of civilization, thinly populated by settlers, than for towns, yet it is applicable to both situations; whilst its direct operation would be to induce the settler adequately to remunerate the native for, as well as to provide him with, a constant supply of labour, and to use every exertion by kind and proper treatment to attach him for as long a period as possible to his establishment.

31. In considering the kinds of labour in which it would be most advisable to engage natives it should be borne in mind that, in remote districts where the European population is small, it would be imprudent to induce many natives to congregate at any one point, and the kinds of labour in which they should be there engaged ought to be of such a nature as to have a tendency to scatter them over the country, and to distribute them amongst the separate establishments.

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32. Whilst in the well-peopled districts, where a force sufficient both to protect and control the aborigines exists, they should be induced to assemble in great numbers, for they work much more readily when employed in masses, and, by thus assembling them on one point, their numbers are diminished in those portions of the colony which have a small European population, and they are concentrated at a spot where proper means for their improvement can be provided.

33. The first of these principles has been strictly attended to in the plan proposed in the 27th and following paragraphs of this report; the second has been carried into successful operation in Western Australia.

34. In order that the work on which the natives are employed in the vicinity of towns should be of the most advantageous nature it is necessary that it should be productive of benefit both to themselves and the Government which employs them, so that it cannot be complained of as a useless expense, whilst at the same time it should be of such a kind as to accord with that love of excitement and change which is so peculiar to this people.

35. Both of these ends would be attained by employing the aborigines either in opening new roads or in repairing old lines of communication; indeed this mode of employment is singularly suited to the habits of this people; they might be kept constantly moving from post to post, thus varying the scene of their operations; one portion of the party might be employed in hunting with kangaroo-dogs, or fishing, in order to supply the others with fresh meat; and the species of labour in which the main body were engaged might, if they wished it, be changed once or twice in the course of the day to prevent their being wearied by the monotonous character of their employment.

### CONCLUSION.

36. Among other enactments which I believe would have a tendency to promote the civilization of the aborigines, and which are applicable to those districts in which for some time a great intercourse has existed between the natives and Europeans, are the following:

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37. That any native who could produce a certificate (from the protector of aborigines) of having been constantly employed at the house of any settler or settlers, for a period of not less than three years, should be entitled to a grant of land, the extent of which should be fixed by the local government of the colony to which such native should belong, and that, if possible, this grant should be given in that district to which this native by birth belonged.

That, in addition to this grant, he should receive a sum of money, the amount of which should also be fixed by the local government, and which should be drawn from the fund raised by the sale of Government lands, and which sum should be expended in goats, poultry, etc., so as to enable the native in some manner to stock his land.

That any native, having only one wife, who produced a certificate of the civil marriage contract having been performed between himself and her, by the resident of the district to which he belonged, should be entitled to a small reward.

That any natives who registered duly the birth of any of their children should be entitled to a small reward.

That some competent person should be paid to instruct two native boys in such a manner as to qualify them to act as interpreters in courts of law, and that as soon as they are found competent they should be employed for this purpose.

I believe that many other regulations, similar to these, would be found to produce a very beneficial effect.



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### APPENDIX.

#### APPENDIX A.

GENEALOGICAL LIST TO SHOW THE MANNER IN WHICH A  
NATIVE FAMILY BECOMES DIVIDED.

Nar-doo-itch or Mo-rel-li, a Ballar-oke, born about A.D. 1735,

had two wives,

Kan-dow-ree, a Ngotak,

and

Bol-ye-ree, a No-go-nyuk.

Kan-dow-ree, had the following children:

Yin-dee-ree, female.

Wun-ya-ree, female.

Kag-a-ree, female.

Yung-al, male.

Wal-luk-wur, male.

These were all Ngotaks.

Three of these children, Yin-dee-ree, Wun-ya-ree, and Kag-a-ree,  
were by Nar-doo-itch's brother, her former husband.

Bol-ye-ree's children were:

Kow-en-ung, female.

No-gong-o, male.

Jee-bar, male.

Koon-a-ber-ra, male.

Ko-teyne, male.

By-er-man, male.

These were all No-go-nyuks.

Kim-be-yen-ung, a Tdon-dar-up, married, amongst other wives,  
Noo-yar, a Ballar-oke.

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Noo-yar's children were:

Yow-at-ung, female.<sup>55</sup>

Kad-jen-ung, female.

Ban-in-yung, female.

Now-ween-gool, female.

These were all Ballar-okés.

In order to show the way in which the different families marry into one another I will now trace up the descendants of some of the male children of Nar-doo-itch by each of his wives.

Yung-al, the son of Nar-doo-itch,

called also

Be-ra-gore,

married:

Ming-an, a Ballar-oke,

Ko-pan, a Nagar-nook,

Yow-at-ung, a Ballar-oke, daughter of Kim-be-yen-ung.

Ming-an's children were:

Book-oop, female.

Yu-yat, male.

Me-kat, female.

Tdan-up, female.

These were all Ballar-okés.

Ko-pan's children were:

E-lar, male.

Wat-up, male.

Bil-yan, male.

Mong-a-na, female.

Wun-daile, female.

These were all Na-gar-nooks.

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Yow-at-ung's children were:

Im-bat, male.

Jil-gar, male.

Gi-mat, male.

Dubin, female.

Boo-yin female.

These were all Ballar-okés.

Jee-bar, a No-go-nyuk, another son of Nar-doo-itch, married:

Kag-a-ree, a Ngotak.

Bar-ri-kan, a Tdondarup.

Kag-a-ree's children were:

Mun-gal-wurt, male.

Ell-yar, male.

Wun-jan-ing, female.

War-ran-ung, female.

Bee-wul-lo, male.

Ngotaks.

Bar-ri-kan's children were:

Djar-a-bung, female.

Nag-a-bung, female.

Yu-gat, male.

Ka-ral-ung, male.

Tdondarups.

Bee-wul-lo, a Ngotak, the son of Jee-bar, married:

Wun-daile, a Na-gar-nook,

Noon-dup, a No-go-nyuk,

Du-bin, a Ballar-oke,

Ek-kan, a Ballar-oke,

Ming-up, a Ballar-oke,

We-jee-bung, a Ballar-oke.

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Wun-daile's children were:

Yen-na, male.

War-rup, male.

Tu-yin, male.

Dow-eer, male.

Wil-gup, female.

Ka-bin-yung, female.

Bate-up, female.

Na-gar-nooks.

Noon-dup's children were:

Mee-nung, male.

Kow-elwurt, male.

Ngar-ra-jil, male.

Kau-mar, male.

Koot-in, male.

Il-gat, male.

No-go-nyuks.

Du-bin had but one child:

Waj-jup, female, a Ballar-oke.

Ek-kan's children are:

Wy-up, male.

Kok-o-bung, female.

Wee-muk, female.

Ballar-okes.

Ming-up has but one child living:

Win-bill, male, a Ballar-oke.

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### APPENDIX B.

#### MOUNT FAIRFAX, THE WIZARD HILLS, AND CHAMPION BAY.

(From the Nautical Magazine for July 1841 page 443.)

The only part of the West coast (to the northward of Swan River) that has been visited by the Beagle is that part immediately to the eastward of the Abrolhos, and it is remarkable from being under the high tableland of Moresby's Flat-topped Range, which is a considerable elevation, and in clear weather is visible from a ship's mast-head at the Abrolhos.

This range of hills extends north-north-west six miles from Mount Fairfax, which, although a detached hill, may be considered its southern extreme. Mount Fairfax is a table-topped hill, the summit of which is an elevated part at its southern edge, and is 590 feet high. It is in latitude 28 degrees 45 1/4 minutes, and longitude 1 degree 3 3/4 minutes west of Swan River, and 4 miles from the coast. To the south-east of Moresby's Flat-topped Range are the Wizard Hills, the highest of which, Wizard Peak, is 640 feet. It is in latitude 28 degrees 49 minutes 37 seconds south and longitude 0 degrees 58 1/2 minutes west of Swan River. For 10 1/2 miles to the northward of Moresby's Flat-topped Range are some remarkable detached ranges of tableland, from 500 to 600 feet high, at the northern extreme of which are the Menai Hills. Some of them show as peaks, but appear only to be the gable ends, as it were, of table-topped ridges.

In latitude 28 degrees 47 minutes south there is a narrow neck of low land projecting about 1 3/4 miles from the coastline, to the northward of which there is good anchorage in Champion Bay.

Point Moore, which is the extreme of this low projection, bears west 13 degrees south (magnetic) from Mount Fairfax, and west 17 degrees north (magnetic) from Wizard Peak. The anchorage is protected from the westward by a reef that extends upwards of a mile to the northward from Point Moore: but half a mile to the northward of the reef is a detached shoal patch which breaks occasionally, between which and the reef there is a passage through which the Beagle passed, and had not less than six fathoms. But perhaps it would be advisable in standing into the bay to pass to the northward of this danger, which may be done by not bringing

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Mount Fairfax to bear to the southward of east 1/4 south (magnetic) until Point Moore bears south.

This bay is open to the northward, but, as the winds from that quarter are not frequent, and then only in the winter season, it may be considered as affording shelter from the prevailing winds on the coast. The water is shoal in the head of the bay, but a good anchorage may be taken three-quarters of a mile off shore in four fathoms sandy bottom, with Point Moore bearing south 50 degrees west and a remarkable bare brown sandhill in the south-east part of the bay, bearing south 31 degrees east. Mount Fairfax will then bear north 87 minutes east, and the north extreme of the reef from Point Moore north 50 minutes west. Wizard Peak is not seen from this anchorage.

South of Point Moore is another bay formed by a continuation of the same reef that shelters Champion Bay from the westward; but it is quite exposed to the prevailing winds. From Champion Bay the coast to the northward is sandy, and fronted by sandhills slightly covered with shrubs. This description of coast continues for nearly twenty miles. In latitude 28 degrees 25 minutes is a remarkable white sand-patch 274 feet above the sea, between two and three miles south of which is a deep ravine where there is probably a stream of fresh water. Here the shore becomes steeper, and rises abruptly from the sea, forming downs about 300 feet high. Native fires were seen in this neighbourhood, and the country had a more fertile appearance than in the vicinity of Champion Bay. This part of the coast is bold too, and is free from outlying dangers, the depth of water from two to three miles off shore being taken between 16 and 29 fathoms. High-water at Champion Bay takes place on change days at 9 hours 30 minutes P.M. nearly, and the range is from 12 to 24 inches. The stream of tide is not perceptible, but there is generally a current along the coast to the north-north-west from half a mile to one mile an hour.

Champion Bay appears to be the only anchorage on the coast between Swan River and Shark Bay: it is preferable to Gage's Road, and may at no very distant period become of importance to Western Australia in consequence of a considerable tract of fine country having lately been discovered immediately to the eastward of Moresby's Flat-topped Range.

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### APPENDIX C.

CONTRIBUTIONS TOWARDS THE GEOGRAPHICAL DISTRIBUTION OF THE MAMMALIA OF AUSTRALIA, WITH NOTES ON SOME RECENTLY DISCOVERED SPECIES, BY J.E. GRAY, F.R.S., ETC. ETC., IN A LETTER ADDRESSED TO THE AUTHOR.

British Museum, 10th July 1841.

MY DEAR SIR,

The very little attention which has hitherto been paid to the distribution of the animals of Australia, and the very incorrect manner in which the habitats of the different species are given in collections and systematic works, have induced me to send you, with the description of the new species recently brought from that country, a table showing at one view the distribution of the different species which have hitherto been recorded as found in Australia, as far as the materials at my disposal will allow me.

I am the more induced to do so as I believe I have now under my care the richest collection of the animals of this country in any Museum; as, besides the specimens which we have been collecting from different quarters, with the kind assistance of Mr. Ronald Gunn, Mr. Harvey, and yourself, we have just purchased a complete series of all the species and varieties brought by Mr. Gould from different parts of this Continent; and these specimens were all marked with the habitat immediately after they were procured.

The first column in the following table indicates the species found in New South Wales, and the east part of the Continent; the number in the column specifying the particular habitats where the species has been observed,

1. Sydney, and its neighbourhood.
2. The Rivers Hunter and Maitland, and Goulburn Plains.
3. Liverpool Plains.
4. Liverpool Range.
5. The Namoi and Mokai Rivers.
6. Bong-Bong.
7. Yarrundi.
8. Interior (generally).

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9. Australian Alps.
10. Murrumbidgee River.
11. Moreton Bay.
12. Clarence River.
13. Port Phillip.
14. Bathurst.
15. Interior of Australia Felix.
16. Murray River.
17. Bayunga River.
18. Darling River.
19. Glenelg River.
20. Port Stevens Mountains.
21. Port Macquarie.

The second column refers to South Australia, and the numbers in it to:

1. Adelaide and its vicinity.
2. Kangaroo Island.
3. The South Coast.
4. Port Lincoln.
5. Murray River.

The third column refers to Western Australia, as:

1. Perth.
2. King George's Sound.
3. Northam.
4. Canning River.
5. Rottneest and Garden Islands.

The fourth column refers to the North-west Coast of Australia:

1. Hanover Bay.
2. Islands in Shark Bay.
3. Dirk Hatterick's Bay.
4. Generally, the peculiar locality not being marked.

The fifth column to the North Coast:

1. Port Essington.



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The sixth column to the Island of Van Diemen's Land, the numbers to:

1. Hobart Town.
2. Circular Head.
3. Bass Strait and King's Island.
4. New Norfolk.
5. Kangaroo Point.
6. Tasman's Peninsula.
7. Launceston.
8. Acteon Island.
9. Mount Wellington.

The seventh column to Norfolk Island, marked Number 1.

PRIMATES. Family Vespertilionidae.

1. *Rhinolophus megaphyllus* Gray. 1:10.
2. *Nyctophilus geoffroyii* Leach ? 1:1 1:7 3:1 6:1.  
*Barbastellus pacificus* Gray.  
*Nyctinomus* — ? Bennett.  
Var. *major* 3:1.

*Scotophilus*.

\* Wings and interfemoral membranes with lines of hairs.

3. *Scotophilus morio*, new species.
4. *S. gouldii*, new species. 1:2 6:7.
5. *S. australis*, new species. 1:1 1:4 2:1 3:4 6:1.

\*\* Wings nearly bald.

6. *S. pumilus*, new species. 1:7.
7. *Molossus australis* 5:1.
8. *Pteropus poliocephalus* Temm. 1:11 1:12.  
*Pt. edwardsii* G. Bennett not Desm.

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FERAE. Family Felidae.

9. *Canis familiaris australasiae*. 1:1 2:1 ?

*Canis Dingo* Blumenb.

Family Phocidae.

10. *Otaria peronii*. 1:1 ?

Family Didelphidae.

11. *Thylacinus cynocephalus* Fischer 6:2.

*Didelphis cynocephalus* Harris.

12. *Diabolus ursinus* 6:1 6:2.

*Didelphis ursina* Harris.

*Sarcophilus ursinus* F. Cuv.

*Dasyurus*.

\* Thumb small, clawless.

13. *D. maculatus* 6:1 6:2.

*Viverra maculata* Shaw.

*Dasyurus macrurus* Geoff.

14. *D. geoffroyii* Gould 1:3.

\*\* Thumb none.

15. *Dasyurus viverrinus* Geoff. 1:1 1:2 1:3 6:1 6:2.

*Didelphis viverrina* Shaw. 1:6.

Var. *Das. maugei* Geoff.

*Phascogale* Temm.

\* Tail end tufted.

16. *Ph. penicillata* Temm. 1:2 1:11 2:1.

*Didelphis penicillata* Shaw 1:3.

*Dasyurus tafa* Geoff.

\*\* Tail conical, end pencilled.

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17. *Ph. minima* Temm. 6:3.  
*Dasyurus minimus* Geoff.  
*Ph. swainsonii* Waterh.
18. *Ph. affinis*, new species. 6:6.
19. *Ph. rufogaster*, new species. 2:1.
20. *Ph. flavipes* Waterh. 1:2 1:3.
21. *Ph. murina* Waterh. 1:2 3:4.
22. *Ph. leucogaster*, new species 3:1.
23. *Myrmecobius fasciatus* Waterh. 3:1.
24. — — ? *rufus* Mitchell.  
Red shrew mouse G. Bennett 1:8 ?

*Perameles*.

a Tail tapering.  
\* Rump banded.

25. *Per. gunnii* Gray 6:1.
26. *Per. fasciata* new species 1:3 2:1.  
\*\* Hair grizzled, ears acute, long.
27. *Per. nasuta* Geoff. 1:1.  
*P. aurita* Mus Par.  
*P. bougainvillii* Quoy.  
\*\*\* Hair grizzled, ears rounded. 3:2.
28. *Per. fusciventer*, new species.
29. *Per. obesula* Geoff. 1:1 ? 3:1 6:4 6:5.  
*Didelphis obesula* Shaw.  
b. Hair soft, tail end tufted, ears very long, Paragalia.

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30. *Per. lagotis* Reid 3:3.
31. *Choeropus ecaudatus* Ogilby 1:16.  
*Perameles ecaudatus* Ogilby.
32. *Phalangista vulpina* Desm. 1:7 1:4 2:2 3:2 3:3 5:1 6:1.  
*Didelphis vulpina* Shaw 1:5 1:10.  
*Didelphis lemurina* Shaw 1:11.  
*Didelphis peregrina* Bodd.  
Var. 1. 3:1.  
Var. 2. 1:5.
33. *Phal. fuliginosa* Ogilby 6:2.  
Var. *grisea*.
34. *Phal. xanthopus* Ogilby 1:19.
35. *Phal. canina* Ogilby 1:2.
36. *Phal. cuvieri* Gray 1:8 ?  
*Ph. cookii* Cuvier.  
*Petaurus cookii* F. Cuv.
37. *Dromicia nana* 6:1.  
*Phalangista nana* Geoff.  
*Phal. gliriformis* Bell.
38. *Hepoona cookii* 1:1 1:3 1:4 3:1 3:2 6:1.  
*Phalangista cookii* Gray 1:7.  
*Phalangista banksii* Gray.  
*Balantia cookii* Kuhl.  
*Phalangista viverrina* Ogilby.
39. *Petaurista taguanoides* Desm. 1:1 1:21.
40. *Petaurista leucogaster* 1:16.  
*Petaurus leucogaster* Mitchell.
41. *Petaurus macrurus* Geoff. 1:8 1:14.  
*Didelphis macrura* Shaw.
42. *Petaurus flaviventer* Desm. 1:3.

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43. *Petaurus breviceps* 1:8.  
*Belideus breviceps* Waterh.

44. *Petaurus sciureus* Desm. 1:1 1:2 7:1.  
*Didelphis sciurea* Shaw. 1:3 1:13.

45. *Petaurus peronii* Desm. ? 1:2.

46. *Acrobates pygmaeus* Desm. 1:8.  
*Didelphis pygmaea* Shaw.

*Macropus*.

\* Tail end simple; fur one-coloured.

47. *Mac. major* Shaw. 1:1 1:4 2:1 6:1 6:9.  
*Macropus giganteus* Shaw. 1:8 1:15.  
*Halmaturus labiatus* Geoff.  
*Halmaturus rufogriseus* Lesson ?  
Var. *Macropus albus* Gray.

48. *Mac. laniger* Lesson 1:5 1:10 2:15.  
*Kangurus rufus* Lesson 1:21 1:19.

49. *Mac. fuliginosus* Lesson 2:2.

\*\* Tail end simple, back coloured.

50. *Mac. lunatus* Gould 3:1.

\*\*\* Tail end clawed. (*Onychogalea*.)

51. *Mac. frenatus* Gould 1:3 1:8.

52. *Mac. unguifer* Gould 4:1.  
*Halmaturus*.

\* Tail long, end slightly tufted.

53. *Hal. parryii* Gray 1:20.  
*Macropus parryii* Bennett 1:3.  
Var. *pallida* Gray.

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54. Hal. manicatus Gould 3:1.

Hal. irma Jourdan.

\*\* Tail simple, back one-coloured.

55. Hal. bennettii Waterh. 4:1.

Hal. ualabatus Gray 4:2 4:3.

Halm. fruticus Ogilby 4:5 4:7.

56. Hal. ualabatus Lesson 1:2.

Halm. lessonii Gray.

57. Hal. elegans 1:6 1:15.

Mac. elegans Lambert.

Hal. ruficollis Lesson, Gould.

58. Hal. billardieri Lesson 6:1 6:2.

Hal. tasmanii Gray 6:3 6:7.

Hal. rufiventer Ogilby.

59. Hal. eugenii Gray 1:1 1:2 2:1 ?

Hal. thetis Lesson.

Kangurus eugenii Desm.

60. Hal. brachyurus Quoy 3:2.

Hal. thylogale brevicaudatus Gray

\*\*\* Tail simple, back streaked.

61. Hal. dorsalis Gray 1:8 1:5 1:17 1:3.

62. Hal. parma Gould 1:1.

63. Hal. derbianus Gray 2:2.

Var. obscurior 3:5.

64. Hal. ? banksianus Lesson 1:1 ?

65. Hal. fasciatus Goldf. 4:2.

Kangurus fasciatus Lesson.

Petrogale.

\* Tail conical, slightly tufted.

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66. *P. robusta* Gould 1:4 1:8.

\*\* Tail end tufted.

67. *P. brachyotis* Gould 4:1.

68. *P. penicillata* Gray 1:3 1:21.  
*Heteropus albogularis* Jourdan.

69. *P. lateralis* Gould 3:1.

70. *Hypsiprymnus minor* Cuv. 1:1 6:1.  
*Macropus minor* Shaw.  
*Hyps. myosurus* Ogilby.

71. *Hyps. ? lesueurii* Quoy 4:3.

72. *Hyps. gilbertii* Gould 3:2.

73. *Lagorchestes leporoides* Gould 1:3 1:5.

*Bettongia* Gray.

\* Tail end blackish.

74. *Bett. setosa* Gray 1:3 1:5.  
*Hypsiprymnus setosus* Ogilby.  
*Hyp. murinus* Ogilby.  
Var. *Bett. penicillata* Gray.

75. *Bett. ogilbii* Gould 3:1.

\*\* Tail end brown, white tipped.

76. *Bett. whitei* Gould 1:1.  
*Hypsiprymnus whitei* Quoy.  
*H. formosus* Ogilby.  
*Hyp. phillipii* Ogilby.

77. *Bett. grayii* 2:4.  
*Hyp. grayii* Gould.

\*\*\* Tail grey, ears black.

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78. *B. rufescens* Gray 1:1.  
*Bett. melanotis* Ogilby.

79. *Phascolarctos fuscus* Desm. 1:1 1:8.  
*Ph. cinereus* Fischer.  
*Lipurus cinereus* Goldf.

80. *Phascolomys ursinus* 1:8 2:1 6:1 6:2.  
*Didelphis ursina* Shaw 1:15 6:3.  
*Wombatus fossor* Geoff.  
*Phasc. fuscus* Desm.  
*Amblotis fossor* Illiger.

Order GLIRES. Family Muridae.

81. *Hydromys chrysogaster* Geoff. 1:3 1:11 3:1 6:1 6:2 6:8.  
*Hyd. leucogaster* Geoff.

82. *Pseudomys australis* Gray 1:3.

83. *Mus setifer* Horsf. 6:1.

84. *Mus lutreola* new species 1:2 2:1 6:5 6:3.

85. *Mus greyii* new species 2:1.

86. *Mus adelaidensis* new species 2:1.

87. *Mus ? platurus* Mitchell 1:18.

88. *Mus ? hovellii* Mitchell 1:17.

89. *Hapalotis albipes* Licht. 1:3 1:9 ?  
*Conilurus destructor* Ogilby 1:18.

90. *Hapalotis mitchellii* 1:16.  
*Dipus mitchellii* Ogilby.

91. *Hapalotis gouldii* new species 3:1.

Order UNGULATA. Family Dasypidae.

92. *Echidna aculeata* 1:4 1:8.



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*Myrmecophaga aculeata* Shaw.  
*Tachyglossus aculeatus* Illiger.  
*Echidna hystrix* Cuv.

93. *Echidna setosa* 6:1 6:2.  
*Ornithorhynchus hystrix* var. Home.  
*Tachyglossus setosus* Illiger.

94. *Platypus anatinus* Shaw 1:1 6:4.  
*Ornithorhynchus paradoxus* Blum.  
*Orn. rufus* and *O. fuscus* Leach.  
*O. crispus* and *elvis* Macgillivray.  
*O. brevirostris* Ogilby.

Order CETAE.

95. *Delphinorhynchus pernettensis* 5:1.

96. *Balaena physalis* 4:1.

Total of species found in each country 1:60 2:18 3:20 4:6 5:3 6:22 7:1.

Total of species peculiar to each country 1:45 2:6 3:12 4:6 5:2 6:11 7:0.

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	1	2	3	4	5	6	7
<b>PRIMATES—Fam. Vespertilionidæ.</b>							
1. Rhinolophus megaphyllus Gray.	10						
2. Nyctophilus Geoffroyii Leach? Barbastellus pacificus Gray. Nyctinomus —? Bennett. Var. major. . . . . Scotophilus.	1, 7		1			1	
* Wings and interfemoral membranes with lines of hairs.							
3. Scotophilus morio, n. s.							
4. S. Gouldii, n. s. . . .	2					7	
5. S. australis, n. s. . . .	1, 4	1	4			1	
** Wings nearly bald.							
6. S. pumilus, n. s. . . .	7						
7. Molossus australis. . . .					1		
8. Pteropus poliocephalus Temm. Pt. Edwardsii G. Bennett not Desm.	11, 12						
<b>FERÆ.—Fam. Felidæ.</b>							
9. Canis familiaris Australasiæ. . Canis Dingo Blumenb. Fam. Phocidæ.	1	1?					
10. Otaria Peronii. . . . . Fam. Didelphidæ.	1?						
11. Thylacinus cynocephalus Fischer. Didelphis cynocephalus Harris.						2	
12. Diabolus ursinus. . . . . Didelphis ursina Harris. Sarcophilus ursinus F. Cuv. Dasyurus. * Thumb small, clawless.						1, 2	
13. D. maculatus. . . . . Viverra maculata Shaw. Dasyurus macrurus Geoff.						1, 2	
14. D. Geoffroyii Gould. . . . ** Thumb none.	3						
15. Dasyurus viverrinus Geoff. . Didelphis viverrina Shaw. . Var. Das. Maugei Geoff. Phascogale Temm. * Tail end tufted.	1, 2, 3 6					1, 2	
16. Ph. penicillata Temm. . . . Didelphis penicillata Shaw Dasyurus tafa Geoff.	2, 11 3	1					

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	1	2	3	4	5	6	7
** Tail conical, end pencilled.							
17. <i>Ph. minima</i> Tennm. . . . .						3	
<i>Dasyurus minimus</i> Geoff.							
<i>Ph. Swainsonii</i> Waterh.							
18. <i>Ph. affinis</i> , n. s. . . . .						6	
19. <i>Ph. rufogaster</i> , n. s. . . . .		1					
20. <i>Ph. flavipes</i> Waterh. . . . .	2, 3						
21. <i>Ph. murina</i> Waterh. . . . .	2		4				
22. <i>Ph. leucogaster</i> , n. s. . . . .			1				
23. <i>Myrmecobius fasciatus</i> Waterh.			1				
24. _____? <i>rufus</i> Mitchell							
Red shrew mouse <i>G. Bennett.</i> . .	8?						
<i>Perameles</i> .							
<i>a</i> Tail tapering.							
* Rump banded.							
25. <i>Per. Gunnii</i> Gray. . . . .						1	
26. <i>Per. fasciata</i> n. s. . . . .	3	1					
** Hair grizzled, ears acute, long.							
27. <i>Per. nasuta</i> Geoff. . . . .	1						
<i>P. aurita</i> Mus Par.							
<i>P. Bougainvillii</i> Quoy.							
*** Hair grizzled, ears rounded.							
28. <i>Per. fusciventer</i> , n. s. . . . .			2				
29. <i>Per. obesula</i> Geoff. . . . .	1?		1			4, 5	
<i>Didelphis obesula</i> Shaw.							
<i>b.</i> Hair soft, tail end tufted, ears very long, Paragalia.							
30. <i>Per. lagotis</i> Reid. . . . .			3				
31. <i>Chceropus ecaudatus</i> Ogilby. . .	16						
<i>Perameles ecaudatus</i> Ogilby.							
32. <i>Phalangista vulpina</i> Desm. . . . .	7, 4	2	2, 3		1	1	
<i>Didelphis vulpina</i> Shaw. . . . .	5, 10						
<i>Didelphis lemurina</i> Shaw.	11						
<i>Didelphis peregrina</i> Bodd.							
Var. 1. . . . .			1				
Var. 2. . . . .	5						
33. <i>Phal. fuliginosa</i> Ogilby. . . . .						2	
Var. <i>grisea</i> .							
34. <i>Phal. xanthopus</i> Ogilby. . . . .	19						
35. <i>Phal. canina</i> Ogilby. . . . .	2						
36. <i>Phal. Cuvieri</i> Gray. . . . .	8?						
<i>Ph. Cookii</i> Cuvier.							
<i>Petaurus Cookii</i> F. Cuv.							
37. <i>Dromicia nana</i> . . . . .						1	
<i>Phalangista nana</i> Geoff.							
<i>Phal. gliriformis</i> Bell.							

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	1	2	3	4	5	6	7
38. <i>Hepoona Cookii</i> . . . . .	1, 3, 4		1, 2			1	
<i>Phalangista Cookii Gray.</i>	7						
<i>Phalangista Banksii Gray.</i>							
<i>Balantia Cookii Kuhl.</i>							
<i>Phalangista viverrina Ogilby.</i>							
39. <i>Petaurista Taguanoides Desm.</i>	1, 21						
40. <i>Petaurista leucogaster</i> . . . . .	16						
<i>Petaurus leucogaster Mitchell</i>							
41. <i>Petaurus macrurus Geoff.</i> . . . .	8, 14						
<i>Didelphis macrura Shaw.</i>							
42. <i>Petaurus flaviventer Desm.</i> . . . .	3						
43. <i>Petaurus breviceps.</i> . . . .	8						
<i>Belideus breviceps Waterh.</i>							
44. <i>Petaurus sciureus Desm.</i> . . . .	1, 2						1
<i>Didelphis sciurea Shaw.</i>	3, 13						
45. <i>Petaurus Peronii Desm. ?</i>	2						
46. <i>Acrobates pygmæus Desm.</i> . . . .	8						
<i>Didelphis pygmæa Shaw.</i>							
<i>Macropus.</i>							
* <i>Tail end simple ; fur one-coloured.</i>							
47. <i>Mac. major Shaw.</i> . . . .	1, 4	1				1, 9	
<i>Macropus giganteus Shaw.</i>	8, 15						
<i>Halmaturus labiatus Geoff.</i>							
<i>Halmaturus rufogriseus Lesson ?</i>							
Var. <i>Macropus albus Gray.</i>							
48. <i>Mac. laniger Lesson.</i> . . . .	5, 10	15					
<i>Kangurus rufus Lesson.</i>	21, 19						
49. <i>Mac. fuliginosus Lesson.</i> . . . .		2					
** <i>Tail end simple, back coloured.</i>							
50. <i>Mac. lunatus Gould.</i> . . . .			1				
*** <i>Tail end clawed. (Onychogalea.)</i>							
51. <i>Mac. frenatus Gould.</i> . . . .	3, 8						
52. <i>Mac. unguifer Gould.</i> . . . .				1			
<i>Halmaturus.</i>							
* <i>Tail long, end slightly tufted.</i>							
53. <i>Hal. Parryii Gray.</i> . . . .	20						
<i>Macropus Parryii Bennett.</i>	3						
Var. <i>pallida Gray.</i>							
54. <i>Hal. manicatus Gould.</i> . . . .			1				
<i>Hal. Irma Jourdan.</i>							
** <i>Tail simple, back one-coloured.</i>							
55. <i>Hal. Bennetti Waterh.</i> . . . .				1			
<i>Hal. Ualabatus Gray.</i>				2, 3,			
<i>Halm. fruticus Ogilby.</i>				5, 7			
56. <i>Hal. Ualabatus Lesson.</i> . . . .	2						
<i>Halm. Lessonii Gray.</i>							

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	1	2	3	4	5	6	7
57. Hal. elegans. . . . . Mac. elegans Lambert. Hal. ruficollis Lesson, Gould.	6, 15						
58. Hal. Billardieri Lesson. . . . . Hal. Tasmanii Gray. Hal. rufiventer Ogilby.						1, 2, 3, 7	
59. Hal. Eugenii Gray. . . . . Hal. Thetis Lesson. Kangurus Eugenii Desm.	1, 2	1 ?					
60. Hal. brachyurus Quoy. Hal. Thylogale brevicaudatus Gray *** Tail simple, back streaked.			2				
61. Hal. dorsalis Gray. . . . .	8, 5, 17, 3						
62. Hal. Parma Gould. . . . .	1						
63. Hal. Derbianus Gray. . . . . Var. obscurior. . . . .		2					
64. Hal. ? Banksianus Lesson. . . . .	1. ?		5				
65. Hal. fasciatus Goldf. . . . . Kangurus fasciatus Lesson.				2			
Petrogale. * Tail conical, slightly tufted.							
66. P. robusta Gould. . . . .	4, 8						
** Tail end tufted.							
67. P. brachyotis Gould. . . . .				1			
68. P. penicillata Gray. . . . . Heteropus albogularis Jourdan.	3, 21						
69. P. lateralis Gould. . . . .			1				
70. Hypsiprymnus minor Cuv. . . . . Macropus minor Shaw. Hyps. myosurus Ogilby.	1					1	
71. Hyps. ? Lesueurii Quoy. . . . .				3			
72. Hyps. Gilbertii Gould. . . . .			2				
73. Lagorchestes leporoides Gould. . . . . Bettongia Gray * Tail end blackish.	3, 5						
74. Bett. setosa Gray. . . . . Hypsiprymnus setosus Ogilby. Hyp. murinus Ogilby. Var. Bett. penicillata Gray.	3, 5						
75. Bett. Ogilbii Gould . . . . . ** Tail end brown, white tipped.			1				
76. Bett. Whitei Gould . . . . . Hypsiprymnus Whitei Quoy. H. formosus Ogilby. Hyp. Phillipii Ogilby.	1						
77. Bett. Grayii. . . . . Hyp. Graii Gould.		4					

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	1	2	3	4	5	6	7
*** Tail grey, ears black.							
78. <i>B. rufescens</i> Gray.	1						
<i>Bett. melanotis</i> Ogilby.							
79. <i>Phascolarctos fuscus</i> Desm.	1, 8						
<i>Ph. cinereus</i> Fischer.							
<i>Lipurus cinereus</i> Goldf.							
80. <i>Phascolomys ursinus</i>	8	1				1, 2	
<i>Didelphis ursina</i> Shaw.	15					3	
<i>Wombatus fossor</i> Geoff.							
<i>Phasc. fuscus</i> Desm.							
<i>Amblotis fossor</i> Illiger.							
Order GLIRES. Fam. <i>Muridæ</i> .							
81. <i>Hydromys chrysogaster</i> Geoff.	3, 11		1			1, 2, 8	
<i>Hyd. leucogaster</i> Geoff.							
82. <i>Pseudomys australis</i> Gray.	3						
83. <i>Mus setifer</i> Horsf.						1	
84. <i>Mus lutreola</i> n. s.	2	1				5, 3	
85. <i>Mus. Greyii</i> n. s.		1					
86. <i>Mus. Adelaidensis</i> n. s.		1					
87. <i>Mus. ? platurus</i> Mitchell	18						
88. <i>Mus. ? Hovellii</i> Mitchell	17						
89. <i>Hapalotis albipes</i> Licht.	3, 9?						
<i>Conilurus destructor</i> Ogilby.	18						
90. <i>Hapalotis Mitchellii</i>	16						
<i>Dipus Mitchellii</i> Ogilby.							
91. <i>Hapalotis Gouldii</i> n. s.			1				
Order UNGULATA.—Fam. <i>Dasypidæ</i> .							
92. <i>Echidna aculeata</i> .	4, 8						
<i>Myrmecophaga aculeata</i> Shaw.							
<i>Tachyglossus aculeatus</i> Illiger.							
<i>Echidna hystrix</i> Cuv.							
93. <i>Echidna setosa</i> .						1, 2	
<i>Ornithorhynchus Hystrix</i> . var.							
<i>Home</i> .							
<i>Tachyglossus setosus</i> Illiger.							
94. <i>Platypus anatinus</i> Shaw.	1					4	
<i>Ornithorhynchus paradoxus</i> Blum.							
<i>Orn. rufus</i> . & <i>O. fuscus</i> Leach.							
<i>O. crispus</i> & <i>elvis</i> Macgillivray.							
<i>O. brevirostris</i> Ogilby.							
Order CETÆ.							
95. <i>Delphinorhynchus Pernettensis</i>					1		
96. <i>Balæna Physalis</i>				1			
Total of species found in each country	60	18	20	6	3	22	1
Total of species peculiar to each country	45	6	12	6	2	11	0

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Of these species there are:

Non-Marsupial:

Primates 8.

Ferae 2.

Cetae 2.

Glires 11.

Total 23

Marsupial (Didelphidae) 71.

Monotrematous 3.

Total 97.

This list shows the progress which has taken place in the knowledge of the Australian animals; for only a few years ago it was generally stated that the Australian dog was the only non-Marsupial animal found on the continent.

The following species appear to be new to science.

Number 1. *Rhinolophus megaphyllus*, Gray Proceedings of the Zoological Society 1834 52.

Brown, end of the hairs of the back with small, and on the lower side of the body with longer, grey tips. Ears with two hairy lines on each side. Wings with little tufts of short hairs near the side of the body beneath. (Nose leaf destroyed.) Body, 2 inches 3-12; fore-arm, 1 11-12; tail 11-12; fore-legs, 9-12; ears, 7-12.

Number 2. *Scotophilus morio*, Gray.

Back uniform, brownish black, scarcely paler beneath; cheeks nearly black; underside of wings, and interfemoral membrane with lines of hairs; heel bone elongated, slender; ears moderate rounded; tragus oblong blunt; fore-arm bone, 1 10-12; shin bone, 9-12 of an inch.

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Number 4. *Scotophilus gouldii*, Gray.

Blackish, hinder half of the back brownish; sides and abdomen brownish ash; ears rather large, broad; tragus half ovate; underside of the wings and interfemoral membrane with lines of hairs.

Var. 1. Hinder part of the back greyish; sides of the abdomen grey. Inhabits Australasia, Mr. Gould.

Number 5. *Scotophilus australis*, Gray.

Back blackish; tips of the hairs rather browner; beneath rather paler on the sides of the abdomen; ears small; tragus oval lanceolate, rather crescent-shaped; wings, with sixteen or eighteen oblique cross lines of hairs under each fore-arm, and scattered hairs on the sides of the body; fore-arm, bone, 1 5-12; shin bone, 15-24. Var. rather larger fore-arm bone, 1 7-12; shin bone, 17-24.

Number 6. *Scotophilus pumilus*, Gray.

Grey brown, base of the fur blackish, beneath paler; cheeks blackish; ears small, rather thin, longer than the fur; tragus elongate, half as long as the ears, rounded at the end; wings nearly bald, except near the arm-pit; interfemoral membrane hairy at the base; heel-bone elongate, two-thirds the length of the margin of the interfemoral membrane. Head and body, 1 2-12; tail 11-12; fore-arm bone, 1 2-12.

This species, Mr. Gould notes, flies quick and low over water.

Number 7. *Molossus australis*. See Gray, Magazine of Zoology and Botany volume 2 501.

Number 15. *Dasyurus viverrinus*.

Mr. Gould has observed that the black and yellowish varieties are sometimes found together in the same litter. There is an intermediate variety, blackish, with olive tips to the hairs. Dr. Shaw's specific name should be retained.

Number 18. *Phascogale affinis*, Gray.

Above brown, grizzled with yellowish-brown tips to the hairs; beneath grey brown; under fur lead colour; tail short. Male darker;



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length of body and head  $6 \frac{1}{2}$ ; tail  $4 \frac{1}{2}$ . Female, length of the body and head  $4 \frac{1}{2}$ ; tail  $2 \frac{3}{4}$  inches. Inhabits Tasman's Peninsula, Mr. Gould.

This may be the same as *P. minima* of Geoffroy, but the tail is longer for its size.

Number 19. *Phascogale rufogaster*, Gray.

Head grey; back and sides brown, with longer black hairs; sides of the belly and feet bright rufous; lips and chin whitish; under fur lead colour; tail end blackish-brown, slightly pencilled. Body and head, 4; tail, 2 inches. Inhabits South Australia, Mr. Gould.

Number 22. *Phascogale leucogaster*, Gray.

Head and shoulders grey, behind rather browner, with scattered longer black-tipped hairs; chin and beneath pure white; feet brownish grey. Body and head, 4; tail,  $2 \frac{1}{2}$  inches.

Inhabits Western Australia, banks of the Canning River, April 1839, Mr. Gould.

More specimens and further observations may prove these to be only local varieties of one species; but the specimens we have from the same localities are similar in character, which is not the case with the different specimens of *Hepoona*.

Number 26. *Perameles fasciata*, Gray.

Grey brown, rump with three black bands; tail white, with a black streak along the upper side. Inhabits Liverpool Plains and South Australia; smaller than *P. gunnii*.

Number 28. *Perameles fusciventer*, Gray.

Brown, yellow grizzled; tail above blackish, beneath grey; head short, conical; belly grey brown, with broad rufous channelled hairs. This species is like *P. obesula* in colour, but the head is shorter, and the belly of that species is white, with white bristles.

Number 37. *Dromicia nana*.

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The dentition and the peculiar form and character of the tail of this species at once point out that it should constitute a distinct genus from the other Phalangers, from which it differs in many of its habits.

Number 38. *Hepoona cookii*.

Specimens from the same locality differ from one another in the extent of the white on the tail, in the darkness of the colour of the fur, and in the limbs and sides of the body being of the colour of the back, or more or less rufous. There are either five or six species, or only one.

Number 39.

I have retained the name of *Petaurista* for the flying Phalangers with hairy ears, as Dr. Shaw's *Didelphis petaurus* is evidently the same as *P. flaviventer*, and has naked ears, like the other species, and his name *Petaurus* should be used rather than Mr. Waterhouse's *Belideus* for this genus.

Number 40.

*Petaurista leucogaster*, may only be a variety of *P. taguanoides*.

Number 42. *Petaurus macrourus*.

This species is only known from the figures of Dr. Shaw. They have a specimen of a young *Petaurista taguanoides*, under this name, in the Paris Museum.

Number 43. *Petaurus breviceps*.

This is probably the species called *P. peronii* in Mr. G. Bennett's catalogue of the Australian Museum. It may also be *M. Desmarest's*; if this is so, the latter name will have to be adopted, and the one first used erased from the list.

Number 47.

The *Macropi* with hairy muffs are found in grassy places, while the *Halmaturi* are confined to the scrubs; and the *Petrogalae*, or Rock-Kangaroos, to the rocky districts; the latter, like *Bettongia*, sit with

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their tail between the legs. Mr. Gould informs me the animals of the latter genus also use their tails for the purpose of carrying the grass to their nests. The tree Kangaroos of New Guinea have a tail somewhat like a squirrel. These differences of habit show the propriety of dividing this group of animals into genera.

Number 48. *Macropus laniger*.

This name must be rejected as the animal is not wool-bearing. The skin in the Paris Museum is made up with the skin of a sheep. M. Desmarest's description of the female *M. rufogriseus* in the New Dictionary, very nearly agrees with this species, but Mr. Gould is inclined to consider the specimen he was shown for that species in the Paris Museum was *M. major*.

Number 57. *Halmaturus elegans*.

The description of Mr. Lambert is so short that it has hitherto been considered impossible to determine it with accuracy; but on comparing the coloured plate which is bound up with Sir Joseph Banks' copy of the volume of the Transactions containing the paper, now in the Museum Library, with the specimens of kangaroos in the Museum collection, I have very little doubt of its being intended for one which Mr. Gould considers as identical with *M. ruficollis* of M. Desmarest. M. Desmarest's animal is said to come from King's Island, in Bass Strait, while Mr. Gould's animal, like the one Mr. Lambert described, is from New South Wales. Mr. Gunn remarks that *H. billardieri* is common in the locality indicated by M. Desmarest.

Number 67. *Petrogale brachyotis*.

This species was discovered by Captain G. Grey, in his expedition, and the specimens he collected he gave to Mr. Gould, who described them, and is now about to figure them in his forthcoming monograph of the species of kangaroos: a work which will be as far superior to any other published on Mammalia in beauty of design and accuracy in the execution of the plates as his work on Birds has been to any that has hitherto appeared either in England or on the Continent. The specimens are now in the collection of the British Museum.

Number 84. *Mus lutreola*.

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Back black and yellowish grizzled, with longer black hairs; sides yellowish grey, beneath grey lead colour, under fur lead colour; ears with scattered short adpressed hairs; whiskers black; front teeth yellow; tail with short black adpressed bristles; length of body and head 7, tail 4, hind-feet 1 1-4 inches. The water-rat of the South Australian Colonist. Inhabits South Australia, River Torrens, Bass Strait, New South Wales; Musquito Islands and Macdonald's River, Van Diemen's Land, Tasman's Peninsula. J. Gould, Esquire.

Number 85. *Mus greyii*, Gray.

Fur brown, with close long slender pale-tipped black hairs; sides yellowish-brown; throat and beneath yellowish; feet whiteish; ears nearly naked, with close-pressed short greyish hairs; tail with close-pressed brown hairs. Variety; belly rather more greyish-white. Inhabits South Australia, June. Length, body and head 6, tail 4 3/4, hind-feet 1 1/12 of an inch.

Number 86. *Mus adalaidensis*.

Fur soft, brown, with scattered rather longer black tipped hairs, beneath pale grey brown; the under fur lead coloured; whiskers black; ears moderate, covered with short close-pressed hairs; tail elongate, brown; cutting teeth pale yellow, compressed; body and head 3, tail 3 inches, hind-feet 8-12. Inhabits South Australia. J. Gould, Esquire.

In examining the Geographical distribution of the Genera, as exhibited in the foregoing table, as far as our present knowledge of these animals extends we may state that the genera *Choeropus*, *Acrobates*, *Petaurista*, *Lagorchestes*, *Phascolarctos*, *Hapalotis*, and *Pseudomys*, are peculiar to New South Wales. The genus *Petaurus* is also found in New South Wales, but not in the Island of Van Diemen's Land and the rest of the continent, but one of the species living there is also said to be an inhabitant of Norfolk Island, where it may probably have been introduced.

The species of the genera *Petrogale* and *Bettongia* are common to New South Wales, South Australia, and the North-west Coast; but they are not found in Van Diemen's Land, and the genus *Myrmecobius* appears to be peculiar to Western Australia, for it is not by any means certain that the red shrew-mouse discovered in Australia Felix by Sir T. Mitchell belongs to this genus.

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The Genera *Thylacinus*, *Diabolus*, and *Dromicia*, are peculiar to Van Diemen's Land.

The species of the genera *Dasyurus* and *Perameles* are very abundant in Van Diemen's Land, but they have also representatives which are found in New Holland.

The species of the genera *Nyctophilus*, *Phalangista*, *Hepoona*, *Phascogale*, *Macropus*, *Halmaturus*, *Hypsiprymnus*, and *Hydromys*, appear to be common to all parts of the continent, and also to Van Diemen's Land.

The genera *Echidna* and *Ornithorhynchus* are found in New Holland and Van Diemen's Land, but I have not heard of their having been discovered in the Western or Southern parts of the continent of Australia.

There are some of the genera of the non-Marsupial animals, as *Rhinolophus* and *Pteropus*, which are common to various parts of Australia and the different parts of the Old World, and others, as *Canis*, *Mus*, *Scotophilus*, and *Molossus*, which are common to it and to both Hemispheres. Two Marsupial genera, *Halmaturus* and *Perameles*, have species found in New Guinea, but most probably, when they have been more carefully examined, they will be found to form a peculiar genus, allied to the Australian animals, as is the case with the tree-kangaroos (*Dendrolegus*) and the Phalangiers (*Cuscus*) of that country. We have a specimen of the *Halmaturus* in the British Museum, from the Leyden collection, but like many of the specimens in that collection, where the zoological specimens are made subservient to the anatomical predilections of the conservator, it has no skull, and false claws, which renders it impossible for me to define its characters. The tail has rings of scales under the hair, but this is also the case with most *Halmaturus*.

Before proceeding to the consideration of the distribution of the species, over the different districts of Australasia, it may be remarked that this is a subject surrounded with considerable difficulty, as different naturalists do not always apply the same test to determine the distinction of the species, some considering the differences found in the specimens from different localities, as merely local varieties, and others regarding them as distinct; and others again declaring that several specimens, which cabinet naturalists are in the habit of regarding as only accidental varieties

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from the examination of the skins, are quite distinct when they are observed alive in their native habitat. In the preceding list, when all the specimens I have seen from a particular habitat have a similar and peculiar character, I have considered them as species; on the contrary when the specimens from the same locality offer variations among themselves, as in those of the genus *Hepoona*, where the extent of the whiteness on the tail, and the variation in the colour of the body appear to differ in the specimens from the same place, I have regarded them as belonging to the same species, believing it to be a variable species which has an extensive range.

From the Table already given it appears that, of the species found on the Australian Continent, 71 are confined to it, 12 common to it and Van Diemen's Land, and one common to it and Norfolk Island; while of the 24 species found on Van Diemen's Land, 11 are found in it alone.

The species common to the Australian Continent and Van Diemen's Land, are:

2. *Nyctophilus geoffroyii*.
4. *Scotophilus gouldii*.
5. *Scotophilus australis*.
15. *Dasyurus viverrinus*.
27. *Perameles obesula*.
32. *Phalangista vulpina*.
38. *Hepoona cookii*.
70. *Hypsiprymnus minor*.
81. *Hydromys chrysogaster*.
84. *Mus lutreola*.
94. *Platypus anatinus*.

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The species common to Australia and Norfolk Island, but not found in Van Diemen's Land is:

44. *Petaurus sciureus*.

The eleven species peculiar to Van Diemen's Land, are:

11. *Thylacinus cynocephalus*.

12. *Diabolus ursinus*.

13. *Dasyurus maculatus*.

17. *Phascogale minima*.

18. *Phascogale affinis*.

37. *Dromicia nana*.

34. *Phalangista fuliginosa*.

58. *Halmaturus billardieri*.

80. *Phascolomys ursina*.

93. *Echidna setosa*.

83. *Mus setifer*.

The last species is also found in Java, from whence it might have been introduced. It has been known in Van Diemen's Land some years, and does not appear to have found its way to Australia.

Of the 72 species found in the Australian continent six have only been recorded as having been found on the North-west coast:

52. *Macropus unguifer*.

55. *Halmaturus bennettii*.

65. *Halmaturus fasciatus*.

67. *Petrogale brachyotis*.

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71. *Hypsiprymnus lesueurii*.

Peculiar to the Western Australian district are:

22. *Phascogale leucogaster*.

23. *Myrmecobius fasciatus*.

28. *Perameles fuscoventer*.

29. *Perameles obesula*.

30. *Perameles lagotis*.

51. *Macropus lunatus*.

54. *Halmaturus manicatus*.

60. *Halmaturus brevicaudatus*.

69. *Petrogale lateralis*.

72. *Hypsiprymnus gilbertii*.

72. *Bettongia ogilbii*.

91. *Hapalotis gouldii*.

To the South Australian district:

19. *Phascogale rufogaster*.

49. *Macropus fuliginosus*.

63. *Halmaturus derbianus*.

77. *Bettongia grayii*.

85. *Mus greyii*.

86. *Mus adelaidensis*.

To the North Coast:



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### 7. *Molossus australis* ?

In the New South Wales district there have been recorded the following: some of them may have a larger distribution on the Continent, when these countries become better known, and some of them (marked with a star\*) are common to this district, and Van Diemen's Land:

1. *Rhinolophus megaphyllus*.

4.\* *Scotophilus gouldii*.

6. *Scotophilus pumilus*.

8. *Pteropus poliocephalus*.

9. *Canis familiaris Australis*.

10. *Otaria peronii*.

14. *Dasyurus geoffroyii*.

15.\* *Dasyurus viverrinus*.

16. *Phascogale penicillata*.

20. *Phascogale flavipes*.

21. *Phascogale murina*.

25. *Myrmecobius ? rufus*.

26.\* *Perameles fasciatus*.

27.\* *Perameles nasuta*.

31. *Choeropus ecaudatus*.

33. *Phalangista xanthopus*.

35. *Phalangista canina*.

36. *Phalangista cuvieri*.

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39. *Petaurista taguanoides*.
40. *Petaurista leucogaster*.
41. *Petaurus macrurus*.
42. *Petaurus flaviventer*.
43. *Petaurus breviceps*.
44. *Petaurus sciureus*.
45. *Petaurus peronii*.
46. *Acrobates pygmaeus*.
47. *Macropus major*.
50. *Macropus fraenatus*.
53. *Halmaturus parryi*.
57. *Halmaturus elegans*.
56. *Halmaturus ualabatus*.
59. *Halmaturus eugenii*.
61. *Halmaturus dorsalis*.
62. *Halmaturus parma*.
- 64 ? *Halmaturus banksianus*.
66. *Petrogale robusta*.
68. *Petrogale penicillata*.
- 70.\* *Hypsiprymnus minor*.
73. *Lagorchestes leporoides*.
74. *Bettongia setosa*.

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76. *Bettongia whitei*.

78. *Bettongia rufescens*.

79. *Phascolarctos fuscus*.

82. *Pseudomys australis*.

87. *Mus platyurus* ?

88. *Mus hovellii* ?

89. *Hapalotis albipes*.

90. *Hapalotis mitchellii*.

92. *Echidna aculeata*.

94.\* *Ornithorhynchus paradoxus*.

Two species are remarkable as being common to the East and South sides of the Continent, namely:

48. *Macropus laniger*.

84. *Mus lutreola*.

26.\* *P. fasciata*.

The latter is also found in Van Diemen's Land. And the four following species are common to the South, West, and East sides of the Continent:

5. *Scotophilus australis*.

32. *Phalangista vulpina*.

38. *Hepoona cookii*, and varieties.

81. *Hydromys chrysogaster*.

These are all also found in Van Diemens' Land, and may therefore be considered as the most generally distributed of all the Australian

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animals. Both the Phalangista and the Hepoona are very variable in their colours, and may prove to comprise different species when we are enabled to examine a larger number of specimens from different localities.

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### APPENDIX D.

Mr. Gould, who is now engaged in a work upon the Ornithology of Australia, having been solicited to furnish a list of the Birds of the Western coast, has kindly forwarded the following enumeration of the species which have come under his notice as inhabiting that part of the country. The list, although necessarily incomplete, is the most perfect that has yet been published, and will doubtless be of considerable interest to the scientific as well as the general reader.

#### ORDER RAPTORES.

*Aquila fucosa*, Cuv.  
*Buteo melanosternon*, Gould.  
*Haliaeetus canorus*, Vig. and Horsf.  
*Pandion leucocephalus*, Gould.  
*Falco hypoleucos*, Gould.  
*Falco melanogenys*, Gould.  
*Falco frontatus*, Gould.  
*Ieracidea berigora*, Gould.  
*Astur approximans*, Vig. and Horsf.  
*Accipiter torquatus*, Vig. and Horsf.  
*Milvus isurus*, Gould.  
*Elanus axillaris*.  
*Circus affinis?* Jard. and Selb.  
*Nyctale ? Boobook*, Gould.  
*Strix cyclops*, Gould.  
*Strix delicatulus*, Gould.

#### ORDER INSESSORES, Vig.

*Aegotheles novae-hollandiae*, Vig. and Horsf.  
*Podargus brachypterus*, Gould.  
*Eurostopodus guttatus*, Gould.  
*Halcyon sanctus*, Vig. and Horsf.  
*Merops ornatus*, Lath.  
*Hirundo pacifica ?* Lath.  
*Collocalia ? leucosterna*, Gould.  
*Cotyle pyrrhonota*.  
*Cotyle familiaris*, Gould.  
*Seisura volitans*, Vig. and Horsf.  
*Microeca assimilis*, Gould.  
*Rhipidura albiscapa*, Gould.

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*Rhipidura isura*, Gould. (North-West Coast.)  
*Piezorhynchus nitidus*, Gould. (North-West Coast.)  
*Ceblepyris humeralis*, Gould.  
*Graucalus melanops*, Vig. and Horsf.  
*Artamus alбовittatus*, Vieill.  
*Artamus personatus*, Gould.  
*Artamus cinereus*, Vieill.  
*Artamus leucorhynchus*, Vieill.  
*Falcunculus leucogaster*, Gould.  
*Cracticus destructor*.  
*Cracticus argenteus*, Gould.  
*Gymnorhina tibicen?* G.R. Gray.  
*Strepera tibicen?*  
*Eopsaltria griseogularis*, Gould.  
*Colluricincla rufiventris*, Gould.  
*Colluricincla brunnea*, Gould. (North-West Coast.)  
*Oreoica gutturalis*, Gould.  
*Pachycephala gutturalis*, Vig. and Horsf.  
*Pachycephala pectoralis*, Vig. and Horsf.  
*Dasyornis longirostris*, Gould.  
*Salicaria? longirostris?*  
*Petroica multicolor*, Swains.  
*Petroica goodenovii*, Jard. and Selb.  
*Petroica bicolor*, Swains.  
*Zosterops chloronotus*, Gould.  
*Ephthianura albifrons*, Gould.  
*Acanthiza chrysorrhoea*, Gould.  
*Acanthiza inornata*, Gould.  
*Acanthiza* (Like *A. diemenensis*, Gould.)  
*Pyrrholaemus brunneus*, Gould.  
*Gerygone brevirostris*, Gould.\*  
*Gerygone culicivorus*, Gould.\*  
(\* These birds have been characterised by me under the generic name of *Psilopus*; but that term having been previously employed in Entomology I propose to alter it to *Gerygone*.)  
*Sericornis frontalis?* Gould.  
*Malurus elegans*, Gould.  
*Malurus lamberti*, Vig. and Horsf. (North-West Coast.)  
*Malurus splendens*, Gould.  
*Stipiturus malachurus*, Less.  
*Calamanthus campestris*, Gould.  
*Cinclorhamphus cruralis*, Gould.  
*Cinclorhamphus rufescens*, Gould.

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*Anthus australis* ? Vig. and Horsf.  
*Pardalotus ornatus*, Temm.  
*Pardalotus punctatus*, Vieill.  
*Cinclosoma castanotus*, Gould.  
*Dicaeum atrogaster*, Less.  
*Amadina?* *acuticauda*, Gould. (North-West Coast.)  
*Amadina?* *pectoralis*, Gould. (North-West Coast.)  
*Estrilda bella*.  
*Estrilda?* *annulosa*, Gould. (North-West Coast.)  
*Grallina melanoleuca*, Vieill.  
*Climacteris rufa*, Gould.  
*Sittella melanocephala*, Gould.  
*Chalcites lucidus*, Less.  
*Cuculus cinereus*, Vig. and Horsf.  
*Cuculus inornatus*, Vig. and Horsf.  
*Eudynamys Orientalis?* Vig. and Horsf. (North-West Coast.)  
*Centropus affinis*, Gould.  
*Platycercus zonarius*, Wagl.  
*Platycercus icterotis*, Wagl.  
*Platycercus pileatus*, Vig.  
*Polytelis melanura*, Wagl.  
*Nymphicus novae-hollandiae*, Wagl.  
*Pezoporus formosus*, Ill.  
*Euphema elegans*, Gould.  
*Euphema splendida*, Gould.  
*Euphema petrophila*, Gould.  
*Trichoglossus porphyrocephalus*, Diet.  
*Plyctolophus leadbeateri*, Vig.  
*Plyctolophus galeritus*, Vieill.  
*Licmetis pastinator*, Gould.  
*Calyptorhynchus naso*, Gould.  
*Calyptorhynchus baudinii*, Vig.  
*Anthochaera lewinii*, Vig. and Horsf.  
*Anthochaera lunulata*, Gould.  
*Myzantha obscura*, Gould.  
*Meliphaga mystacalis*, Gould.  
*Meliphaga novae-hollandiae?* Vig. and Horsf.  
*Ptilotis ornata*, Gould.  
*Ptilotis leucotis*, Swains.  
*Ptilotis plumula*, Gould.  
*Ptilotis sonora*, Gould.  
*Glyciphila ocularis?* Gould.  
*Glyciphila albifrons*, Gould.

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*Haematops lunulatus?* Gould.  
*Acanthorhynchus superciliosus*, Gould.  
*Myzomela nigra*, Gould.

### ORDER RASORES.

*Turtur spilonota*.  
*Peristera chalcoptera*, Swains.  
*Peristera scripta*.  
*Petrophassa albipennis*, Gould. (North-West Coast.)  
*Coturnix australis*, Temm.  
*Turnix\* varius*, Vieill.  
*Turnix velox*, Gould.  
*Turnix castanotus*, Gould.  
(\*The term *Turnix* having been published long prior to that of *Hemipodius* it must necessarily be employed in preference to the latter; the Australian species of this form will therefore stand as: *Turnix varius*, Vieill. *Turnix melanogaster*, Gould. *Turnix castanotus*, Gould. *Turnix velox*, Gould. *Turnix pyrrhothorax*, Gould. *Turnix melanotus*, Gould.)  
*Leipoa ocellata*, Gould.

### ORDER GRALLATORES.

*Otis australasianus*, Gould.  
*Dromaius novae-hollandiae*, Vieill.  
*OEdicnemus novae-hollandiae*, Lath.  
*Charadrius virginianus*, Borkh.  
*Squatarola helvetica?* Cuv.  
*AEgialitis nigrifrons*, Gould.  
*AEgialitis ruficapillus*.  
*Himantopus leucocephalus*, Gould.  
*Chladorhynchus pectoralis*, G.R.  
Gray. *Vanellus?* *pectoralis*.  
*Erythrogonys cinctus*, Gould.  
*Strepsilas collaris*, Temm.  
*Pelidna australis*, Jard.  
*Limosa australis*, Briss.  
*Totanus stagnatilis?* Bechst.  
*Haematopus picatus?*  
*Haematopus niger?*  
*Numenius australasianus*, Gould.  
*Recurvirostra rubricollis*, Temm.



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*Porphyrio bellus*, Gould.  
*Tribonyx ventralis*, Gould.  
*Fulica novae-hollandiae*, Gould.  
*Rallus phillipensis*, Linn.  
*Zapornia phillipensis*?  
*Botaurus stellaris*? Steph.  
*Nycticorax caledonicus*, Less.  
*Ardea novae-hollandiae*, Lath.

### ORDER NATATORES.

*Larus leucomelas*, Vieill.  
*Xema jamesonii*.  
*Sterna poliocerca*, Gould.  
*Sterna caspia*? Pall.  
*Sterna caspia*? (like *minuta*).  
*Sterna dougallii*, Mont.  
*Diomedea exulans*, Linn.  
*Diomedea melanophrys*, Temm.  
*Diomedea chlororhyncha*, Gmel.  
*Diomedea fuliginosa*, Gmel.  
*Procellaria gigantea*, Auct.  
*Puffinus brevicaudus*, Gould.  
*Puffinus chlorhynchus*, Less.  
*Cygnus atratus*, Linn.  
*Anser atratus*?  
*Casarka tadornoides*, Eyton.  
*Malacorhynchus membranaceus*, Swains.  
*Nyroca australis*, Gould.  
*Anas novae-hollandiae*, Steph.  
*Anas naevosa*, Gould.  
*Mareca castanea*, Eyton.  
*Rhynchaspis rhyncotis*, Steph.  
*Biziura lobata*, G.R. Gray.  
*Oxyura australis*, Gould.  
*Podiceps cristatus*, Lath.  
*Podiceps gularis*, Gould.  
*Podiceps poliocephalus*? Jard. and Selb.  
*Pelecanus spectabilis*, Temm.  
*Phalacrocorax Carbo*? Cuv.  
*Phalacrocorax pica*.  
*Phalacrocorax melanoleucus*, Vieill.  
*Spheniscus minor*.

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### APPENDIX E.

A Catalogue of the Species of Reptiles and Amphibia hitherto described as inhabiting Australia, with a description of some New Species from Western Australia, and some remarks on their geographical distribution, by JOHN EDWARD GRAY, F.R.S. etc. etc. in a note to the author.

Order 1. SAURI.

Family MONITORIDAE.

1. *Odatria punctata*, Gray Annals of Natural History 1 394.  
Grey olive, with narrow black reticulated lines, leaving large hexagonal spots. Head, limbs, and tail blackish, with a few pale spots.  
Inhabits Western Australia.
2. *Hydrosaurus varius*, Gray Annals of Natural History 1 394.  
*Uranus varius*, Merrem. Gray King's Voyage 2 427.  
*Lacerta varia*, Shaw. White Journal New South Wales 246 t. 3. f 2.  
Shaw N. Misc. t. 83.  
*Tupinambis variegatus*, Dauden.  
Inhabits New Holland.
3. *Hydrosaurus gouldii*, Gray Annals of Natural History 1 394.  
With two yellow streaks on the side of the neck. Scales over the orbits small, flat.  
Inhabits Australia.
4. *Uranus bellii*, Dumeril and Bibron Erp. Gen. 3 493 t. 35 f. 1.  
Inhabits New Holland, T. Bell, Esquire.

Family SCINCIDAE.

5. *Trachysaurus rugosus*, Gray King's Voyage 2 421. Annals of Natural History 2 288.  
*T. peronii*, Wagler Icon t. 36.  
*Scincus pachyurus*, Peron. manuscript.  
Stump-tailed Goanna, Colonist's.  
Inhabits Western Australia, Perth.
6. *Trachysaurus typicus*.

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- Brachydactylus typicus, A. Smith South African Journal 1.  
Inhabits Western Australia, Perth.
7. Egernia cunninghami, Gray Annals of Natural History 2 288.  
Tiliqua cunninghami, Gray Proceedings of the Zoological Society.  
Inhabits New Holland, Liverpool Plains.
8. Tiliqua whitei, Gray Annals of Natural History 2 288.  
Tiliqua tuberculata, Gray King's Voyage 2 429.  
Lacerta scincoides. Shaw Zool t. 81.  
Scincus gigas, Bodd. S. crotophomelas, Lacep. A. Museum H. N. 4  
192. S. tuberculatus, Merrem. 73.  
Cyclodus flavigularis, Wagler Icon t. 6.  
Inhabits New Holland; Java ?
9. Tiliqua casuarinae.  
Cyclodus casuarinae, Dumeril and Bibron Erp. Gen. 5 749.  
Inhabits "New Holland," Dumeril.
10. Tiliqua nigrolutea, Gray Annals of Natural History 2 290.  
Scincus nigroluteus, Quoy and Gaim. Voyage Uran t. 41.  
Cyclodus nigroluteus, Wagler Syst. 162.  
Inhabits New Holland.
11. Tiliqua trivittata ? Gray Syn. Griffith A. K. 68. Illust. Ind. Zool t.  
Annals of Natural History 2 289.  
Scincus ocellatus, and S. leuerinensis, Peron. manuscript. S. Whitei,  
Lacep. Ann. Museum H. N. 4 192. S. taeniolatus and S.  
quadrilineatus, Merrem. S. moniliger, Valenc. Museum Paris.  
Inhabits New Holland, Peron. India.
12. Tiliqua taeniolata, Gray Annals of Natural History 2 289.  
Lacerta taeniolata, Shaw Zool. 3 239. White Journal t. 32.  
Scincus undecimstriatus, Kuhl Beytr. S. octolineatus, Daud. S. a dix  
raies, Lacep. A. mus. H. N. 4 192.  
S. multilineatus, Lesson Voyage Coq. t. 3 f. 2.  
Inhabits New Holland, Sydney.
13. Tiliqua labillardieri, Gray Annals of Natural History 2 289.  
Scincus labillardieri, Cocteau British Museum.  
Lygosoma labillardieri, Dumeril and Bibron Erp. Gen. 5 731.  
Inhabits New Holland, Islands of Waigiou and Rawack.

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14. *Tiliqua napoleonis*, Gray Annals of Natural History 2 290.  
*Scincus napoleonis*, Cuv. British Museum. *S. trifasciatus*, Peron.  
*Tropidolepisma dumerilii*, var. c. Dumeril and Bibron Erp. Gen. 5 745.  
Psammite de Napoleon, Coct.  
Inhabits "New Holland."
15. *Tiliqua kingii*, Gray Annals of Natural History 2 290.  
*Scincus nicittensis*, Peron manuscript.  
Psammite de Dumeril, Coct. Tab. *Tropidolepisma dumerilii beta*,  
Dumeril and Bibron Erp. Gen. 5 745.  
Inhabits New Holland, British Museum.
16. *Tiliqua aterrima*.  
*Scincus aterrimus*, Peron.  
*Tropidolepisma dumerilii alpha*, Dumeril and Bibron Erp. Gen. 5 745  
t. 50.  
Inhabits New Holland.
17. *Tiliqua tenuis*, Gray Griffith A.K. 71. Annals of Natural History 2 291.  
*Scincus erucotis*, Peron manuscripts.  
*Lygosoma erucata*, Dumeril and Bibron Erp. Gen. 5 726.  
Inhabits New Holland, British Museum.
18. *Tiliqua stoddardtii*, Gray Annals of Natural History 2 291.  
Inhabits New Holland, Museum Chatham.
19. *Tiliqua vachelli*, Gray Annals of Natural History 2 291.  
Inhabits New Holland, Museum Chatham.
20. *Tiliqua leucopsis*, Gray Annals of Natural History 2 291.  
Inhabits New Holland, Museum Chatham.
21. *Tiliqua australis*, Gray Annals of Natural History 2 291.  
Inhabits New Holland, British Museum.
22. *Tiliqua buchananii*, Gray Annals of Natural History 2 291.  
Inhabits New Holland. British Museum.
23. *Tiliqua trilineata*, Gray Annals of Natural History 2 291.  
Inhabits New Holland, British Museum.

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24. *Tiliqua duperreyii*, Gray Annals of Natural History 2 292.  
*Scincus duperreyii*, Cocteau.  
*Lygosoma duperreyii*, Dumeril and Bibron Erp. Gen. 5 715.  
Inhabits South Australia, Kangaroo Island.
25. *Tiliqua entrecasteaux*, Gray Annals of Natural History 2 292.?  
*Scincus entrecasteaux*, Cocteau. *Lygosoma entrecasteaux*, Dumeril and Bibron Erp. Gen. 5 717.  
*Tiliqua reevesii*, Gray Annals of Natural History 1 292 ? *Scinque a flanc noir*, Quoy and Gaim. Voyage Uranie Zool. t. 42 f. 1 ?  
*Lygosoma quoyii*, Dumeril and Bibron Erp. Gen. 5 728.  
Inhabits New Holland. Var. beta China.
26. *Tiliqua lesueurii*.  
*Lygosoma lesueurii*, Dumeril and Bibron Erp. Gen. 5 733.  
Inhabits New Holland.
27. *Tiliqua guichenoti*.  
*Lygosoma guichenoti*, Dumeril and Bibron Erp. Gen. 5 713.  
Inhabits New Holland.
28. *Tiliqua bougainvillii*, Coct. *Coct.*  
*Lygosoma bougainvillii*, Dumeril and Bibron Erp. Gen. 5 716.  
Inhabits New Holland.
29. *Tiliqua naevia*.  
*Scincus naevius*, Peron. *S. melanopogon*, Muller. *S. erythrolaemus*, Muller. Museum Leyd.  
*Lygosoma melanopogon*, Dumeril and Bibron Erp. Gen. 5 723.  
Inhabits New Holland, New Guinea, and Timor.
30. *Riopa bougainvillii*, Gray Annals of Natural History 2 332.  
*Scincus bougainvillii*, Cocteau.  
Inhabits New Holland.
31. *Lygosoma australis*, Gray Annals of Natural History 2 332.  
Inhabits New Holland, Museum Chatham.
32. *Chiamela duvaucellii*, Gray Annals of Natural History 2 333.  
*Scincus duvaucellii*, Cocteau. Museum Paris. fide Bibron. Museum British.  
Inhabits Australia, King George's Sound, Museum Paris.

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33. *Tetradactylus decresiensis*, Peron. Cuv. Gray Annals of Natural History 2 233. Dumeril and Bibron Erp. Gen. 5 764.  
Inhabits Australia, King George's Sound, Kangaroo Island.

34. *Tridactylus decresiensis*, Peron. Gray Annals of Natural History 2 333.

*Hemiergus decresiensis*, Dumeril and Bibron Erp. Gen. 766.

*Zignis decresiensis*, Fitz.

Inhabits Australia, Kangaroo Island.

35. *Ronia catenulata*, t. 4 f. 1. Gray Annals of Natural History 1841.

Inhabits Western Australia.

Family GYMNOPHTHALMIDAE.

36. *Cryptoblepharis poecilopleurus*, Gray Annals of Natural History 1 335.

*Ablepharis poecilopleurus*, Weigm. N. Act. Nat. Cuv. 17 183 t. 8 f. 1.

*A. peronii*, Dumeril and Bibron Erp. Gen. 813. *A. leschenaultii*, Coct. Mag. Zool t. 1. Crypt. *peronii*, Coct. Etudes, t.

*Scincus boutonii*, Desjard.

*S. arenarius* and *S. furcatus*, Museum Leyd.

Inhabits New Holland, Java, and Isle of France.

37. *Cryptoblepharis lineo-ocellatus*.

*Ablepharis lineo-ocellatus*, Dumeril and Bibron Erp. Gen. 5 817.

Inhabits New Holland, Museum Paris.

Family LIALISIDAE.

38. *Lialis burtonii*, t. 3 f. 1 t. 5 f. 4. Gray Proceedings of the Zoological Society 1834 134. Dumeril and Bibron Erp. Gen. 5 831.

Inhabits Australia, Western Australia.

Family PYGOPIDAE.

39. *Pygopus lepidopus*, Merrem Syn. 77.

*Bipes lepidopode*, Lacep. Ann. Museum H. N. 4 193, 209 t. 55 f. 1.

*Sheltopusik novae hollandiae*, Oppell.

*Hysteropus lepidopus*, Boug.

*H. novae hollandiae*, Dumeril and Bibron Erp. Gen. 5 832.

Inhabits New Holland.

There are sometimes some scales between the anterior frontal plates.

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40. *Delma fraseri*, t. 4 f. 3 Gray Zool. Misc.  
Inhabits New Holland, Liverpool Plains ? Western Australia, J. Gould.

### Family RHODONIDAE.

41. *Rhodona punctata*, Gray Annals of Natural History 2 335.  
*Brachystopus lineato-punctatus*, A. Smith manuscript ? Dumeril and Bibron Erp. Gen. 5 779.  
Inhabits New Holland, South Africa, Dumeril !

42. *Soridia lineata*, t. 3 f. 2 Gray Annals of Natural History 2 335.  
*Prepaeditus lineatus*, Dumeril and Bibron 5 788.  
Inhabits Australia, Western Australia, J. Gould, common.

43. *Chelomeles quadrilineatus*, Dumeril and Bibron Erp. Gen. 5 774.  
Inhabits New Holland, Museum Paris.

### Family APRASIADAE.

44. *Aprasia pulchella*, t. 4 f. 2 Gray Annals of Natural History 2 331.  
Inhabits Western Australia.

### Family GECKOTIDAE.

45. *Platydactylus ornatus*, Gray.  
*Phelsuma ornata*, Gray King's Voyage 2 428.  
Inhabits New Holland.

46. *Phyllodactylus strophurus*, Dumeril and Bibron Erp. Gen. 3 397 t. 32 f. 1.  
Inhabits West Coast of Australia, Shark Bay, Quoy and Gaimard.

47. *Phyllodactylus porphyreus*, Dumeril and Bibron Erp. Gen. 3 393.  
*Gecko porphyreus*, Daud.  
*Sphaerodactylus porphyreus*, Wagler.  
Inhabits New Holland.

48. *Phyllodactylus lesueurii*, Dumeril and Bibron Erp. Gen. 3 392.  
Inhabits New Holland and New Guinea.

49. *Diplodactylus vittatus*, Gray Proceedings of the Zoological Society 1832 40.

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*Phyllodactylus vittatus*, Dumeril and Bibron Erp. Gen. 3 400.  
Inhabits New Holland, Liverpool Plains.

50. *Peropus variegatus*.  
*Hemidactylus variegatus*, Dumeril and Bibron Erp. Gen. 3 353.  
Inhabits West Coast of Australia, Shark Bay, and Van Diemen's  
Land.

51. *Phyllurus platurus*, Cuv. R. A. 2 58. *P. cuvieri*, Borg.  
*Lacerta platura*, Shaw. White Journal New South Wales 246 t. 3 f. 2.  
*L. discosura*, Lacep.  
*Stellio phyllurus*, Schneider. *S. platurus*, Daud.  
*Gecko platicaudus*, Schinz.  
*Agama platyura* and *A. discosura*, Merrem.  
*Gymnodactylus platurus*, Wagler.  
*G. phyllurus*, Dumeril and Bibron Erp. Gen. 3 428.  
*Cyrtodactylus platurus*, Gray.  
Inhabits New Holland.

52. *Phyllurus miliusii*, Bory St. Vincent Dict. Class H. N. 7 183 t.  
*Cyrtodactylus miliusii*, Gray.  
*Gymnodactylus miliusii*, Dumeril and Bibron Erp. Gen. 3 450 t. 33 f.  
1.  
Inhabits New Holland, Museum Paris.

### Family AGAMIDAE.

53. *Chlamydosaurtis kingii*, Gray King's Voyage Australia 2 424 t.  
Dumeril and Bibron Erp. Gen. 4 441 t. 45.  
Inhabits West Coast of Australia, Careening Bay, A. Cunningham,  
Esquire, Port Nelson. Captain Grey sent a fine specimen of this  
species to the Museum during his travels.

54. *Lophura lesueurii*, Gray Syn. Griffith A. K. 60.  
*Istiurus lesueurii*, Dumeril and Bibron Erp. Gen. 4.  
Inhabits Australia, New Holland.

55. *Grammatophora barbata*, Kaup Isis. Gray. Dumeril and Bibron ?  
*Agama barbata*, Cuv. R. A. 2 35.  
Inhabits New Holland.

56. *Grammatophora muricata*, Kaup Isis 1827 621. Gray. Dumeril  
and Bibron.



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*Lacerta muricata*, Shaw Zool. 3 t. 63 f. 1.

*Agama muricata*, Daud. *A. jacksoniensis*, Kuhl. Guerin Icon t. 3 f.

*Amphibolus muricatus*, Wiegmann.

Inhabits New Holland.

Var. 1 *diemenensis*, Gray Annals of Natural History 1840.

Inhabits Van Diemen's Land.

Var. 2 *adelaidensis*. Gray Annals of Natural History 1840.

Inhabits Western Australia, Adelaide.

57. *Grammatophora gaimardii*, Dumeril and Bibron Erp. Gen. 4 470.

Inhabits West Coast of Australia, Shark Bay.

58. *Grammatophora decresii*, Dumeril and Bibron Erp. Gen. 4 472.

Inhabits Australia, Kangaroo Island. Var. 1.

Inhabits Western Australia.

59. *Grammatophora cristata*, Gray Annals of Natural History 1840.

Inhabits Western Australia, J. Gould.

60. *Moloch horridus*, t. 2. Gray Annals of Natural History 1841.

Inhabits Western Australia, Captain G. Grey. J. Gould.

61. *Uromastix griseus*, Cuv. R. A. 2 34.

Inhabits "New Holland." Peron.

It is very probable that this species was established on a variety or discoloured specimen of *U. hardwickii*, and it is very doubtful if it is a native of New Holland.

Family CHAMAELEONIDAE.

62. *Chamaeleo bifurcus*, Brongn. Bull. Soc. Philom. number 36 f. 2.

Dumeril and Bibron Erp. Gen. 3 233 t. 27 f. 3. *Cham. bifidus*, Latr.

Inhabits "New Holland."

Messieurs Dumeril and Bibron, in the work cited, state that this species is found in New Holland, but I believe this is a mistake, as I have neither seen nor heard of any species of this genus being found in Australia.

Order 2. OPHIDII.

Family VIPERIDAE.

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63. *Acanthophis palpebrosa*. *A. cerastinus*, Lacep. Ann. Museum 4  
100. Guerin Icon. t. 24 f. 2.  
*A. brownii*, Leach Zool. Misc. 1 t. 3.  
*Boa palpebrosa*, Shaw Zool. 3 362.  
*Ophryas acanthophis*, Merrem. 147.  
Schlingende Natter, Merrem Beitr. 2 t. 3.  
*Vipera acanthophis*, Schlegel. 2 605 t. 21 f. 21, 22, 23.  
Inhabits New Holland.

Family COLUBRIDAE.

64. *Tropidonotus mairii*, Gray.  
Inhabits New Holland, Dr. Mair, 39th Regiment Museum Chatham.

65. *Leptophis punctulatus*, Gray, King's Voyage 2 432.  
Inhabits Careening Bay, James Hunter, Esquire.

66. *Leptophis spilotus*, Gray, King's Voyage 2 433.  
Inhabits Australia Cape, P.P. King, R.N.

67. *Naja custa*, Schlegel Phy. Serp. 2 486.  
Inhabits Australia, King George's Sound, Museum Paris.

68. *Naja bungaroides*, Schlegel Phys. Serp. 2 477.  
Inhabits New Holland, Port Jackson, and India, Museum Paris.  
Var. 1. New Holland. Dr. Mair.

69. *Trimesurus leptocephalus*, Lacep. Ann. Museum 4 196 t. 56 f. 1.  
Crimson-sided Snake, *Coluber porphyraicus*, Shaw Zool. t. 110. New  
Holland, t. 10.  
*Hurria porphyraica*, Merrem.  
*Boa laevis*, Lacep. Ann. Museum 4 195.  
*Duberia porphyriaca*, Fitz.  
*Acanthophis tortor*, Lesson Voyage t. 6. Guerin Icon. t. 24 f. 1.  
*Pseudechis porphyriacus*, Wagler.  
*Alecto*, Wagler.  
*Oplocephalus*, Cuv. R. Anim. 2 94.  
*Naja porphyraica*, Schlegel. 1 181 2 479 t. 17 f. 6, 7.  
Inhabits New Holland, Sidney.

70. *Trimesurus olivaceus*, Gray.  
Inhabits New Holland, Dr. Mair.

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71. *Calimaria diadema*, 65 f. 3. Schlegel Phys. Serp. 1 131 2 32.  
Inhabits Australia, New Holland, Quoy and Dr. Mair.  
Western Australia, Mr. Gould.
72. *Calimaria annulata*, Gray. Snake, n. 2. White Journal Appendix  
259 t. f. 2.  
Inhabits New Holland, Dr. Lewis.
73. *Tortrix pseudo-eryx*, Schlegel Phys. Serp. 1 128 2 19.  
Inhabits New Holland, Port Jackson, Peron.
74. *Tortrix australis*, Gray.  
Inhabits New Holland, Museum Chatham, n. 68.
75. *Elaps psammophis*, Schlegel Phys. Serp. 1 182 2 454.  
Inhabits New Holland.
76. *Elaps coronatus*, Schlegel Phys. Serp. 1 184 2 454.  
Inhabits New Holland.
77. *Elaps gouldii*, t. 5 f. 1. Gray Annals of Natural History 1841.  
Inhabits Western Australia.
78. *Elaps ? lewisii*, Gray.  
Inhabits New Holland, Dr. Lewis.

### Family BOIDAE.

79. *Python spilotes*.  
*P. punctatus*, Merrem Tent. 150.  
*P. peronii*, Cuv. R. A. Wagner, Icon. t. 1.  
*Coluber spilotes*, Lacep. Ann. Museum 4 195.  
*Echidna spilotes*, Merrem.  
Australian Snake, Shaw's Zool. 505.  
Snake, n. 1. and 5. White Voyage Appendix 159 t. f. 5 and t. f. 1.  
Inhabits New Holland, White. King George's Sound, Quoy.

### Family HYDRIDAE.

80. *Aspisurus laticaudatus*.  
*Coluber laticaudatus*, Linn. Museum Ad. t. 16 f. 1.  
*Platura fasciata*, Latreille.  
*Pl. semi-fasciata*, Reinw.

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*Laticauda imbricata*, Laur.

*Aspisurus laevis*, Lacep. Ann. Museum 4 197 t. 56 f. 3.

*Hydrus colubrinus*, Schlegel Phys. Serp. 514 t. 18 f. 18 to 22.

Inhabits New Holland.

81. *Pelamis bicolor*, Daud.

*Anguis platura*, Linn. S. N. 391.

*Hydrophis platura*, Latr.

*Hydrus bicolor*, Schneider.

Inhabits New Holland. Port Jackson, Forster.

82. *Disteria doliata*, Lacep. Ann. Museum 4 199 t. 57. f. 2.

*Hydrophis schistosus*, Daud. Schlegel Phys. Serp. 500.

Inhabits New Holland.

Order 3. CHELONIA.

Family CHELYDAE.

83. *Platemys macquaria*, Dumeril and Bibron Erp. Gen. 2 458.

*Hydraspis macquaria*, Gray Syn. Rept. 1 40.

*Emys macquaria*, Cuv. R. Anim. 2 11.

Inhabits New Holland ?

84. *Hydraspis australis*, t. 6. new species.

Inhabits.

85. *Chelodina longicollis*, Gray Syn. Rep. 39. *C. novae hollandae*,  
Dumeril and Bibron Erp. Gen. 2 445 t. 21 f. 2.

*Testudo longicollis*, Shaw Gen. Zool. 3 62 t. 16. Zool. New Hol. 1 19 t.  
7.

*Emys longicollis*, Schw. Prod. 1 309, 433.

*Hydraspis longicollis*. Bell Zool. Journal 3 512.

Inhabits New Holland, Sydney.

86. *Chelodina oblonga*, t. 7 new species.

Inhabits Western Australia.

Family CHELONIADAЕ.

87. *Chelonia caretta*.

*Testudo caretta*, Solander manuscript Banks Icon. ined. in British  
Museum n. 41, 42, 43.

Inhabits Sea. Latitude 37 South, December 23 1768. Captain Cook.

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88. *Chelonia imbricata*.

Inhabits Sea, New Holland, New Guinea.

89. *Chelonia mydas*.

*Testudo mydas*, Solander manuscript. Banks Icon. ined. in British Museum n. 39, 40.

Inhabits New Holland, Endeavour River, Cook's Voyage.

Order EMYDOSAURI.

Family CROCODILIDAE.

90. *Crocodilus vulgaris*, Cuv. Ann. Mus. 10 40 t. 1 f. 5 12 t. 2 f. 7.

Inhabits New Holland, Mouth of Endeavour River, Captain Cook.

Class AMPHIBIA.

Family RANIDAE.

91. *Cystignathus peronii*, Dumeril and Bibron Erp. Gen. 8 409.

Inhabits New Holland ? Peron.

92. *Cystignathus dorsalis*, Gray Annals of Natural History 1841.

Inhabits Western Australia.

93. *Crinia georgiana*, Tschudi, 2 78.

*Cystignathus georgianus*, Dumeril and Bibron Erp. Gen. 8 416.

Inhabits Australia, King George's Sound.

94. *Heleioporus albopunctatus*, tab. 1 f. 2 Gray Annals of Natural History 1841.

Inhabits Western Australia.

Family HYLIDAE.

95. *Litoria freycinetii*, Dumeril and Bibron Erp. Gen. 8 504 t. 88 f. 2.

Inhabits New Holland, Port Jackson.

96. *Hyla peronii*, Dumeril and Bibron Erp. Gen. 8 569.

*Dendrohyas peronii*, Tschudi, 75.

Inhabits New Holland, Peron.

97. *Hyla coerulea*.

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*Hyla cyanea*, Daud. Schlegel. Dum.

Blue Frog, White Journal Appendix 248.

*Rana australasiae*, Schneider.

*R. coerulea*, Shaw Gen. Zool. 3 113. Daud. Mer.

*Calamites cyanea*, Fitz. Tschudi.

*Calamites coerulea*, Wagler.

Inhabits New Holland, New Guinea, Timor.

98. *Hyla jervisiensis*, Dumeril and Bibron Erp. Gen. 8 580.

Inhabits New Holland, Jervis Bay.

99. *Hyla lesueurii*, Dumeril and Bibron Erp. Gen. 8 595. *H. oculata*,  
Peron manuscript.

Inhabits New Holland, Port Jackson.

100. *Hyla ewingii*, Dumeril and Bibron Erp. Gen. 8 597.

Inhabits Van Diemen's Land.

101. *Hyla citropa*, Peron and Lesueur. Dumeril and Bibron Erp. Gen.  
8 600.

*Dendrohyas citropa*, Tschudi, 75.

Inhabits New Holland, Port Jackson.

102. *Hyla aurea*.

*Rana aurea*, Lesson Voyage Coq. t. 7 f. 2.

*Hyla jacksoniensis*, Dumeril and Bibron Erp. Gen. 8 602.

*Ranoidea jacksoniensis*, Tschudi.

Inhabits New Holland, Port Jackson.

103. *Hyla adelaidensis*, t. 8 f. 2. Gray Annals of Natural History 1841.

Inhabits Western Australia.

104. *Hyla bioculata*, t. 8 f. 1. Gray Annals of Natural History 1841.

Inhabits Western Australia.

105. *Uperoleja marmorata*, Gray Annals of Natural History 1841.

Inhabits Western Australia.

Family BUFONIDAE.

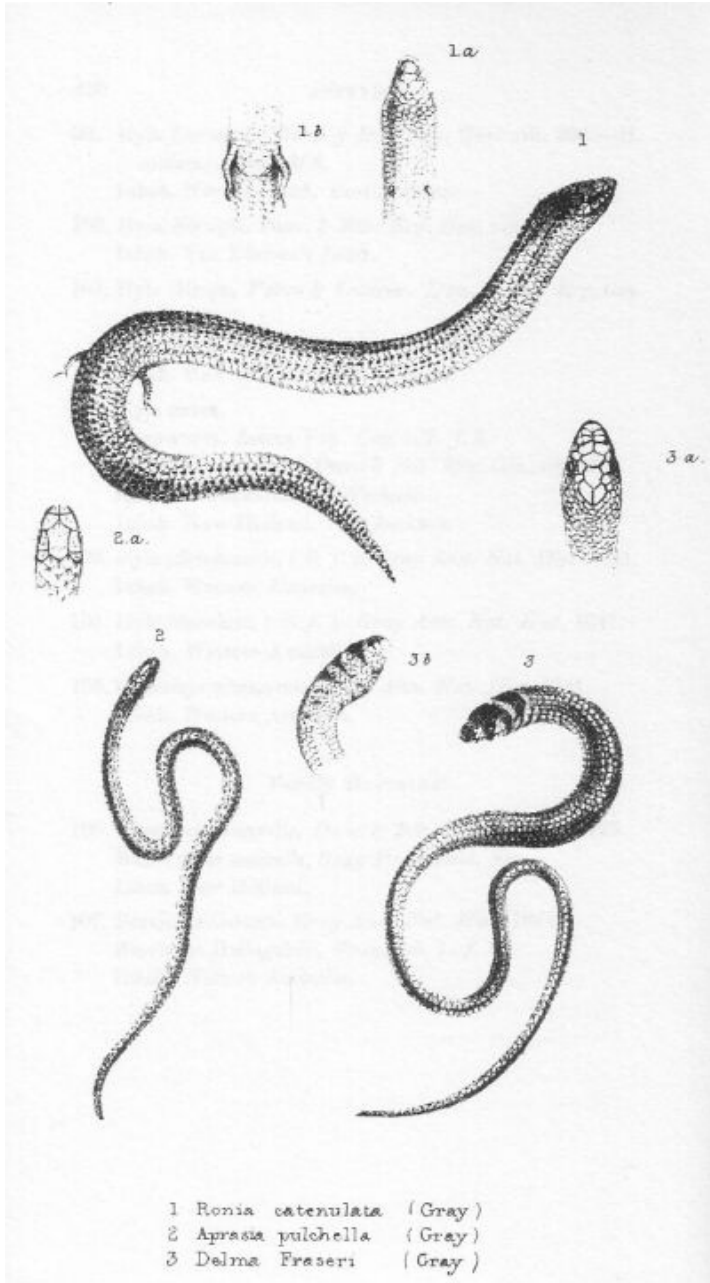
106. *Phreniscus australis*, Dumeril and Bibron Erp. Gen. 8 725.

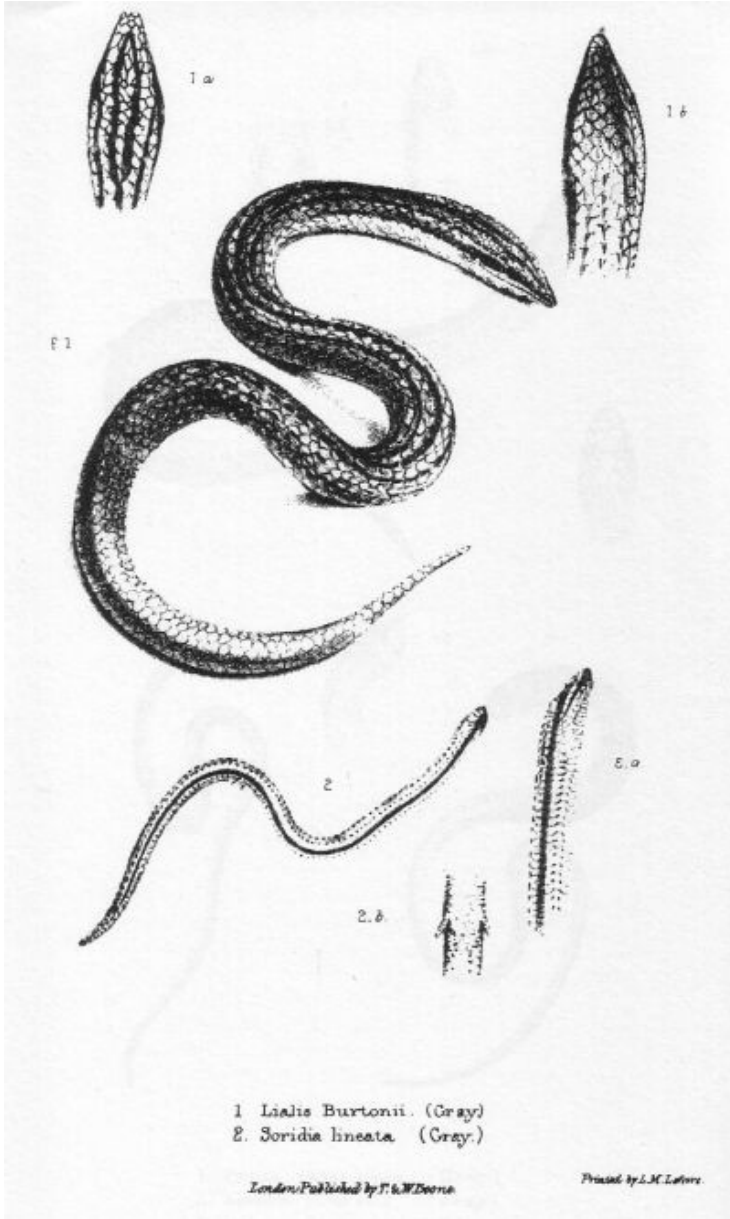
*Bombinator australis*, Gray Proceedings of the Zoological Society.

Inhabits New Holland.

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107. *Breviceps gouldii*; Gray Annals of Natural History 1841.  
*Breviceps heliogabali*, Gray, tab. 1 f. 1.  
Inhabits Western Australia.





I have been induced to add to the foregoing list the following observations on the more obscure and hitherto unknown genera and species.



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RONIA, Gray. Head rather shelving, shielded with one transverse frontal and two large vertebral plates, the hinder largest; the rostral plates large, with two unequal superciliary plates. The nasal plate triangular, interposed between the rostral plate and the frontal ones, with the nostrils in its centre; loreal plates two, square; labial plates large; ears none, only a very indistinct sunk dot in their place. Body cylindrical; tail conical, tapering. Scales smooth, ovate, imbricate, those of the belly 6-sided. The front limbs very small, rudimentary, undivided; the hinder limbs moderately developed, ending in two very unequal toes, with distinct claws.

35. *Ronia catenulata*, Gray, t. 4 f. 1.

Back grey, with eight series of small black dots, one dot on the centre of each scale; cheeks black speckled; sides and beneath whitish.

Body 3 1/2, tail 2 1/2 inches.

Inhabits Western Australia. Mr. J. Gould.

The scales under the tail are rather larger, and the spots on the tail are also rather larger than those on the back.

38. *Lialis burtonii*, t. 3 f. 1. Gray Proceedings of the Zoological Society 1834 134. Dumeril and Bibron H. R. 831.

Pale brown, back with three longitudinal brown streaks, each occupying half of two series of scales; the centre streak divided into two over the nape and head, uniting together again over the tip of the nose.

Inhabits Western Australia. J. Gould.

Family Pygopidae.

Head short, with two or three pairs of narrow frontal shields, similar to, and behind the nasal shield, with two odd large vertebral shields; nostrils oblong, in the suture between the outer angle of the nasal shield and the front loreal shields; ears distinct, tympanum sunk; eyes surrounded with a series of scales; belly with two or four series of broad 6-sided ventral shields; tail with three series of broader shields, the central the broadest; limbs two, rudimentary, undivided,

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scaly, on the side of the vent; throat covered with small scales; lower labial plates large.

Pygopus. The scales of the back keeled, with a series of numerous praeanal pores; pupil round; the hinder limbs elongate.

Delma. The scales smooth; praeanal pores none; pupil elliptical, erect; hinder limbs short.

### 42. *Soridia lineata*, t. 3, f. 2.

M. Bibron in the work quoted observes: *La Soridia lineata* de M. Gray n'est pas different d'une espece de Scincoiden du Cap que nous avons vue dans la collection de M. Smith a Chatham et de laquelle nous avons pris une description qui s'est malheureusement egaree. Page 787. And again: Nous croyons que c'est par erreur que M. Gray a indique cette espece comme provenant de la Nouvelle Hollande, nous pensons plutot qu'elle est originaire du Cap, et la meme que celle dont nous parlions tout a l'heure ou le Scincoidien que d'accord avec le Dr. Smith nous nous proposons d'appeller *Praepeditus lineatus*. Page 788.

I do not know what Dr. Smith's animal may be, but the account of *Praepeditus*, given by M. Bibron, is only a translation of my description of *Soridia*! It is not probable that this animal should come both from Australia and the Cape. It is certainly from New Holland.

### 44. APRASIA.

The head small, shielded; muzzle rounded, rather produced, with two pairs of large frontal shields, covering the cheeks, a large six-sided elongated vertebral shield, and a pair of small superciliar shields; rostral and labial shields large, few; the nostrils small, in the sutures between the tip of the front upper labial, and the anterior frontal plates; eyes circular, edged with a series of small scales; pupil round; ears none; body and tail cylindrical, tapering, covered with hexangular scales, the ventral shields rather broader; limbs none.

By some mistake the slip containing the description of this genus in my synopsis of the slender-tongued Saurians got into the wrong place with the *Tiliquae* instead of being near *Anguis*.

### 56. *Grammatophora muricata*.

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The young animals have a series of small spines on each side of the base of the tail, and a series of spots on each side of the back.

Mr. Gould has brought home two very distinct local varieties.

Var. 1 diemenensis. Young dark-coloured, with vermiculated marks on the chin, chest, and abdomen. The adult dark, beneath gray, varied with black spots placed in irregular lines.

Inhabits Van Diemen's Land.

Var. 2 adelaidensis. Young pale above and beneath, with three broad diverging black lines on the chin, leaving an oblong spot in the centre of the throat, with a broad streak on the chest separated into three lines on the abdomen, which unite together again on the pubis. The adult gray, with a few spots beneath.

58. *Grammatophora decresii*, Dumeril and Bibron, *Erp. Gen.* 4 472. ?

Tail conical, with nearly regular scales, the base rather swollen, without any series of spines on the side; the nape and back with a series of rather larger, low, compressed scales; back with small sub-equal scales, and a few larger ones in cross series; side of the head near the ears and side of neck with two or three ridges crowned with short conical spines. In spirits black, yellow spotted and varied, beneath gray, vermiculated with blackish; tail black-ringed.

Inhabits Western Australia.

So much smaller than *G. muricata* that I might have considered them as young animals if one of them had not had the body filled with well-formed eggs; and the tail is much shorter in comparison than even in the young of that species.

They agree in most points with the description given by Messieurs Dumeril and Bibron, but not in the colour and in the size of the tail. The specimens in our collection greatly differ in their colour, but are all very different from any other species.

59. *Grammatophora cristata*. Nape with a crest of distinct, rather short, curved, compressed, spinose scales; back and tail with a series of compressed keeled scales, forming a slight keel; occiput with separate short strong conical spines: sides of the neck and back with

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folds crowned with series of short compressed scales; base of the tail with some scattered larger scales. In spirits, dull olive; crown black with large white spots, beneath black; middle of the belly, and undersides of the base of the tail white; tail with black rings at the end; feet whitish.

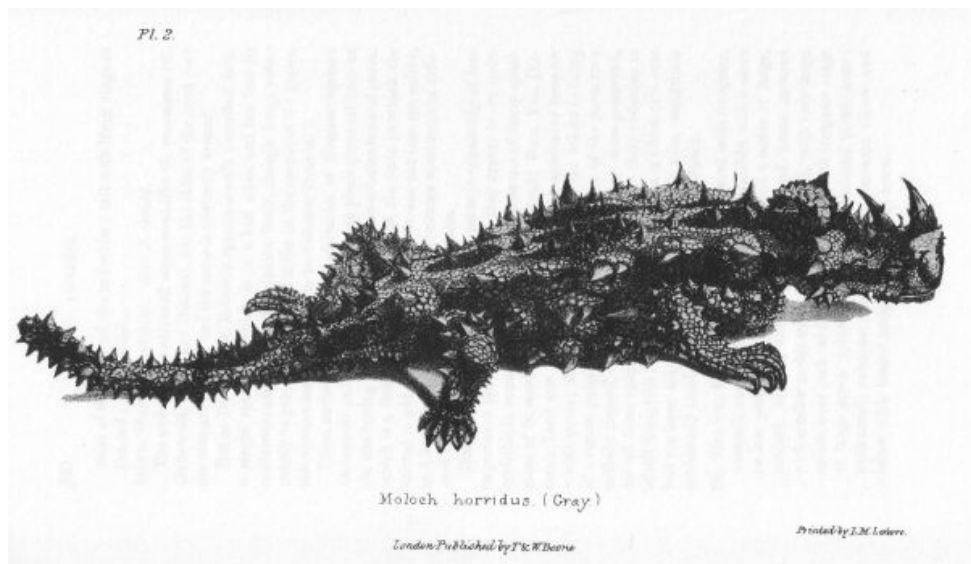
Inhabits Western Australia. Mr. J. Gould.

The underside is coloured somewhat like *G. maculatus* (*G. gaimardii*, Dumeril and Bibron) but the sides of the head near the ears are spinose, and the nape is distinctly crested.

But as Dumeril and Bibron's species is only described from a single specimen which is in a bad state, and has lost its epidermis, and as the description itself, though long, refers chiefly to parts which do not differ in the species of the genus, this species may prove not to be different from it.

These authors, in giving the character of *Grammatophora gaimardii* and *G. decresii*, appears to place great reliance on the one having tubular and the other non-tubular femoral pores, which is a fact entirely dependent on the state in which the animal might be at the time when it was put into the spirits, as I have verified by comparing numerous specimens of different reptiles furnished with these pores.

But in this genus the size of the pores is apparently of less importance than in many others, for they appear to be quite invisible in some states of the animal: thus out of many specimens of *G. muricata* brought by Mr. Gould from Van Diemen's Land and Western Australia, eight specimens have no visible pores; these specimens differ from the others in being of a rather paler colour beneath. This state of the pores may entirely depend on the manner in which they were preserved, for all these specimens had a slit made into their abdomen to admit the spirits; while in all the specimens in which this care had not been taken the pores are distinctly seen, sometimes moderately sized, and at others tubularly produced.



60. MOLOCH, Gray.

Body depressed, covered with irregular, unequal, small, granular plates, each furnished with a more or less prominent central spine, and with a series of large, conical, convex, acute spines; head and limbs covered with similar scales and spines; head small, with very large spines over each of the eyebrows; tail with irregular rings of large acute spines; femoral and subanal pores none; teeth small, subequal; toes 5.5, short, covered above and below with keeled scales; claws long, acute.

The external appearance of this Lizard is the most ferocious of any that I know, the horns of the head and the numerous spines on the body giving it a most formidable aspect. The scales of the back are small and unequal; they gradually increase in size as they approach the base of the conical spines, which is surrounded with a ring of larger scales with longer spines; the large spines are conical; rather compressed, spinulose below, smooth and acute at the tip, and are usually furnished with a sharp-toothed ridge on the front edge, and sometimes on both. These spines only consist of a horny sheath, placed on a fleshy process of the exact form and appearance of the spines they bear.

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The scales of the underside of the body are of the same form as those of the back, and are furnished with similar but smaller and less produced spines. The back of the neck of the two specimens I have seen is furnished with a large rounded protuberance like a cherry, covered with large granular spinous scales, and armed on each side with a large conical spine; but I do not know if this is common to the species or merely accidental in these individuals; at any rate it adds considerably to the singularity of their appearance.

I have named this genus, from its appearance, after "Moloch, horrid king."

60. *Moloch horridus*, t. 2.

Pale yellow, marked with dark regular spots; sides and beneath with black-edged dark red similar spots.

Inhabits Western Australia. The Honourable Captain G. Grey, and John Gould, Esquire.

The marks on the body are very definite, but from the irregularity of their form they are not easily described.

The lips are dark brown, with two streaks up to the small spines on the forehead; there is a dark cross-band from the base of the two large horns over the eyebrows, running behind, and then dividing into broad streaks, one along each side of the centre of the back of the neck to between the shoulders, crossing the nuchal swelling. In the middle of the back there is a very large black patch nearly extending from side to side, and over the loins are two oblong longitudinal black spots; the dark lines commencing from the lower angle of each eye extend along the upper part of each side to the upper part of the groin; the front of the fore- and hind-legs, and the sides are marked with similar dark bands.

A dark band commences from the hinder part of the lower lip, merging in the throat, and expanding out so as to be united together at the back part of the chin. There is a large rather oblong spot in the centre of the chest and the hinder part of the abdomen, separated from each other by a large somewhat triangular spot on each side of the middle of the abdomen.

Body 4 1/2 inches.

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This is the Spinous Lizard exhibited by Mr. Gould at the meeting of the Zoological Society in October 1840.

### 64. *Tropidonotus mairii*, Gray.

Olive, beneath pale olive, vertebral scales darker, slightly spotted; labial shield pale, dark edged. The dorsal and lateral scales keeled, placed in longitudinal series; the keels continued, equal; chin shields two pairs, long; throat scaly on the sides, shielded in the middle; loreal shields equal; one high anterior, and three small posterior ocular shields; temples shielded; nostrils in the suture between the scales; the anterior frontal narrow, moderate; eyes large, convex, pupil round.

Inhabits New Holland, Dr. Mair, 39th Regiment.

White, in the Appendix to his Journal, mentions and figures two snakes (n. 1 and 2 page 258) but his descriptions are so short, and his figures so indistinct, compared with what are now required to determine the species of snakes, that I am unable to apply them with certainty to any of the species here recorded.

### 68. *Naja bungaroides*, var.

Brown. Varied with a few whitish cross bands; last series of scales and beneath whitish ventral shield black in front; subcaudal plates, one-rowed; throat scaly; chin shields two pairs; eyes lateral, pupil round; front pair of frontal plates short; nostrils lateral, in two small shields, loreal shields none; one large anterior, and two moderate posterior ocular shields; lower temporal shield in the labial ones. Scales quite smooth, broad.

Inhabits New Holland. Dr. Mair.

### 69. *Trimesurus leptcephalus*.

Lacepede described this species twice, once as a *Boa*, and then as a *Trimesurus*. Mr. Schlegel observes that there is one of Baudin's original specimens in the Leyden collection, and that the scales are not in the least keeled, though Lacepede described them to be so. Lesson believing it to be an undescribed species formed for it his genus *Acanthophis*; Wagler has also formed two genera for this

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single species; and Cuvier formed from a variety of it with subcaudal bands a third genus, under the name of *Oplocephalus*.

### 70. *Trimesurus olivaceus*, Gray.

Olive-green, scales black; head dark with a black streak along each side, enclosing the eyes and united by a black band across the nape; lips, and beneath white; lips and chin black dotted, front of ventral shields blackish, throat scaly, chin shields two pairs. Under the epidermis bluish green; body elongate, tapering; tail moderate tapering, subcaudal shields one-rowed, longer towards the tip; scales all smooth, imbricated, subequal, rather larger below; head small, rather tapering in front, rounded; eyes rather small, pupil round, head shields normal; the nostrils lateral in the suture between two shields, hinder shield elongate; loreal shields none; one large anterior and two moderate post-ocular shields; labial shields subequal, lower temporal inserted.

Inhabits New Holland. Dr. Mair.

### 71. *Calamaria diadema*, t. 5 f. 3.

Body cylindrical, scales small; ventral shields brown, rounded; tail rather short, tapering; subcaudal plates two, round. Head small, indistinct, moderately long; head shields normal, first frontal small; nostril lunate, in the middle of a triangular nasal shield; no loreal; one rather large upper anterior, two posterior ocular shields, lowest largest; temples shielded; labial shield moderate. White dorsal scales with a distinct brown edge; head and nape black, with a broad white occipital band; beneath white.

New Holland. Dr. Mair.

### 72. *Calamaria annulata*, Gray. Snake, n. 2. White's Journal Appendix 259 f. 2.

White (in spirits) with twenty-eight black rings (twenty-five on the body and three on the tail;) head with two black bands, one on the end of the nose and the other with the eyes in front of it. Tip of the tail black; eyes small, pupil round; nostrils in the centre of a shield, lateral, erect; loreal shields none; one anterior oblique, and two small post-ocular shields.



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Inhabits New Holland. Dr. Lewis.

### 74. *Tortrix australis*.

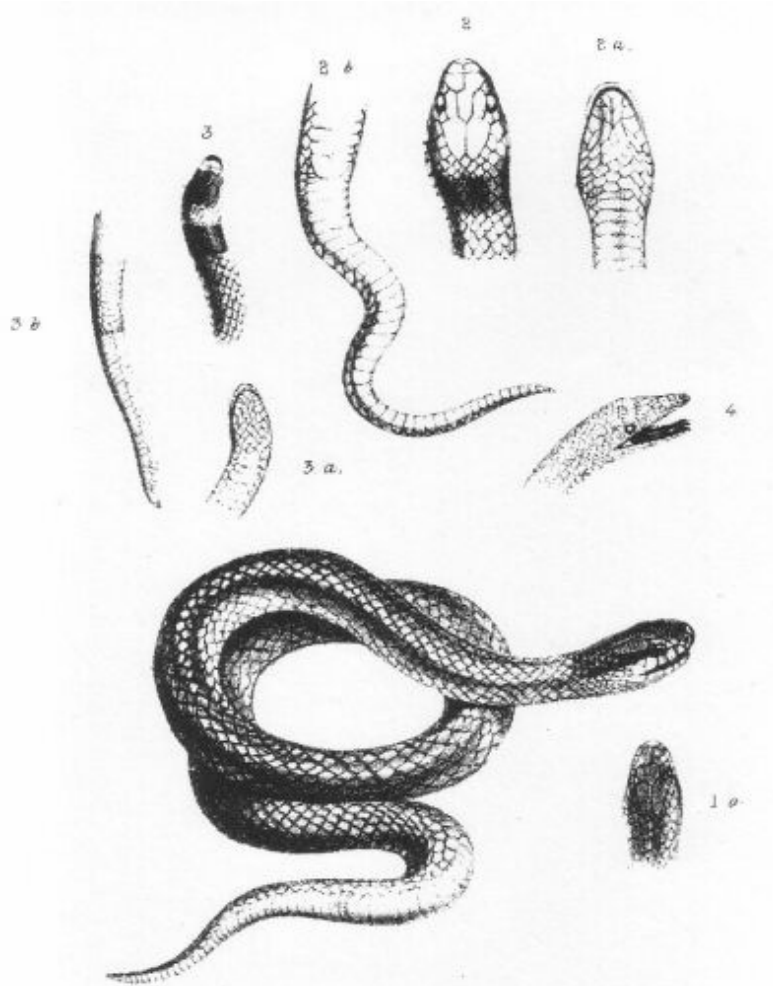
Pale olive, scales black-edged, on the sides widest; beneath bluish, with a white edged black band across the end of the muzzle; a white band before the front and back of the eyes, and a triangular black spot at the lower hinder angle of the eyes; pupil round; one large and two posterior ocular shields, no loreal shields; nostrils lateral, in the suture between the two nasal shields; scales smooth imbricate, those of the sides larger, of the tail six-sided.

### 77. *Elaps gouldii*, Gray, t. 5 f. 1.

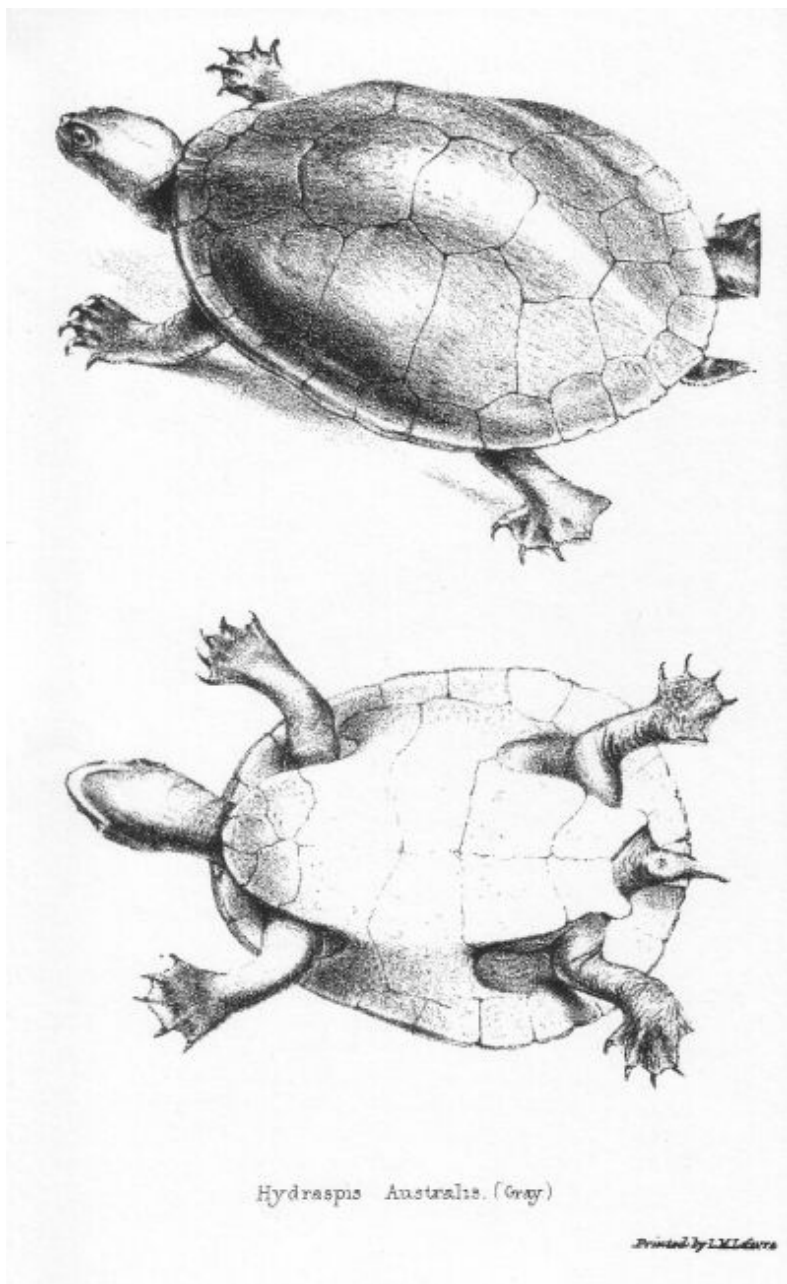
Pale yellowish; the scales of the back small, 6-sided, with a dark anterior margin, giving the back a netted appearance. Top of the head and nape black, with a yellow spot on the rostral scale on each side just before the eyes. Head small, the occipital plates large elongate; the nasal plate triangular; one moderate anterior, and two subequal posterior ocular shields; six upper and lower labial shields, the fourth under the eyes; eyes small, pupil round. There is an indistinct small yellow spot behind the upper part of the eye; but this may be an accidental variety, as the spots on the two sides are not equally defined.

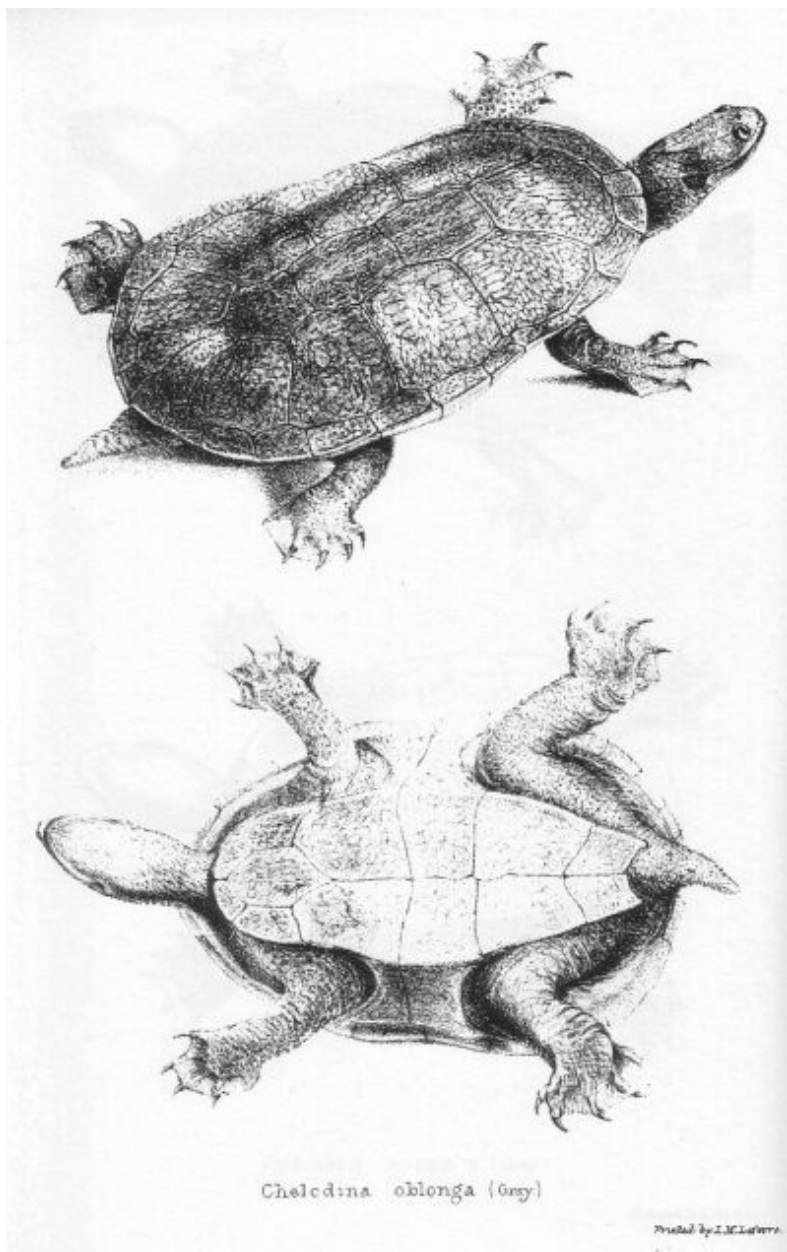
Inhabits Western Australia.

This species resembles *Calamaria diadema*, which is also found in Western Australia, but it is larger, and the head is larger in comparison with the body, and in this species it is the base of scales, while in the later it is the outer margin, that is dark.



- 1. *Elaps Gouldii* (Gray)
- 2. *Coronatus*. (Schl.)
- 3. *Calamaria diadema* (Schl.)
- 4. *Lialis Burtonii* (Gray)





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### 78. *Elaps lewisii*, Gray.

Olive green, submetallic; edge of the scales blackish; upper lip, chin, and ventral plates greenish-white; head moderate, elongate, depressed; head shields normal; hinder frontal and front of superciliary shield expanded on the sides, and bent down on the cheeks. Nostrils in the suture between the two small nasal plates. Loreal plates small oblong; one small front and two smaller posterior oculars. Temples shielded; labial plates moderate; chin shields two pair; middle of the throat shielded, sides scaly. Eyes large, pupil rounded; body elongate, sub-cylindrical, moderately thick, covered with cross bands of elongated narrow scales. The vertebral series broad, six-sided, long; of the nape, small, like those on the sides; of the tail, broader and more uniform; ventral plates distinctly keeled and erect on the sides. Tail elongate, tapering, with two rows of shields, keeled on the sides.

### 80. *Hydrus*.

Captain G. Grey informs me that these snakes coil themselves upon the shore, living on the seaweed, and that they lay their eggs on the shore. They are often found asleep upon the sea, when they are easily caught, as they cannot sink without first throwing themselves on the back, probably to empty their large vesicular lungs.

### 83. *Platemys macquaria*.

This species was originally indicated by Cuvier, from a single specimen brought from the Macquarie River by Messieurs Lesson and Garnot. It has been doubted if it really is an inhabitant of that country, and might not have been imported from South America, whence all the other species of the genus come, and sold to the French collectors for a native species.

### 84. *Hydraspis australis*, t. 6.

Body ovate, back dark olive, rather convex, rounded on the middle of the sides, with a narrow reflexed edge, shelving behind with a broad expanded margin; vertebral shields broad, six-sided, last subtriangular; beneath rather convex, yellow, shelving on the sides; the second marginal plate with an angular lobe produced into the suture between the vertebral and first costal plates; claws sharp, black; skin of head and limbs smooth.

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Inhabits Western Australia ?

The back covered with conferva.

85. *Chelodina longicollis*.

Mr. Gould brought two large specimens of this species, which are much more ovate and convex than Dr. Shaw's specimens. They are 7 inches long by 6 wide. It may be a particular variety, or they may become more ovate as they increase in size, The sternal shields (in specimens preserved in brine) are pale yellow, with black edges.

86. *Chelodina oblonga*, t. 7.

Shell oblong, rather contracted in front, with a broad impression on the middle of the back; back olive brown, with irregular anastomosing lines on the shields; beneath reddish-yellow. The marginal plates longer than broad, the second larger than the first and third; and rather angularly produced in the middle of the inner edge, opposite the suture between the first dorsal and first costal plate; the sternum high, flat, strongly and sharply keeled on the sides.

Inhabits Western Australia.

This species is at once known from *Chelodina longicollis* by the form of its high, flat sternum, which is strongly keeled on the sides, and by this part being of a uniform reddish colour, without any dark margin to the plates; the hinder part of the sternum is only slightly concavely truncated, and not deeply notched.

It is also known from that old well-known species by its oblong depressed form, and by the form of the marginal plates, and especially from the second and eleventh marginal plates on each side being placed more forwards, so that the centre of their inner edge is opposite the suture of the first and last costal plates with the dorsal ones; instead of their front margin, as is the case with all the specimens of *Chelodina longicollis* I have seen.

This species grows to a large size. Mr. Gould brought a specimen which he gave to Mr. Bell, which is 11 inches long, and the neck is nearly equally long, very thick, and studded with large warts; the

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head is broad and depressed, covered with a thin skin, like a *Trionyx*, and marked with small thin scales.

### 92. *Cystignathus dorsalis*.

The palatine teeth in a single large straight line, just behind the inner nostrils; tongue large, slightly nicked behind, the tympanum nearly hid under the skin; gray-brown (in spirits) marbled with dark irregular spots, with a white streak down the middle of the forehead and front of the back; sides pure white, spotted and marbled with black; beneath white; toes elongate, slender, tapering; back part of thighs brown, white speckled.

Inhabits Western Australia. Mr. Gould.

This species is very distinct from *C. peronii* and *C. georgianus*, the two Australian species described by Messieurs Dumeril and Bibron. It agrees with the former in the disposition of the palatine teeth.

### HELIOPORUS, Gray.

Head short, swollen; eyes large, convex; palatine teeth in a straight interrupted ridge between the two internal nostrils; teeth very small; body swollen; skin of the back minutely granular, of the belly smooth; legs rather short; toes 4.5, short, warty beneath, quite free; the hind wrist with a large, oblong, compressed, internal tubercle; the base of the inner finger with a conical wart, ending in a small acute bony process; tongue large, entire behind.

This genus has many of the characters of *Cystignathus*, but differs from it in being warty and swollen, and in having short toes like a toad.

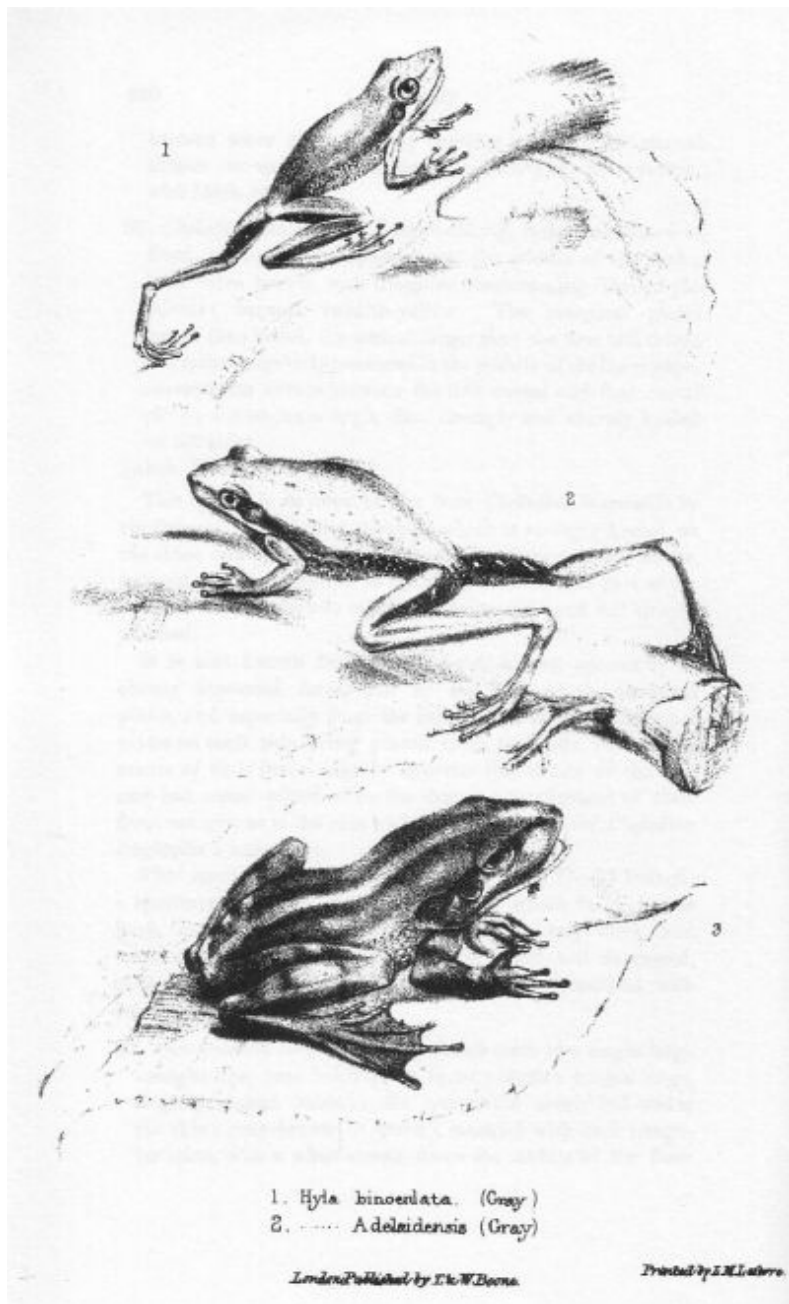
### 94. *Helioporus albo punctatus*, t. 1 f. 2.

Lead-coloured (in spirits) with white spots; beneath dirty white, with some small white warts at the angle of the mouth; legs smooth.

Inhabits Western Australia.

### 103. *Hyla Adelaidensis*, Gray, t. 8 f. 2.

Slender; fore-toes quite free, hinder toes webbed to the last joint; (in





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spirits) gray-blue, with a series of small oblong tubercles; the sides purple-brown with a white streak from the underside of the eyes to the shoulders; sides of the belly and region of the vent purplish, with small white spots; the hinder side of the thighs purple-brown, with three large oblong white spots; belly and under side of thighs granular; chin white, brownish dotted; palatine teeth in two roundish groups between the internal nostrils.

Inhabits Western Australia.

104. *Hyla binocularata*, Gray, t. 8, f. 1.

Slender; fore-toes quite free; hinder toes webbed to the last joint. Grayish white (in spirits) with a series of very small, indistinct, oblong tubercles, with a dark streak from the nostrils to the shoulder, enclosing the eyes, and a white streak below it from the underside of the eye; sides purplish, with small white spots; back of the thighs purple, with two yellow spots; belly and underside of thighs whitish, granular.

Var. 1. Back of thighs with one or two additional yellow spots.

Var. 2. Back bluish gray; back of the thighs with six or seven small subequal yellow spots.

Inhabits Western Australia.

UPEROLEIA, Gray.

Head large; palate quite toothless; upper jaw with small close teeth; tympanum hid under the skin; toes of the fore and hind feet elongate, slender, quite free; ankle with a roundish external and a small conical inner tubercle; tongue small, oblong, roundish, and entire behind.

This genus is most nearly allied to *Leiuperus* of Messieurs Dumeril and Bibron, with which it agrees in having no teeth on the palate, but it differs from it in the tympanum being quite hid.

The internal nostrils are some distance in front of the cross-ridge on which the palatine teeth are generally placed.

105. *Uperoleia marmorata*.

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Black and green marbled, leaving a triangular greenish spot on the forehead, beneath lead colour.

Inhabits Western Australia.

Dr. Tschudi has formed a genus under the name of *Crinia*, which appears by his characters to be nearly related to the above; but Messieurs Dumeril and Bibron (Erp. Gen. 8 416) observe that the specimens he described have two very small groups of teeth on the vomer.

107. *Breviceps gouldii*, t. 1 f. 1.

Smooth, with a few scattered low tubercles; gray-brown (in spirits), yellowish beneath.

Inhabits Western Australia.

This animal has all the external appearance and character, as far as they are given in Messieurs Dumeril and Bibron's work, of the *Breviceps gibbosus* of the Cape of Good Hope, except that it has not the yellow dorsal band, and the back is scarcely to be designated as granular. It is the second species of the genus, and only the second Toad found in Australia.



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### APPENDIX F.

Notes on some Insects from King George's Sound, collected and presented to the British Museum by CAPTAIN GEORGE GREY, by ADAM WHITE, Esquire, British Museum, in a letter addressed to the author.

DEAR SIR,

Fabricius was the first, or among the earliest, Entomologists who described the Annulose animals of New Holland, New Zealand, and the Pacific Islands. At the time he published his *Systema Entomologiae* (1775) these parts of the world had been visited by but few persons, and I believe that all the species he described as coming from them he found in the collection which was made by Sir Joseph Banks and Dr. Solander on their well-known voyage with Captain Cook; that collection was presented to the Linnean Society of London. Several of the original specimens have been figured in the works of Olivier and Donovan, and it is perhaps unnecessary to say that modern Entomologists often refer to these specimens as the typical examples. As far as I am aware the next important addition to the Entomology of New Holland was made by Dr. Schreibers of Vienna,<sup>56</sup> which was followed by that of Mr. Marsham.<sup>57</sup> All the specimens described by these entomologists were most probably collected by travellers touching only at certain points on the coast.

As New Holland became colonized and settlements increased Entomology was not altogether neglected, for we find a resident, John W. Lewin, A.L.S., of Paramatta, New South Wales, in 1805, publishing an elegant and curious quarto volume of plates in which he describes many species of crepuscular and nocturnal Lepidoptera, in most cases figuring the insects in all their stages; it is highly to be regretted that this interesting work was not continued, and it is to be feared that want of encouragement alone prevented the industrious and acute author from persevering in the design of his work, which the title he gave it<sup>58</sup> shows he intended to have made of a general nature on the subject. The accounts of the habits of *Cryptophasa* and *Agarista* are peculiarly interesting, and it is much to be wished that some of the many entomologists now in New Holland and the islands of the Pacific Ocean would publish similar notes (however short) on the habits, etc., of the insects they may find.

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Dr. Robert Brown, when on Flinders' voyage, collected many interesting insects which were described by Kirby in the 12th volume of the Linnean Transactions.<sup>59</sup> Several specimens were deposited by this celebrated botanist in the British Museum. We find Dr. Leach commencing the description of New Holland insects in his Zoological Miscellany; and Macleay in his *Horae Entomologicae* described many curious Lamellicornes. Since that time the communication with the great South Continent has been so uninterrupted that collections have been continually coming to Europe, and scarcely a ship now arrives without some additions being made to this branch of science.

The French voyages of discovery under Freycinet,<sup>60</sup> Duperrey, D'Urville, and Laplace have contributed very much to extend our knowledge of the Natural History of the Southern islands, as the publication of the *History of the Voyages of the Uranie*, Coquille, Astrolabe, and Favorite, amply testify; we are more especially indebted to Admiral D'Urville, who seems to unite the seemingly incompatible duties of commander of an expedition with an enthusiastic love of and search after insects. M. Guerin-Meneville published the Annulose animals of the *Voyage de la Coquille*, in which New Holland genera and species take a prominent place. Dr. Boisduval described those collected on the expedition of the *Astrolabe*, he also published the first *Fauna Entomologica* of New Holland and the Pacific; in his two volumes he gives a synoptical description of all the species he met with in the Parisian collections, indicating also such as he found in books whether he had seen the specimens or not. More detailed descriptions are looked for on some future occasion by the entomologists of this country from the learned and talented author of so many well-known works.

The figures and descriptions of Guerin, though fewer in number, are more detailed than those of Dr. Boisduval, who was much limited for space.

It would take up too much time to give a title of the names of the entomologists who have described New Holland insects<sup>61</sup> as nearly every working student of insects abroad and at home has added to the list.

Messieurs Audouin, Blanchard, and Boisduval will shortly publish descriptions of the insects etc. collected on D'Urville's last voyage. Latreille, Dejean, Schoenherr, and Klug must be specially

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particularized; Gory, Percheron, Chevrolat, Aube, Serville, Reiche, Spinola, Fischer, and Mannerheim have all more or less added to our acquaintance with the species. Many New Holland Arachnida and Pacific Ocean Crustacea have been described in the well-known works of the Baron Walckenaer and Dr. Milne Edwards. In this country Kirby, Hope, Curtis, G.R. Gray, Waterhouse, Shuckard, Newman, and Westwood have been the principal scientific men who have attended to species of annulosa. Bennett, Mr. Surgeon Hunter, Darwin and Major Mitchell, when opportunities offered, collected many species and neglected not the subject of their habits; the last-mentioned having also described (specifically) one or two species in his interesting work. Macleay's Appendix to Captain King's voyage<sup>62</sup> is universally known.

Curtis and Haliday have published and are engaged in publishing the description of Annulosa collected by Captain King, while those collected by Mr. Darwin on the voyage of the Beagle have been entrusted to Mr. Waterhouse, who has published descriptions of some in the Entomological Society's Transactions and in the Annals of Natural History. Hope's papers in the Zoological Transactions and the Coleopterist's Manual are well known, as are Mr. Newman's in different Magazines and Annals. We rejoice to see in a late number of a small periodical sheet exclusively devoted to Entomology<sup>63</sup> and edited by this gentleman a letter from Mr. Davis, containing some interesting information regarding the insects of Adelaide; and in the same periodical there are many New Holland insects described. Much may be expected from Messrs. Macleay and Swainson, both at present in the South Sea islands, and it is to be hoped that in a short time the fruits of their researches will be before the public. Mr. Gould collected many insects on his Ornithological expedition to New Holland, descriptions of which, from the pen of the Reverend F.W. Hope, may shortly be looked for.

The north-west coast of New Holland has been but little investigated, and yet in that quarter the late Allan Cunningham gathered a rich harvest of rare and unknown species; but it would take too much space to tell what parts have not been searched for insects, suffice it to say that the Swan River settlement, Kangaroo and Melville islands, Adelaide, Sydney, and Hobart Town seem all peculiarly rich in species, and what may we not expect from New Zealand, from the samples already given of its entomology by Fabricius and Shuckard, not to mention others who have described species from that locality.

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We yet hope to see a general work on the subject similar to the truly national work on the Birds and Kangaroos at present publishing by Mr. Gould. Mr. G.R. Gray commenced such a work in quarto, and the beautiful number illustrated by the late Charles Curtis, containing species of Phasmidae, it is to be hoped will not be left single.<sup>64</sup> I have only room to add that, owing to many other occupations, I can at present give only a very imperfect list of the species you have presented to the National Museum, which were all collected by you on the shores of King George's Sound. A.W.

### COLEOPTERA.

CARENUM, Bon. *Carenum perplexum*.

I think this may be the *Scarites cyaneus* Fabricius described from the Banksian Cabinet in 1775 (*Systema Entomologiae* page 249 g. 68 sp. 2.) It differs however from his description in the appendiculated thorax (the sides of which are rounded) being abruptly cut off behind, and in having the somewhat dilated margin there, slightly emarginate. The general surface of the thorax is not so bright in colour as the elytra, it has more of a purple reflection; a dark greenish hue prevails over the elytra, the anterior edge of each having, towards the margin, a slight bend upwards, which forms a kind of tooth, projecting slightly over the somewhat dilated margin of the elytra, along the margin of these are at least eight points, at first seemingly impressed, but when more particularly examined they appear to be raised and to have an impressed line round each of them. The head is black, the antennae and palpi piceous, the third joint in the former is longer than the second or third, the terminal joints are (more especially) furnished with pitchy hairs. Long. lin. 8.

Habitat King George's Sound. Captain George Grey.

The genus *Carenum* was founded by Fr. A. Bonelli in the second part of his *Observations Entomologiques*, read the 3rd May 1813 and published in the *Turin Transactions* for 1813,<sup>65</sup> upon a specimen contained in the Paris Museum of Natural History, which he regarded as the *Scarites cyaneus* of Fabricius figured by Olivier.

Guerin<sup>66</sup> has shown that the *Armidius marginatus* Leach of the letter-press to the *Voyage de l'Astrolabe*, page 33, is synonymous with *Carenum cyaneum* of Bonelli, as he has seen the two specimens, the former of which is in Dupont's collection.

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M. Brulle<sup>67</sup> observes well that the *Carenum cyaneum* of Bonelli must be different from the *Scarites cyaneus* of Fabricius, as both these authors speak of its being blue (or deep blackish green) over the whole upper surface, while in the *C. cyaneum* the blue is confined to the margin of the elytra; besides Olivier expressly states that the *Scarites cyaneus* is smaller than the *Scarites subterraneus*, which will not at all suit the original specimen from which the learned Bonelli derived his generic character. In the British Museum is the original specimen of *Arnidius marginatus* (catalogued by Dr. Leach) presented by J. Huey, Esquire, and it is very different both in size and in colour from the descriptions of Fabricius and Olivier, and the figure of the latter,<sup>68</sup> all derived from the original specimen formerly contained in the Banksian collection. Dr. Boisduval's concise description (op. cit. page 2, page 23) answers the specimen so named by Leach.

If the figure of *Carenum cyaneum*, given by Audonin and Brulle in their Work (tome 5 plate 2 f. 6) be correctly drawn, it differs very considerably from Leach's specimens of *Arnidius*, which is a broader insect.

I have not been able to see the original specimen of the *Scarites cyaneus*, so that in all probability it has been destroyed; it is much to be desired that accurate figures and descriptions were made and published of the original specimens described by Linnaeus and Fabricius, which exist in the Banksian and Smithian Cabinets in the possession of the Linnean Society, as well as those to be found in the Hunterian and British Museums. The genus *Eutoma* of Newman<sup>69</sup> seems to me to be synonymous with *Carenum*, but different from *Arnidius* of Leach.

CHLAENIUS, Bon.

*Chlaenius greyianus*, new species.

*C. supra laete viridi-smaragdinus, elytris costis tribus, suturaque elevatis cupreis, laevibus, interstitiis laevibus; margine utraque linea punctorum impressorum instructa; subtus piceo-niger, antennis pedibusque piceo-nigris.*

I have named this beautiful species after the Governor of South Australia; in the system it would come close to the European *Chlaenius quadrisulcatus*, Illiger. (Dejean and Boisduval Iconogr. et



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Histoire Naturelle des Coleopt. d'Europe 2 page 185 plate 94 f. 3)  
which it seems singularly to represent.

It is however rather a larger insect, and of a brighter green above than any specimens of the other species which I have seen, there is less of the coppery tinge about its upper surface. The thorax is much narrower, the lateral margins can hardly be called depressed, and they are not at all longitudinally scooped out there, as they are in the *C. quadrisulcatus*. The elytra are very distinctly sinuated towards the extremity, and the three elevated ribs are smooth and of a coppery bronze colour, with the intervening spaces smooth (at least not granulated as in the *C. quadrisulcatus*) and have two longitudinal lines of impressed points, one on each side of the smooth interval.

This short description may suffice to distinguish this beautiful species.

Habitat King George's Sound, Captain George Grey. (British Museum.)

*Staphylinus erythrocephalus*, Fabricius.

*Systema Entomologiae* 265 to 266 1775 *Syst. Eleuth.* 2 593 19.

*Oliv. Ent.* 3 Number 42 sp. 9 page 12 plate 2 figure 9.

*Erichs. Genera et species Staphyl. sp.* 8 page 351 1840.

Habitat Australia (King George's Sound) Captain George Grey, Museum British.

The specimens brought home by Captain Grey seem to me identical with the above. Fabricius describes the thorax (truncated in front and rounded behind) as having the anterior margin rufous in the middle, it being wholly of a deep shining black, and as Olivier (l.c.) remarks, the neck or narrowed collar (qui joint la tete au corcelet) is rufous yellow as is the squareish transverse head with a black spot on the crown. The scutellum and elytra are minutely punctured or chagrined, and hairy (except a small smooth oblong space on the shoulder of the latter) and are black with a violet tinge; in one specimen the elytra have scarcely any of the blue tinge, and the spot on the shoulder is of a ferruginous hue; the wings are violaceous. Dr. Leach had regarded this as a distinct subgenus, but as the name he

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had given it is pre-occupied in Botany, and has not been published with or without characters, as far as I am aware, I have not given it.

CRYPTODUS, Macleay.

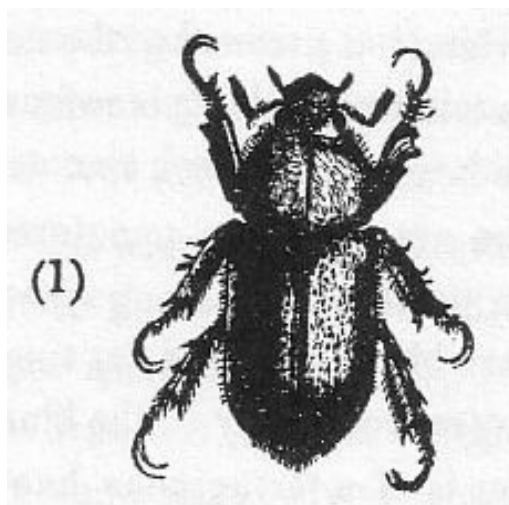
*C. variolosus*, Burmeister (Westwood Monograph ined.)

Smaller than Mr. Macleay's species and of a pitchy brown, it is less depressed; the head is squarer and not so broad, the two tubercles are more prominent, the mentum is deeply emarginate: antennae nine-jointed; basal joint dilated, prothorax not so transverse, much more closely punctured: the elytra are scarcely dilated behind, shorter, and are covered with exceeding minute punctures in addition to the larger ones.

Inhabits King George's Sound, Captain George Grey. (British Museum.)

Mr. Westwood informed me that Professor Burmeister had sent him a description of this species under the above-mentioned name; the characters are the principal of those which will appear in Mr. Westwood's elaborate memoir. I had written a description of this species and assigned a name to it, which however I withdraw. There are more than two species of this curious genus, first published in the *Horae Entomologicae*.

BRACHYSTERNUS, Guerin. (s.g. *Epichrysus*.)



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B. ? (E.) Lamprimoides, new species. Illustration 18 Insects 1.

Viridi aureus, thorace corporeque subtus tomentosus.

Yellowish metallic green, legs darker. The head is somewhat square, the transverse suture being rather indistinct; the margin of the clypeus is distinctly reflexed. Antennae dark brown, ten-jointed; 1st joint longest, thickened at the end, with ferruginous hairs behind; 2nd rounded, thin; 3rd, 4th, and 5th, with the separating lines very indistinct, those before the 3 lamellated joints short, transverse. Maxillary palpi with the terminal joint dilated, rather blunt at the tip, depressed above, and hollowed out at its base. Legs rather thick, the outer of the two tarsal claws of the third pair of legs, cleft at the end, anterior tibiae externally sub-tridentate. Thorax with the sides somewhat angulated and narrowly margined, rounded behind, but the sides of the posterior margin are straight, the surface is minutely punctured and covered with brown hairs, the sternum of the mesothorax is without a spine, or projecting angle; elytra in some specimens of a rich, lively, metallic, yellowish green, in other coppery green with the suture and margin dark green, the surface chagreened and punctured. Underside of the body and legs dark green, the former covered with ash-grey pubescence, or rather longish soft hairs.

This insect seems to be one of those links which connect such genera as Anoplognathus, Amblyterus and Brachysternus, and it is very difficult to say to which of these genera it is most allied. Professor Burmeister has begun to eradicate the Phyllophagous genera of Beetles, and from his deep knowledge of Entomology, and the particular acquaintance which he has with the principles of general Zoology, as well as the thorough manner in which he means to go through all the species, much light may soon be expected to be thrown on the subject; how true is Darwin's remark, made in speaking of a somewhat anomalous bird, "this, from its varied relations, although at present offering only difficulties to the systematic Naturalist, ultimately may assist in revealing the grand scheme, common to the present and past ages, on which organized beings have been created." (Journal and Remarks Voyage of Beagle 3 page 112.)

BIPHYLLOCERA, g.n.

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Antennae (seemingly) nine-jointed, the first joint long, much thickened at the end, and furnished with several stiff hairs, the five last are lamelliform, the lamellae in the male long, and pinnated on one side; labium deeply grooved in the middle, notched at the tip; palpi with the terminal joints longest, sub-cylindrical; head moderate; clypeus separated by a distinct line, basal part slightly hollowed out, as is the head between the eyes; thorax short; elytra elongate, somewhat rounded on the lateral edge, truncated at the end; legs slender; tibiae of first pair anteriorly sub-tridentate, tibiae of second and third pairs with many spines, claws of posterior tarsi entire, joints of tarsi, slender, elongate.

In the system this would come at no great distance from the genus *Serica*, the compound lamellated joints are, I believe, the first noticed amongst Phyllophagous Coleoptera.

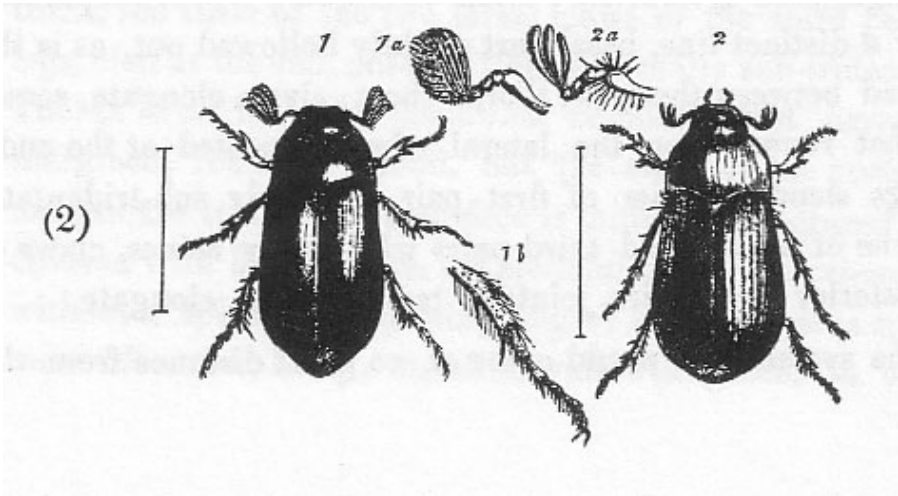
*Biphyllocera kirbyana*, sp. n. Illustration 19 Insects 2 Figure 1 a and b.)

*Piceo-brunnea*, *subtus piloso-fulvescens*, *thoracis margine flavescente*, *dorso, hirtello*; *elytris 9 (saltem) lineis longitudinalibus impressis*, *interstitiis transverse substriolatis quasi squamulatis*.

Shining, more especially on the head and clypeus, the crown of the head very smooth, the space between the eyes with impressed punctures, the clypeus slightly notched in front; antennae pale-ferruginous; thorax with short rust-coloured hairs, and the lateral margin slightly reflexed and paler than the dorsal part, which is covered with short striolae, giving a squamulate appearance to it; when narrowly examined, just above the rather large and bluntish scutellum, there are some distinct scattered punctures; thorax beneath covered with fulvous hairs.

Habitat King George's Sound, Captain George Grey.

There are two more or less injured specimens of this species in the collection of the British Museum. In the same collection, from the same locality, are two specimens of what I regarded as the females of the *B. kirbyana*; they are larger and of a pale brown; one of these is figured in the accompanying wood-cut figure 2. In the lamellae of the antennae of the two specimens there is considerable difference, so that probably there may be a second species of *Biphyllocera*. I have given it the name of *B. fabriciana*.



*Lamprima micardi*, Reiche in Guerin's Rev. Zool. 1841, Number 2, page 51.

Habitat King George's Sound, Captain George Grey.

*Porrostoma rufipenne* (Fabricius) Laporte Histoire des Anim. Art.

*Lycus rufipennis*, Fabricius Syst. El. 2 page 114 to 120.

Habitat King George's Sound.

*Porrostoma serraticorne* (Fabricius) Lap.

*Lycus serraticornis*, Fabricius Syst. El. 2 3 page 6.

Habitat King George's Sound.

*Saprinus cyaneus* (Fabricius) Erichson Uebers. der Hister. in Klug's Jahrb. d. Insectenk. 1 page 178.

*Hister. cyaneus* Fabricius Systema Entomologiae page 52 7 3. Syst. El. 1 86 13. Oliv. Ent. 1 number 8 plate 3 f. 17.

Habitat King George's Sound, Captain George Grey.

*Stigmodera roei*, Hope, Synopsis of Austr. Insects page 2 number 15.

*Buprestis dejeaniana*, Boisduval Voyage de l'Astrolabe Ent. 2 page 63 plate 6 f. 6.

*Stigmodera cancellata*, Lap. and Gory (nec Donovan) Histoire Naturelle etc. des Col. plate 2 f. 6.

Habitat King George's Sound, Capt George Grey.

Donovan's *B. cancellata* is surely a distinct species, the serrated margins of the elytra and other characters would separate it. I have

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not seen the work of the Reverend F. Hope, referred to by Messrs. Gory and Laporte, so that I am not aware whether the specific name *roei* or *dejeaniana* had the priority in publication.

*Stigmodera iospilota*, Hope, var. "Syn. etc." Lap. and Gory, op. c. plate 7 f. 39.

Habitat King George's Sound, Captain George Grey.

*Diphucrania scabiosa*, Gory ? Boisduval Voyage de l'Astrolabe.

Habitat King George's Sound, Captain George Grey.

*Ptomaphila lacrymosa* (Schreiber) Hope. The Coleopterist's Manual part 3 page 150.

*Silpha lacrymosa*, Schreibers Linnean Transactions 6 page 194 tab. 20 Figure 5.

Habitat King George's Sound, Captain George Grey.

*Belus suturalis*, Boisduval Voyage de l'Astrolabe, Ent. 2 page 304 plate 7 Figure 20.

Habitat King George's Sound, Captain George Grey.

*Catasarcus rufipes* (Hope) Schoenh. Gen. and Spec. Curc. 5 gen. 109 sp. 2 page 814.

*Cneorhinus stigmatipennis*, Boisduval Voyage de l'Astrolabe 2 page 349.

Habitat King George's Sound.

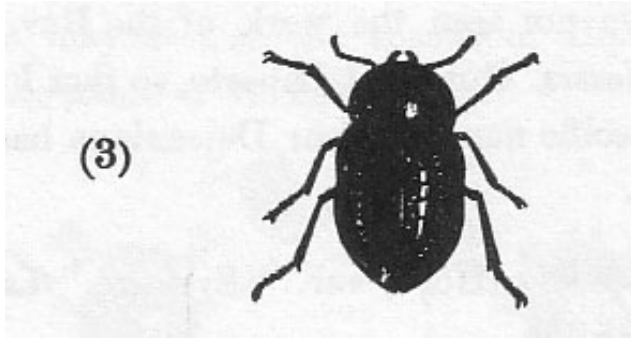
*Helaeus echidna*, new species. Illustration 20 Insects 3.

*H. elytris triseriatim spinosis.*

The dilated sides of thorax meeting in front, and projecting beyond head, a short spine in the middle near the hind margin. Elytra with two rows of spines close to the suture, and another close to the edge, where the dilated part commences: the central rows of spines are not continued to the tip, the spines being placed irregularly; they are also much larger than those of the side row. General surface of thorax and elytra very smooth, shining, the dilated parts of thorax and elytra with the surface somewhat undulated.

Inhabits King George's Sound, Captain Grey.

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EMCEPHALUS, Kirby Zool. Journal 3 page 524.

Emcephalus (Cilibe) tricostellus, new species.

Much larger than the *E. gibbosus*, of a dirty brown, glossed, and wide margin of elytra flat, the extreme edge somewhat turned up, the sides of the elytra at base are somewhat straight, but the edge soon gradually gets rounded off towards tip. Towards the suture the elytron is raised so as to form a very prominent keel down the back of elytra; the general surface of the elytra is somewhat pustulose, and there are three slightly elevated, longitudinal lines, nearly meeting (but indistinctly) behind on the convex part of each elytron. The middle of thorax is more shining than the other parts, and seems to have two impressions on the back on each side of a longitudinal, elevated dorsal line.

King George's Sound, Captain George Grey.

This species may belong to the genus "*Cilibe* Kirby," shortly alluded to by Dr. Boisduval in the Entomological part of the Voyage of the *Astrolabe*.

*Hesthesis cingulatus* (Kirby) Newman. *Annals of Natural History* 5 page 17.

*Molorchas cingulatus*, Kirby, *Linnean Transactions* 12 page 472.

Habitat King George's Sound, Captain George Grey.

*Phoracantha semipunctata* (Fabricius) Newman, *Annals of Natural History* 5 page 19.

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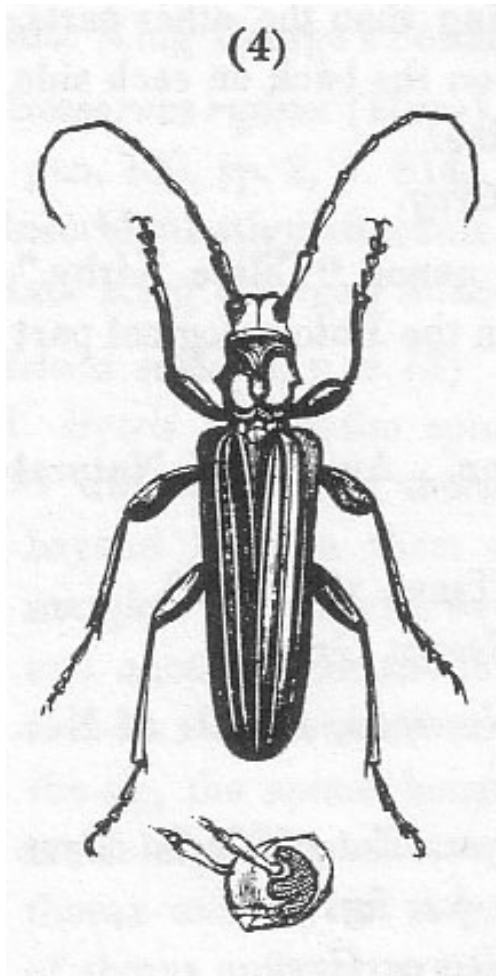
*Stenocorus semipunctatus*, Fabricius Systema Entomologiae 180 8  
Syst. El. 2 306 8. Donovan Epitome etc. figure.

Habitat King George's Sound, Captain George Grey.

*Hebecerus marginicollis*, Dejean.

Habitat King George's Sound, Captain George Grey.

*Bardistus cibarius*, Newman, Entomologist March 1841 Number 5  
page 80. Illustration 21 Insects 4.





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Of a yellowish bay colour, the head, thorax, and basal part of the three first joints of the antennae darker; the elytra soft, margined, with three parallel raised lines, not reaching the tip, the outer is on the side and not so distinct as the other two; there is also a short one running from the base of the elytron near the scutellum, and soon forming a margin to the suture. The antennae are slightly hairy outside. (In the accompanying figure they are represented much too short.) There are a few short hairs at the rounded tip of the elytra.

Habitat King George's Sound, where it seems to be very abundant, forming a favourite article of food with the natives who call it Barde; it is eaten in its imago as well as its larva and pupa states.

"It is found in the Xanthorrhoea. The grubs are white, have a fragrant aromatic flavour, and form a favourite article of food amongst the natives. They are eaten either raw or roasted, and frequently form a sort of dessert after native repasts. The presence of these grubs in a grass-tree is thus ascertained. If the top of one of these trees is observed to be dead, the natives give it a few sharp kicks with their feet, when, if it contains any Barde, it begins to give way; if this takes place, they push it over, and breaking the tree in pieces with their hammers, extract the Barde." Captain Grey's manuscript.

Paropsis, Oliv.

There are several beautiful species of this genus found at King George's Sound, where they seem to take the place of the Tortoise beetles (Cassididae). When alive, they have, like many of the Cassidae, the most brilliant lustre, their resplendent colours disappearing soon after death.

*Coccinella tongataboae*, Boisduval Voyage de l'Astrolabe Ent. it. page 595 plate 8 figure 24.

Habitat King George's Sound, Captain George Grey.

ORTHOPTERA.

*Blatta subverrucosa*, new species.

Apterous, oval; thorax in front semicircular, shrouding the head; posterior angle sharp, rounded behind, the frontal edge bent slightly

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back, and yellowish; the upper surface brown, rather obscure, the surface irregularly raised, below deep shining pitchy brown. Abdomen yellowish brown, above sprinkled with dark brown, the edges of each segment with several small wart-like prominences; two first segments being also shagreened at the sides, beneath pitchy brown, segments at the base black with green reflections; the femora are pitchy brown; the tibiae pale yellowish with black spines; the tarsi of a deeper yellow; head dark brown, the trophi and a narrow line on the cheeks yellowish; antennae somewhat ferruginous.

Habitat King George's Sound, Captain George Grey.

A large apterous species.

*Mantis latistylus*, Serville, var. Orthopt. Suites de Buffon page 179.

Habitat King George's Sound, Captain George Grey.

*Mantis rubrocoxata*, Serville ? Orthopt. page 203.

Habitat King George's Sound, Captain George Grey.

*Acheta* ? *marginipennis*, new species.

Thorax black with a yellow line above; head as wide as the thorax, with a blunted projection in front between the antennae, which are very long and situated in a groove in front of the eyes, and have their basal joint very large. No ocelli visible. Thorax wider than long, somewhat narrower in front than behind. Hemelytra very transparent, longer than the abdomen, lying flat upon one another, the outer margin bent down; the horizontal portion has many irregular nerves; there are two longitudinal nerves at the angle formed by the bent down outer margin, which extend from base almost to the tip, the spaces between these nerves being of a yellowish colour, the general colour greyish, there are several oblique parallel veins on the bent down margin; wings very short; posterior legs very long; femora much thickened, brown, at the base very pale; anal appendages very long and hairy. Somewhat allied to the *Acheta arachnoides* of Westwood, figured in the Naturalist's Library, Introduction to Entomology, volume 1 plate 6.

Habitat King George's Sound, Captain George Grey.

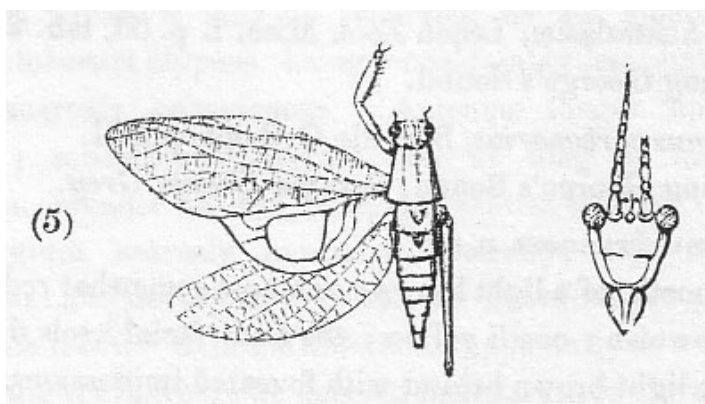
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*Tympanophora pellucida*, new species. Illustration 22 Insects 5.

Antennae very long, arising from between the eyes, labrum heart-shaped, eyes very large, prominent; ocelli 3, the first the largest, situated between the antennae, the two others being placed on the sides of a slight groove behind them. Prothorax widest behind, in front not so wide as the head; abdomen small, two of the segments on the back with projecting knobs; anal appendages in the male short cylindrical, slightly hooked inwardly, furnished at the end with two teeth, the surface is rough with short bristly hairs. The elytra are much longer than the wing, which again are at least twice the length of the abdomen; the first and second pair of legs are rather stout, the tibiae having two rows of strong spines on the underside; the hind legs are long and slender, the under surface of the tibiae being but slightly denticulated. The head is green, the front inclining to yellow, the crown is reddish brown, eyes green, ocelli yellow, two basal joints of antennae green, the remainder rust coloured; prothorax green, brown behind, with a broadish line of same colour down the middle; body rusty green, each segment with a dusky ring; elytra pale green with few longitudinal nerves, but many cross ones; wings of a very pale green; anterior legs of a pale brown, femora of second and third pair green; the tibiae pale brown, the tarsi and joints darker.

Habitat King George's Sound.

This genus is not far removed from *AEcanthus* Serville; when the wings are closed it somewhat resembles a species of the African genus *Pneumora*; (the figure should be reversed.)



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*Saga denticulata*, new species.

Head yellowish green with a brownish tint; the cheeks below the eyes and an irregular mark above the clypeus brownish in some specimens; labrum yellow, in some at the base brown; mandibles pale at base, succeeded by a reddish brown hue, the cutting edges being black and shining; antennae lower half green, terminal portion brownish green; prothorax without transverse grooves, the surface with minute wart-like prominences; elytra (in male) pale green with darker reticulations, the inner edge with a rosy hue; abdomen of a dark dull green above, beneath pale; legs green, changing into yellowish and brownish; the two rows of spines on the underside of the femora and tibiae short and blackish; anal appendages in the male knife-shaped, with a broad tooth at base. The ovipositor of female has the edges quite smooth beneath.

This species is but half the size of the *Saga serrata*.

Inhabits King George's Sound.

This species belongs to Serville's second division, or may possibly form a third, as in the males there exist rudiments of wings. Each of the elytra has a clear space like a tympanum; the upper part of the prothorax is smooth, the sides and posterior part are very slightly bent back, the last segment of abdomen notched at the end.

*Tropinotus cinnamomeus*, Serville Orthopt. page 620. *Gryllus australasiae*, Leach Zool. Misc. 1 page 56 tab. 24 ?

Habitat King George's Sound.

*Calliptamus carbonarius*, Serville Orthopt. page 691.

Habitat King George's Sound, Captain George Grey.

*Calliptamus brunneus*, new species.

Head smooth, of a light brown; antennae somewhat red, at the tip brownish; ocelli yellow; the four facial keels distinct; thorax light brown behind with foveated impressions, amidst which arise a few longish prominences, transverse grooves feeble, dorsal keel very distinct. Elytra longer than the body, slightly opaque, light brown, with a few indistinct spots; wings scarcely as long as the elytra, with

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a greenish hue, except at the tip which is brownish; abdomen brown, shining, palest beneath, segments keeled above, posterior tibiae of a bright red, sides at the base yellowish, spines black, posterior femora with two brown bands on the upper edge about the middle.

Inhabits King George's Sound.

HYMENOPTERA.

ONCORHINUS, Shuckard.

[Family Thynnidae Shuckard.]

My reasons for establishing the family Thynnidae I shall expose in my monograph of that family, which would have been published ere this but for the difficulty of procuring specimens for dissection; and as I must for a similar reason defer the positive character until I publish the synopsis of the whole, I will give those negative ones which are comprised in the differences which distinguish it from *Scotaena* of Klug, and from which it may be separated by its much swollen and protuberant clypeus, being considerably less emarginate. Genae scarcely conspicuous. Antennae longer and more porrect; second submarginal cell as long as the third; abdomen broader at the base, its ventral surface concave; hypopygium scarcely carinated laterally, and pygidium prominent and deeply emarginate, its lateral edges produced into acute teeth. External differences apparently so small, and which might elsewhere be deemed inadequate to the establishment of genera, become important in this remarkable family, from their being confirmed by the structure of the trophi, and the strong distinctions exhibited in their females in every instance that has yet presented itself to me, wherever I have had the certainty of specific identity in these heterogynous insects, from the direct observation of my friends in Australia.

*Oncorhinus xanthospilos*, Shuckard.

Black—clypeus, mandibles, lower portion of face in front of eyes, a narrow streak above and behind them—anterior margin of collar, tegulae, tubercles and adjacent part of epimerae—a round spot on each side of each segment of the abdomen, except the terminal one—apex of the femora, the tibiae and tarsi, all yellow; the posterior tibiae

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being only brown within, and the extreme apex of the joints of their tarsi also brown.

Habitat King George's Sound. Length 11 lines, expansion of the wing 18 lines.

This is a unique species in the genus as far as I have yet had the opportunity of ascertaining.

W.E.S.

NEUROPTERA.

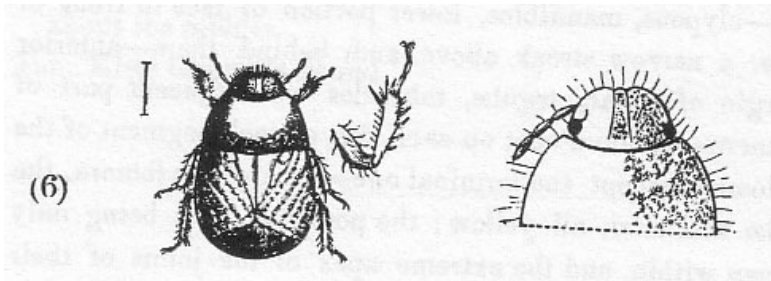
*Bittacus australis*, Klug. Monogr. Panorp. Berlin Transactions sp. no. 11.

Habitat King George's Sound.

HEMIPTERA.

CHOEROCYDNUS, n.g.

Head broad, in front somewhat truncated; ocelli wanting; antennae five-jointed, second joint longest, third, fourth and fifth, somewhat thickened and nearly equal; beak reaching to base of last pair of legs, if not beyond; third joint the longest; thorax in front notched for reception of head, not so wide as the body; scutellum long and pointed, the line separating it from hemelytra very indistinct; hemelytra without a membrane at the end; tibiae very spiny; abdomen broadest behind; tarsi of fore-legs very feeble, two-jointed, second joint shorter than the first, and ending in two claws.



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*Choerocydnus foveolatus*, new species. Illustration 23 Insects 6.

Dark pitchy brown; head, thorax, and body margined with hairs; head above minutely punctured, an elongated space in the middle, smooth; thorax above minutely punctured with some larger impressed dots, and irregularly shaped smooth spaces, the coriaceous part pitted; antennae and tarsi light ferruginous.

Inhabits King George's Sound.

### LEPIDOPTERA.

*Papilio liris*, Godart. *Encycl. Meth.* 9 *Papilio* page 72 no. 132. Boisduval *Spec. gener. des Lepidopt.* 1 page 269 number 92. De Haan. *Bijdr. etc. Verh. Nat. geschied. etc. Zool. Insecta* tab. 4 f. 3 page 40.

It may perhaps be not altogether foreign to the purpose of this list to say that in the collection of the British Museum there are two specimens of this species from the North-west coast of New Holland, where they were collected by the late Mr. Allan Cunningham. The whole of his collection was bought by Mr. Children, and many of the rare Lepidoptera in it were named by Mr. G.R. Gray. Godart's description of the body agrees exactly with the male in the national collection, les cotes et le bout de l'abdomen d'un rouge-carmin tendre. Boisduval, in the standard work above alluded to, says of this species, dessous et extremite de l'abdomen d'un rouge carmin. FEMELLE SEMBLABLE AU MALE, sur quatre individus que nous possedons, AUCUN NE VARIE. In one of the Museum specimens (a female) the abdomen is nearly entirely black, and the brown in both specimens is of the same rich deep shade that is found in the *Papilio polydorus*. The abdomen may possibly be that of some other species, as the specimen is not in very good condition. I regard the specimens from the north-west coast of New Holland as a slight local variety. Godart's specimens came from the East Indies and Boisduval's from Timor. I find that Monsieur W. de Haan, in the splendid work published at Leyden on the Natural History of the Dutch colonies in the East and West Indies, etc. has described and figured "the female" of this species with the following note; his specimens were from Timor-Kupang. On the lower side of both wings there is a carmine anal spot placed at the end of the yellow band and gradually running into it, this spot is larger and more deeply coloured in the male than in the female; in the former it shows itself on the upper

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side, along the inner edge, as a small streak which is not visible in the latter (l.c. page 40). I may add that his figure of the abdomen is red, and the specimens are larger than those in the Museum (Bijdragen tot de Kennis der Papilionidea, in the Verhandel. over de Natuurl. Geschied etc. Zool. No 3 tab. 4 f. 3 1840.)

*Pieris aganippe* (Donovan) Boisduval var. Lepidopt. 1 page 457.  
*Papilio aganippe* Donovan Ins. of New Holland.

Habitat King George's Sound.

*Hipparchia merope* (Fabricius).

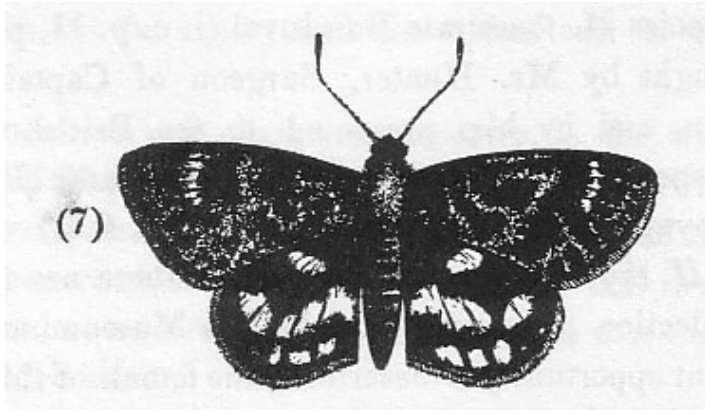
Habitat King George's Sound.

*Hesperia* ? *Sophia*. Illustration 24 Insects 7.

Above, brownish black; upper wings varied with bluish grey scales, many near the outer margin arranged into a somewhat regular series; a transverse, slightly bent, white band runs from near the outer edge close to the tip, to near the middle of the wing; wings fringed with greyish and black; under wings brownish black, with fulvescent orange spots and a band, one small spot somewhat transverse, near the middle, beneath this a broadish band extends from the anal margin nearly to the outer side of wing, which is divided by a brown line, leaving an irregular squareish spot, attenuated towards the outer margin; on the margin are three differently-shaped dots beginning from the internal margin, and in one of the specimens are four slight lunules, growing fainter as they approach the outer margin. Beneath, upper wings with two transverse fulvescent orange bands, one near the centre, the other at the tip, broadest externally, with three black spots, the outer largest running into it near the margin, interiorly it is much contracted ending in spots; the base of the wings is yellowish grey, under wings yellowish grey at base, otherwise very similarly marked, the outer part of the orange band having two longitudinal whitish lines on it; antennae at base fringed with white; club brown. Body above silky yellowish brown; borders of segments lighter; beneath, greyish white.

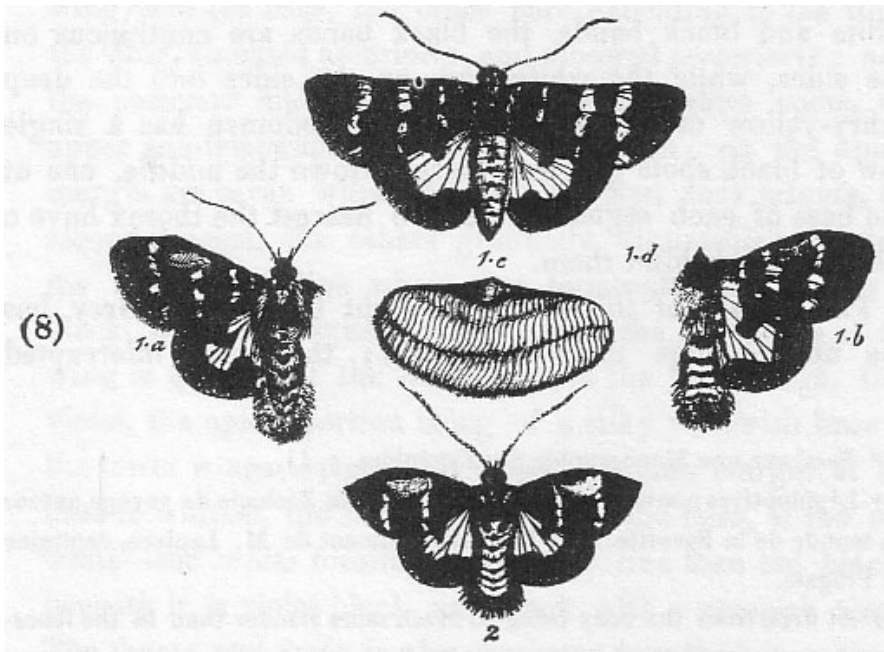
Inhabits King George's Sound. Capt George Grey.





This seems to belong to a new genus not far removed from *Castnia* or *Coronis*.

*Hecatesia thyridion*, Feisthamel. Illustration 25 Insects 8.



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1. *Hecatesia thyridion* female. 1a. do. male upper side. 1b. under. 1c. fenestra in wing of male. 1d. section of fenestre. 2. *Hecatesia fenestrata* male.

Lepidopt. Voyage Favorite Supplement plate 5 f. 1 male.

Female alis longioribus, maculis albis triseriatis alarum anticarum majoribus, nulla macula diaphana fenestrata ad costam.

The genus *Hecatesia* was founded by Boisduval in 1829,<sup>70</sup> upon a singular Zygenidous insect sent to Latreille by Mr. Alexander Macleay, from New Holland, in some part of which it does not seem to be uncommon.

The species *H. fenestrata* Boisduval (l.c. page 11 plate 1 f. 2) was brought by Mr. Hunter, Surgeon of Captain King's expedition, and by him presented to the British Museum. Another species has been described by the Baron Feisthamel in the voyage of the Favorite (page 19 plate 5 f. 1) under the name of *H. thyridion*.<sup>71</sup> Of this species there are specimens in the collection presented to the British Museum, and I take the present opportunity of describing the female of this species, only remarking that it wants the fenestrated clear space in the upper wing.<sup>72</sup>

The *H. thyridion* is distinguished from the *H. fenestrata* by its larger size, and a third yellowish white interrupted band close to the base of the first pair of wings; the fenestrated spot is narrower, more lunated, and is much smaller in proportion than in the corresponding part in Dr. Boisduval's species. The body beneath is girded with four yellowish white and black bands, the black bands are continuous on the sides, while the white pass on the sides into the deep ochry-yellow of the upper side; the abdomen has a single row of black spots (at least seven) down the middle, one at the base of each segment, the two nearest the thorax have a whitish spot behind them.

The female of this species brought by Captain Grey has the upper wings more developed; the three interrupted whitish bands are composed, at least the two outer, of three spots, larger than in the female; the little bluish white spots on the deep brown part of the under side of the lower wing are also nearly obsolete; the sides of the body are not fringed as in the male; and the apical tuft is very small indeed.

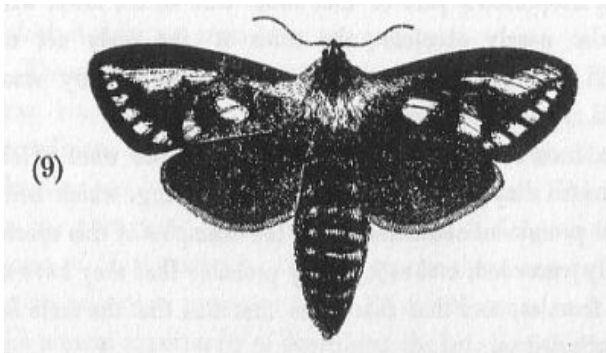
## Journals of Two Expeditions of Discovery

The most marked character however is the want of the fenestrated diaphanous spot in the upper wing, which being a most prominent characteristic in the examples of this species already recorded, makes it highly probable that they have all been females, and that this is the first time that the male has been alluded to.

The beautifully striated and waved surface of the glassy spot, taken in connection with the fact of the noise made by the insects possessing it, would seem to indicate that the fenestrated spot must act as a tympanum.

*Cossodes lyonetii*, new species. Illustration 26 Insects 9.

Wings black, with violet, purple, and green reflections; upper with a longitudinal line, broken by the black of the wing near the base, the other part extending to the tip of the wing, sinuated anteriorly, and elbowed posteriorly; near the posterior margin are two irregular white spots, the upper sub-triangular, the under squareish; on the apical margin are seven white spots, the first very minute, the second largest, the others gradually diminishing towards the long white line where they terminate. The fringe is black, slightly greyish on the edge; the underside of the wing is greyish at the base, and on the inner edge, then violet, the apical portion being of a silky yellowish brown; the lower wings are purplish violet, the outer margin at the base is whitish, the fringe is black at the base, at the end white—the white forming a broader line than the black; beneath it is violet black, and black with a greenish tinge. The thorax and body in the specimen described is rubbed; the latter seems to be blackish green, banded with white. I have seen a species closely resembling the above in Dr. Boisduval's immense collection.

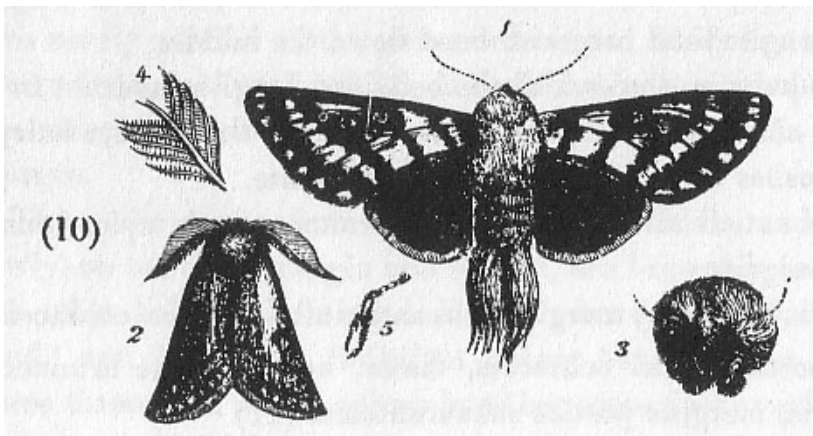


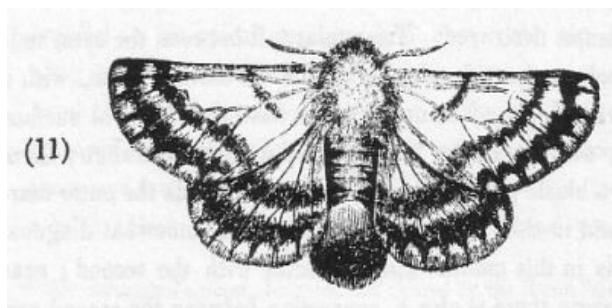
Habitat King George's Sound. Captain George Grey.<sup>73</sup>

*Odonestis elizabetha*, new species.

Antennae, with the pectinations rusty brown, lighter at the tips, the stem densely covered with white scales, palpi and head in front deep ferruginous. Thorax thickly clothed with fawn-coloured hairs; body above, shining ochrey inclined to orange; short tuft at the end of the body; underside lateritious; upper surface of first pair of wings fawn, with a reddish hue, densely covered with hair-like scales, with shorter and somewhat square scales beneath, the scales over the nervures, being reddish; an indistinct line of seven obscure spots still more indistinctly connected by a zigzag reddish line, runs across the wing nearly parallel to its apical margin, and nearer the tip of the wing than the middle. (In one of the two specimens this band of spots is obsolete, or nearly so, as are the reddish coloured nervures.) Second pair of wings of a blush red, the fringe fawn coloured; underside of both wings, more of a brick colour than the upper surface of second pair; the fringes fawn coloured; the second pair with a very indistinct band, nearly parallel to the posterior margin; the nerves on the first pair of wings are lighter than the general ground, on the second pair darker; space between the first pair of legs densely clothed with long ferruginous hair; two hind pair of legs with two strong spurs, one rather shorter than the other; the tibiae have each a tuft of yellowish white hairs, the legs themselves are covered with short ferruginous scales or hair, those on the soles of the tarsus being somewhat ochrey in colour.

*Trichetra isabella*. Illustration 27 Insects 10.





Alis anticis albis, fasciis tribus apiceque nigris, maculis subocellatis duobus inter fasciam secundam tertiamque, maculis octo apicalibus; posticis nigris, basi anguste, apiceque marginali ochraceis. (10 figures 1 and 3)

Antennae destroyed. Triangular tuft between the eyes, reddish ochre, the sides brown; hairs on thorax white, with a yellowish tinge. The upper wings have their general surface white, the margin at the base being ochrey-orange; there are two black parallel bands suffused towards the outer margin, and in this way connected; a third somewhat diagonal band is in this manner also connected with the second; near the margin there is also a connection between the second and third bands by means of a brownish band interspersed with white scales, and in this are two subocellated spots, white, with an ochrey-orange roundish pupil; the second just in front of the third band white in front, and ochrey-orange behind; behind the third black band there comes a narrow band of white scales, with an ochrey-orange spot at the end near the outer margin. The tip of the wing is (broadly) velvety brown, with eight marginal whitish spots; the fringe is mixed with black and ochrey; the ochrey tingeing the posterior margin of some of the outer spots.

The under wings are velvety brown; the base being obscurely ochrey; the yellowish colour running up into brown; the fringe behind is ochrey.

The under wings are ochrey at the base; the outer margin of the first pair being dark brown; the brown of the second pair is scolloped on the margin as is that of the first. The body above, on the sides and on the margin beneath, is covered with velvety black hair; beneath there

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is a somewhat indistinct longitudinal brownish band down the middle.

The hairs on the end of the body are longish, and not in a dense close effused tuft as in the female; the legs are hairy, the brushes being black and yellowish white.

Female: *Alis anticis albis fasciis tribus brunneo-nigris apice brunneo-nigris.*

*Maculis 8 (saltem) marginalibus antice albis, postice ochraceis.*

*Alis posticis, basi ochraceis, fascia, apiceque late brunneo-nigris, margine postico subaurantiaco. Illustration 28 Insects 11.*

Since the figure of this was drawn from one of the two rather injured specimens presented by Captain Grey, I have seen another specimen in finer condition, from which I shall take the more particular description of the bands on the upper wing.

The head and thorax are covered with long and close hairs; the tuft between the eyes being of a brownish ochrey colour; the sides blackish. The hairs on the fore-part of the thorax are ochrey-brownish, gradually passing into white on its general surface, which however has more or less of a yellowish tinge.

The upper wings are white and covered with longish loose scales. Near the base is a narrowish transverse dark brown band, with another considerably before the middle of the wing running parallel to it; behind the middle there is a third band, the inner extremity being at the same distance from the second band as the second is from the first; but it gradually slopes away towards the outer margin, and is thus nearly parallel to the posterior margin, which has also a brown band, scolloped behind, and with at least eight spots on the margin, which is of a brownish yellow, as in the outer margin.

The under-wings, from the base to the middle, and (narrowly) on the outer margin and behind, are brownish ochrey; the other half of the wing is blackish brown, scolloped behind; and having an indistinct ochrey band passing transverse through it, which ochrey band has some darker-coloured scales mixed with it.

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The undersides of both wings differ but little from the upper sides; the upper pair more especially however have on the basal and submarginal parts longish ochrey coloured hairs instead of white scales.

The body above is, at the base, ochrey; the sides, and two or three other segments brownish black, darkest just in front of the large thick-set tuft of brownish orange hairs at the extremity; beneath, down the middle, is a band of brownish orange, the segments to the sides of this being black at the base and orange at the tip; the legs are varied with black and ochrey white.

This seems congeneric with the *Arcturus sparshalli* of Mr. Curtis, described in the 7th volume of the *British Entomology*, folio 336, as a British insect; but there seems doubt of the correctness of this. The name, having been pre-occupied in *Natural History*, has been changed by Mr. Westwood to *Trichetra*, in page 92 of the *Generic Synopsis*, appended to his *Introduction to the modern Classification of Insects*.

The *Bombyx tristis* is figured (figure 2) on the same block with the *T. Nephthis*.

*Agagles amicus*, new species.

A new species, at first sight resembling *Leptosoma annulatum*, Boisduval (*Voyage de l'Astrolabe* 1 page 197 plate 5 figure 9) but differs; the thorax having four longitudinal, narrow, light-coloured lines, the band across the upper wings is more continuous, and the circular spot on lower, larger. It is about the same size, and has the body ringed with black and yellow; the legs are brown; the femora on underside fringed with whitish hairs, simply pectinated; many of the pectinations of the antennae end in a bristle-like hair; palpi somewhat prominent; last joint pointed.

The illustrative figures were drawn by Mr. B. Waterhouse Hawkins, and engraved on wood by Mr. Robert Hart, of Gloucester Street, Queen's Square.

THE END.





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### FOOTNOTES

1. Now Captain Lushington of the 9th Foot.
2. Monsieur Savignon, Medecin du Gouvernement, se distingue par un caractere honorable et des connoissances etendues dans la profession. Voyage aux Terres Australes Tome 1 page 21.
3. The mean temperature of Laguna may be estimated at 63 degrees of Fahrenheit, within doors, in the middle of the town; the thermometer being placed in the shade, and exposed to the air. Result of eight years' uninterrupted daily observations from 1811 to 1818.
4. The revolt broke out on the 7th November 1837 but was suppressed the following month. Great alarm existed lest the Negro slaves should be induced to take their part likewise in the conflict between the contending factions. Annual Register for 1837.
5. We had been able to introduce several useful plants into the Cape; amongst others the South American Yam, which, owing to the quality of the potatoes and their great fluctuations in price, will eventually be very serviceable to the colonists, more especially for the use of whalers.
6. We found the marks of an encampment of a tribe of natives. Eight or nine spots were cleared away amongst the grass, and in the centre of each were the ashes of a small fire, close to which we noticed some loose flattened stones with a smaller one lying upon them, which the natives probably used for the purpose of bruising or grinding the seeds of plants and breaking shellfish. King's Survey of Australia volume 1 page 302.
7. I should state that the rise and fall of tide here is thirty-eight feet.
8. A similar mass of shells, though of smaller dimensions, is spoken of by Captain King, at Port Essington: A curious mound, constructed entirely of shells, rudely heaped together, measuring thirty feet in diameter, and fourteen feet high, was also noticed near the beach, and was supposed to be a burying-place of the Indians. King's Australia volume 1 page 87.

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9. This tree was also observed on this part of the continent by Captain King, who met with it both at Cambridge Gulf and Careening Bay, and describes it as follows: Mr. Cunningham was fortunate in finding the fruit of the tree that was first seen by us at Cambridge Gulf, and had for some time puzzled us from its immense size and peculiar appearance. It proved to be a tree of the Natural Order Capparides, and was thought to be a Capparis; the gouty habit of the stem, which was soft and spongy, gave it an appearance of disease; but as all the specimens, from the youngest plant to the full-grown tree, possessed the same deformed appearance, it was evidently the peculiarity of its habit. The stem of the largest of these trees measured twenty-nine feet in girth, whilst its height did not exceed twenty-five feet. It bore some resemblance to the *Adansonia* figured in the account of Captain Tuckey's expedition to Congo. King's *Australia* volume 1 page 423.

10. This hill may be easily recognized by a precipitous cavity near the summit on its southern side, which may be seen at some distance.

11. I am informed that the seeds of it which I introduced into the Isle of France in 1838 have greatly multiplied and that the plants are in a very flourishing state.

12. This figure brings to mind the description of the Prophet Ezekiel: Men portrayed upon the wall, the images of the Chaldeans portrayed in vermilion, girded with girdles upon their loins, exceeding in dyed attire upon their heads, all of them princes to look to, after the manner of the Babylonians of Chaldea, the land of their nativity. Chapter 23:14, 15.

13. Appendix, volume 2.

14. *Ibid.*

15. *Nautical Magazine* for 1840 page 576.

16. *Flinders' Voyages* volume 2 page 158.

17. North-east coast of Australia.

18. King's *Australia* volume 2 page 25.

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19. King's Australia volume 1 page 291.
20. The Serwatty Islands to the east of Timor see the map of the Asiatic Archipelago by Mr. John Arrowsmith.
21. Another authority says: Tidore near Ternate is a good friendly place. Articles for trade are looking-glasses of a better kind, knives and forks, beads, watches, printed calicos, blue Pondicherry cloth, Salimpores, arms, powder, flints, lead or shot, razors, scissors, handkerchiefs; in return for which you may get pearls, pearl-shell, tortoiseshell, birds-of-paradise, nutmegs, etc.
22. In the year 1667 the Dutch Commodore Vlaming appears to have visited these coasts and to have ascended a river which might have been the Gascoyne. The account of his exploration is thus briefly given by Flinders (Terra Australis volume 1 Introduction page 61) After relating the arrival of his two ships off Cape Inscription at the north end of Dirk Hartog's Island he proceeds:

No mention is made by Valentyn of the ships entering the road, nor of their departure from it; but it should seem that they anchored on February 4th. On the 5th Commodore Vlaming and the commander of the Nyptang went with three boats to the shore, which proved to be an island. They found also a river, and went up it four or five leagues, amongst rocks and shoals, when they saw much water inland, as if the country were drowned, but no men, nor anything for food, and wherever they dug the ground was salt. They afterwards came to another river, which they ascended about a league, and found it to terminate in a round basin, and to be entirely salt water. No men were seen, nor any animals, except divers, which were very shy; and the country was destitute of grass and trees. Returning downward on the 10th, they saw footsteps of men and children of the common size, and observed the point of entrance into the river to be a very red sand.
23. The Warran in a species of Dioscorea, a sort of yam like the sweet potato. It is known by the same name both on the east and west side of the continent.
24. For a further description of this harbour, which has been since denominated Port Grey, see the account of the schooner Champion's Expedition in the 6th chapter.

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25. A small red root somewhat resembling in flavour a mild onion.
26. The nut of the *Zamia* tree.
27. The *Boyl-ya* is the native sorcerer.
28. Ruston.
29. He was the eldest son of Octavius Smith, Esquire, of Thames Bank, and grandson of the late William Smith, Esquire, long known in political life as Member for Norwich.
30. See above. [The coast to the eastward of the Abrolhos has been since examined by H.M.'s surveying vessel the *Beagle*, Captain Wickham, R.N., and while these sheets were passing through the press an account of the survey of Port Grey, under the appellation of Champion Bay, appeared in the *Nautical Magazine* for July 1841 page 443, from which periodical it has been copied into Appendix B at the end of this volume. ED.]
31. The report of this bay by the Master of the *Champion* is as follows: 26th January 1840. Anchored in a bay not laid down in the charts, lying in latitude 28 degrees 50 minutes, the north land bearing north-north-west, and the south point south-west. A reef breaks off the point, the north part of which bore west-south-west; but it extends far more to the north, and breaks, I presume, in bad weather. The reefs extend also a great way to the westward of this point. We anchored about half a mile from the shore in seven fathoms water, and about three miles from the head of the bay. The soundings are exceedingly even for five miles, carrying seven fathoms, never varying: just before, we carried four and five, when, I think, we passed over the reef, which appears to me to join the main at that distance from the south-west point. The beach does not show the least sign of any sea. Found two posts stuck up in it. I consider this bay an excellent anchorage during summer; and, I think, from the appearance of the beach, it must be safe in winter.
32. See Illustration 8 volume 1.
33. See Illustration 10 volume 1.
34. The corresponding figure, Illustration 9 volume 1, should have been inverted.

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35. Volume 2.
36. Volume 2 quoting from Charlevoix volume 3 page 266.
37. Ibid quoting from Major Long's Exp. volume 1 chapter 15.
38. Voyages and Travels page 86.
39. Extracted from the Reports of the Aboriginal Protection Society.
40. Volume 2 quoting from Tanner's Narrative page 313.
41. Ibid.
42. Account of the Abipones Volume 1.
43. Volume 2.
44. Ibid.
45. Boreang is the word for a male native dog.
46. Boyl-ya is the native name for a sorcerer.
47. Burckhardt remarked a similar custom among the Bedouin Arabs. He says: If the deceased have not left any male heir, or that the whole property is transferred to another family, or if his heir is a minor, and goes to live with his uncle or some other relative, the tent posts are torn up immediately after the man has expired, and the tent is demolished. Travels in Arabia page 58.
48. He had been murdered by his countrymen whilst tending Mr. Bussel's cattle.
49. Charlevoix, in describing the funeral of the North American Indians, says: Le cadavre est expose a la porte de la cabanne dans la posture qu'il doit avoir dans le tombeau, et cette posture en plusieurs endroits est cela de l'enfant dans la sein de sa mere. Nor was this custom confined to these races, for, in the words of Cicero: Antiquissimum sepulturae genus id fuisse videtur, quo apud Xenophontem Cyrus utitur; redditur enim terrae corpus, et ita locatum ac situm, quasi operimento matria obducitur. De Legibus 11 66.

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50. Australian Expedition volume 1.

51. Threlkeld's Vocabulary page 88.

52. His words were nearly as follows:

Boyl-ya yongar boyl-ya gaduk. Djerral, way-lo, wor-rar ngin noween; Boyl-ya windoo; boko-djee wattoo; boorda nganya mendyke ngoomon. Boyl-ya yongar boola ngan-noween, kalla moquoin, boorda ngin-nee nganya men-dyke ngoomon. Boyl-ya donga gaduk, boorda gurrang ngoomon, nadjoo nginnee wangow broo.

Boyl ya kote yan-na, ngin-nee bid-jar, bal-goon kote yan-na; kote yool yannow boyl-ya. Boyl-ya windoo-buk; boorda nganneel mendyke ngoomon; nadjoo wanga-broo. Goodjyte yool yannow. Boyl-ya wunja nginnee? Nganya goree katta mendyke. Boorda nginnee nganya goodjall waingur; Yoongar nungow broo. Boyl-ya bakkan broo kote ngan-now. Ko-tdje ngannow broo. Yel-line ngan-now (ngin-nee nganya yonga, nadjoo wattoo yan-na.) Boyl-ya yoongar bogal boola ngin-now. Yoongar mendyke, boyl-ya wal-byne, wal-byne, wal-byne, etc. etc. boorda bar-rab-a-ra yoongar.)

53. They halt or remain.

54. [This letter has subsequently been printed for Parliament at page 43 of the Sessional Paper Number 311 of 1841, the Colonization of New Zealand. ED.]

55. Married to Yungal, a son of Nar-doo-itch.

56. Linnean Transactions 6 pages 185 to 206, tab. 19 to 21 1802. Descriptions of some Singular Coleopterous Insects by Charles Schreibers, M.D., Deputy Professor of Natural History in the University of Vienna. *Lucanus aeneus* (Lamprima Latr.) *Scarabaeus proboscideus* (*Elephastomus* Macleay). *Cetonia philipsii* (*Schizorhina* Kirby) *Silpha lachrymosa* (*Ptomaphila* Hope). *Clerus fasciculatus*. *Prionus lepidopterus* (*Tragocerus* Dejean) *Cerambyx giraffa* (*Gnoma*) *Cer. fichtelii* (*Enicodes* G.R. Gray) *Scarites schroetteri* (*Hyperion* Lap.) all new, and a singular Brazilian genus, *Scarabaeus dytiscoides* (near *Anamnesis* Vigors and supposed to be the *Eucranium arachnoides* Dejean Cat. page 150 ed 1837) are all admirably described and figured here.

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57. Linnean Transactions 9 pages 283 to 295, tab. 24 to 25 1808. Description of *Notoclea*, a new genus of Coleopterous Insects from New Holland by Thomas Marsham, Esquire. Tr. L.S. This contains 20 species, some of which however had been previously described by Olivier under *Paropsis*, the appellation now universally applied to this "convex-backed" genus. The Reverend William Kirby in a note added the more latent characters.

58. *Prodromus, etc., Natural History of Lepidopterous Insects of New South Wales*, collected, engraved, and faithfully painted after nature by J.W.L. etc. London 1805 4to.

59. Volume 12 1818 pages 454 to 478. A description of several new species of Insects collected in New Holland by Robert Brown, Esquire, F.R.S. etc., by the Reverend W. Kirby, M.A., F.R.S. etc. 33 species described, 13 figured on tab. 23. Mr. Kirby, in his century of Insects published in the same volume, described 17 New Holland species, and in the same celebrated paper founded four new genera upon Australasian Insects, *Adelium*, *Rhinotia*, *Eurhinus* and *Rhinaria*. He would have described other genera but for his fear of interfering with Germar's labours on the *Curculionidae*. N.B. *Strongylium chalconotum* is from Brazil and not from Australasia as indicated.

60. *Voyage autour du monde etc. sur les corvettes de S.M. l'Uranie et la Physicienne 1817 a 1820 Paris 1824 Partie Zoologie*. Freycinet's Voyage, but for the lamentable shipwreck of one of his vessels, would have added much to our acquaintance with the Natural History of the places visited. Messrs. Quoy and Gaymard, Medecins de l'expedition, published the Zoological part of their notes. They refer with regret to the disastrous accident which deprived them of large collections of Insects made more particularly in the environs of Port Jackson. They describe and figure but one insect from New Holland (*Curculio lemniscatus* from Shark Bay) a spider from Port Jackson (*Aranea notacautha* Quoy, *Dolophones notacantha* Walckenaer Apt. 1 383) in which the brown callosities at the end of the cylindrical abdomen were taken for eyes, a position rectified by Walckenaer as above and by Kirby in his *Bridgewater Treatise* where he gives a copy of the French figure of this singular spider—Two Crustacea, one (*Ocypode convexus*) from Dirk Hatterick's and the other (*Pagurus clibanarius*) from Shark Bay, are all the Annulose animals described or figured as coming from New Holland, from the pitiable circumstance above alluded to.

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61. The entomologist who would attempt to do this must give a Universal Entomological Bibliography, as scarcely a Journal or volume of Transactions of any Scientific Society appears without containing fewer or more species from the great Australasian Continent and its islands.

62. King (Captain Philip P., R.N., F.R.S. etc.) Narrative of a Survey of the Intertropical and Western Coasts of Australia performed between the years 1818 and 1822 2 volumes London 1827. Appendix Catalogue of Insects collected by Captain King, R.N., 192 species of Annulosa, 188 Insects, 4 Arachnida pages 438 to 469; "eighty-one of the species are new." In this paper Macleay institutes a Curculionidous genus near Phalidura, which he names Hybauchenia, the type being *H. nodulosa*. *Carpophagus* type *C. Banksiae* "would probably with Linnaeus have been a *Bruchus*." *Megamerus* "has an affinity to *Sagra*, but differs from that genus in having setiform antennae, porrect mandibles, and securiform palpi, its habit is also totally different, and more like that of some of those insects which belong to the heterogeneous magazine called *Prionus*; it is undoubtedly the most singular and novel form in Captain King's collection." Type *M. kingii*.

63. The Entomologist, conducted by Edward Newman. London Van Voorst in Monthly Numbers.

64. I see in Laporte and Gory's *Histoire Naturelle et Iconographic des Coleopteres*, a work on Australian Insects, by the Reverend Frederick W. Hope, often quoted as *Synopsis of the Insects of New Holland*, but this must be privately printed, as I have never seen it or heard of it elsewhere.

65. *Memoires de l'Academie Imp. des Sciences* etc. page 479.

66. *Crust. Arachn. et Ins. of the voyage of the Coquille* avant-propos page 7.

67. *Histoire Naturelle des Ins. par Messieurs Audouin and Brulle* 5 page 64.

68. *Coleopt.* 3 Number 36 l. 2 f. 17.

69. *Entomological Magazine* 5 page 170 *Eu. tinctilatus*.



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70. Essai sur une Monographie des Zygenides page 11.
71. Lepidopteres nouveau, etc. Supplement a la Zoologie du voyage autour du monde de la Favorite sous le commandement de M. Laplace capitaine de Fregate.
72. At first, from the body being so much more slender than in the fenestrated specimens, I thought it might be the male but, on showing the specimen to Mr. Edward Doubleday, he pronounced it a female.
73. The *Saturnia laplacei*, described and figured by the Baron Feisthamel in his description of the Lepidoptera collected on the voyage of the Favorite is synonymous with the *Chelepteryx collesi*, described by Mr. G.R. Gray in the First Volume of the Transactions of the Entomological Society of London page 122.