

**Journal of an Expedition into the Interior of Tropical Australia  
In Search of a Route from Sydney to the Gulf of Carpentaria  
(1848) by  
Lt. Col. Sir Thomas Livingstone Mitchell Kt. D.C.L. (1792-1855)  
Surveyor-General of New South Wales**

**Thomas Mitchell**

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Journal of an Expedition into the Interior of Tropical Australia  
In Search of a Route from Sydney to the Gulf of Carpentaria (1848)

by

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Lt. Col. Sir Thomas Livingstone Mitchell Kt. D.C.L. (1792-1855)  
Surveyor-General of New South Wales

TO  
THE HONOURABLE  
THE SPEAKER AND MEMBERS  
OF THE  
LEGISLATIVE COUNCIL OF NEW SOUTH WALES,  
THIS JOURNAL  
OF  
AN EXPEDITION OF DISCOVERY,  
PETITIONED FOR BY THE COUNCIL,  
AND  
UNDERTAKEN AT THE EXPENSE OF THE COLONY,  
IS  
DEDICATED  
BY  
THEIR MOST OBEDIENT,  
HUMBLE SERVANT,  
T. L. MITCHELL

PREFACE.

"Admiring Nature in her wildest grace,"[\* Burns.] it has ever been the most attractive of the author's duties to explore the interior of Australia. There the philosopher may look for facts; the painter and the poet for original studies and ideas; the naturalist for additional knowledge; and the historian might begin at a beginning. The traveller there seeks in vain for the remains of cities, temples, or towers; but he is amply compensated by objects that tell not of decay but of healthful progress and hope;--of a wonderful past, and of a promising future. Curiosity alone may attract us into the mysterious recesses of regions still unknown; but a still deeper interest attaches to those regions, now that the rapid increase of the most industrious and, may we add most deserving people on earth, suggests that the land there has been reserved by the Almighty for their use.

In Australia, the great family of civilized man seems still at that early period between history and fable, upon which, even in "the world as known to the ancients," the Roman poet had to look very far back:--

"Communemque prius, ceu lumina solis et auras, Cautus humum longo signavit limite mensor." [\* Ovid, Met. lib. i.]

The Journey narrated in this work was undertaken for the extension of arrangements depending on physical geography. It completes a series of internal surveys, radiating from Sydney towards the west, the south, and

the north, which have occupied the author's chief attention during the last twenty years; and, as on former occasions, it has enabled him to bring under the notice of men of science some of the earth's productions hitherto unknown. He cannot sufficiently express his sense of obligation in this respect, to Mr. Bentham, Sir William Hooker, Dr. Lindley, and Professor De Vriese, for supplying the botanical matter and notes contained in this volume, and thus contributing to the general stock of human knowledge. It is also his pleasing duty to state, that during the long journey of upwards of a year, Captain P. P. King, R. N., kept a register of the state of the barometer at the sea side; and, in the midst of his important avocations, determined, by a very elaborate comparison of minute details, all the heights of localities herein mentioned.

The new geographical matter is presented to the public with confidence in its accuracy, derived as it is from careful and frequent observations of latitude; trigonometrical surveying with the theodolite, wherever heights were available; and, by actual measurement of the line of route. This route was connected, at its commencement and termination, with the trigonometrical survey of the colony; and, in closing on Mount Riddell, a survey extending two degrees within the tropics, the near coincidence of his intersections with that summit, as fixed by his survey of 1830, could not but be very satisfactory to the author.

The geological specimens collected during this journey have been deposited in the British Museum, and their original locality is shown on the maps by the numbers marked upon the specimens, so that they may be available to geologists; hence, in the progress of geological science, the fossils now brought from these remote regions will be accessible at any future time, and something known of the geology as well as of the geography of the interior. As Professor Forbes most readily undertook to describe the freshwater shells after the work had passed through the press, that portion of the collection also has thus been brought under the notice of geologists.

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JOURNEY INTO TROPICAL AUSTRALIA, ETC.

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The exploration of Northern Australia, which formed the object of my  
first journey in 1831, has, consistently with the views I have always  
entertained on the subject [\* See London Geographical Journal, vol. vii.  
part 2, p. 282.], been found equally essential in 1846 to the full  
development of the geographical resources of New South Wales. The same



direction indicated on Mr. Arrowsmith's map, published by the Royal Geographical Society in 1837, was, in 1846, considered, by a committee of the Legislative Council of New South Wales, the most desirable to pursue at a time when every plan likely to relieve the colony from distress found favour with the public.

At no great distance lay India and China, and still nearer, the rich islands of the Indian Archipelago; all well-peopled countries, while the industrious and enterprising colonists of the South were unable to avail themselves of the exuberance of the soil and its productions,

"Which mock'd their scant manurings, and requir'd MORE HANDS THAN THEIRS to prune their wanton growth."

The same attraction which drew the greatest of discoverers westward, "*al nacimiento de la especeria* [\* To the region where spices grew.]," seemed to invite the Australian explorer northward; impelled by the wayward fortunes of the Anglo-Saxon race already rooted at the southern extremity of the land whose name had previously been "*Terra Australis incognita*." The character of the interior of that country still remained unknown, the largest portion of earth as yet unexplored. For the mere exploration, the colonists of New South Wales might not have been very anxious just at that time, but when the object of acquiring geographical knowledge could be combined with that of exploring a route towards the nearest part of the Indian Ocean, westward of a dangerous strait, it was easy to awaken the attention of the Australian public to the importance of such an enterprise. A trade in horses required to remount the Indian cavalry had commenced, and the disadvantageous navigation of Torres Straits had been injurious to it: that drawback was to be avoided by any overland route from Sydney to the head of the Gulf of Carpentaria.

But other considerations, not less important to the colonists of New South Wales, made it very desirable that a way should be opened to the shores of the Indian Ocean. That sea was already connected with England by steam navigation, and to render it accessible to Sydney by land, was an object in itself worthy of an exploratory expedition. In short, the commencement of such a journey seemed the first step in the direct road home to England, for it was not to be doubted that on the discovery of a good overland route between Sydney and the head of the Gulf of Carpentaria, a line of steam communication would thereupon be introduced from that point to meet the English line at Singapore.

In this view of the subject, it seemed more desirable to open a way to the head of the Gulf of Carpentaria, the nearest part of the sea, than to the settlement at Port Essington, on a *presque-île* forming the furthest point of the land; and, that the journey would terminate at the Gulf was therefore most probable. The map of Australia, when compared with that of the world, suggested reasonable grounds for believing that a considerable river would be found to lead to the Gulf of Carpentaria.

My department having been reduced to a state of inactivity in 1843, I submitted a plan of exploration to Sir George Gipps, the Governor, when His Excellency promised, that if the Legislative Council made such reductions as they seemed disposed to make in the public expenditure, he should be able to spare money for such an expedition. The Legislative Council not only made reductions in the estimates to save much more money than His Excellency had named, but even voted 1000L. towards the expense of the journey, and petitioned the Governor to sanction it. His Excellency, however, then thought it necessary to refer the subject to

the Secretary for the Colonies. Much time was thus lost, and, what was still worse, the naturalist to whom I had explained my plan, and invited to join my party, Dr. Leichardt. This gentleman, tempted by the general interest taken by the colonists at the time in a journey of discovery, which afforded a cheering prospect amid the general gloom and despondency, raised and equipped a small party by public subscription, and proceeded by water to Moreton Bay. Dr. Leichardt, and the six persons who finally accompanied him thence to the northward, had not been heard of, and were supposed to have either perished or been destroyed by natives. [\* Dr. Leichardt returned afterwards to Sydney from Port Essington by sea; and the journal of his journey, recently published, shows what difficulties may be surmounted by energy and perseverance.]

The reply of Lord Stanley was, as might have been anticipated, favourable to the undertaking; but the Governor of the colony still declined to allow the journey to be undertaken, without assigning any reason for keeping it back. This was the more regretted by me, when it became known in New South Wales that Captain Sturt was employed, with the express sanction of Lord Stanley, to lead an exploring expedition from Adelaide into the northern interior of Australia, and that he was actually then in New South Wales. Sir George Gipps had expressed, in one of his early despatches to the British Government, his readiness to encourage such an undertaking as that, and stated that "no one came forward to claim the honour of such an enterprise;" yet now that Lord Stanley had sanctioned the plan of the Surveyor General, whose duty it was to survey the country, he refused to allow this officer to proceed. The Legislative Council, however, renewed the petition for this undertaking, to which the Governor at length assented, in 1845; and the sum of 2000L. was unanimously voted for the outfit of the party, but with the clear understanding on the part of the Council, that the plan of the Surveyor General should be adopted.

The idea of a river flowing to the northward, was not, however, new. The journey in 1831 was undertaken chiefly in consequence of a report that a large river had been followed down to the coast by a bushranger, accompanied by the natives: and the ultimate course of the Condamine, still a question, was a subject of controversy in some of the first papers published in the Journal of the Royal Geographical Society. My suggestions on the subject are detailed at length in the London Geographical Journal, Vol. VII., Part 2., page 282., and accompanied by a map showing the line of exploration then recommended.

In making preparations for this expedition, the means of conveyance by land and water required the earliest consideration. These were strong bullock-drays and portable boats. Horses and light carts had been preferred by me: but the longer column of march, and necessity for a greater number of men, were considered objections; while many experienced persons suggested that the bullocks, though slow, were more enduring than horses. [\* The results of this journey proved quite the reverse.] Eight drays were therefore ordered to be made of the best seasoned wood: four of these by the best maker in the colony, and four by the prisoners in Cockatoo Island. Two iron boats were made by Mr. Struth, each in two parts, on a plan of my own, and on the 17th of November the whole party moved off from Paramatta on their way to the proposed camp at Buree.

I joined the party encamped at Buree on the 13th of December, having rode there from Sydney in four and a half days, and on the following Monday, 15th of December, 1845, I put it in motion towards the interior. The Exploring party now consisted of the following persons:--

SIR T. L. MITCHELL, Kt., Surveyor General, Chief of the Expedition.  
EDMUND B. KENNEDY, Esq. Assistant Surveyor, Second in command. W.  
STEPHENSON, M.R.C.S.L. Surgeon and Collector of objects of Natural  
History. PETER M'AVOY, Mounted Videttes. Charles Niblett, William Graham,  
ANTHONY BROWN, Tent-keeper. WILLIAM BALDOCK, In charge of the horses.  
John Waugh Drysdale, Store-keeper. Allan Bond, Bullock-drivers. Edward  
Taylor, William Bond, William Mortimer, George Allcot, John Slater,  
Richard Horton, Felix Maguire, James Stephens, Carpenters. Job Stanley,  
Edward Wilson, Blacksmith. George Fowkes, Shoemaker. John Douglas,  
Barometer carrier. Isaac Reid, Sailor and Chainman. Andrew Higgs,  
Chainman. William Hunter, With the horses. Thomas Smith, Patrick Travers,  
Carter and Pioneer. Douglas Arnott, Shepherd and Butcher. Arthur Bristol,  
Sailmaker and Sailor.

8 drays, drawn by 80 bullocks; 2 boats; 13 horses; 4 private do.; and 3  
light carts, comprised the means of conveyance; and the party was  
provided with provisions for a year:--250 sheep (to travel with the  
party), constituting the chief part of the animal food. The rest  
consisted of gelatine, and a small quantity of pork.

With the exception of a few whose names are printed in italics, the party  
consisted of prisoners of the Crown in different stages of probation,  
with whom the prospect of additional liberty was an incentive so  
powerful, that no money payment was asked by them or expected, while,  
from experience, I knew that for such an enterprise as this I could rely  
on their zealous services. The patience and resolution of such men in the  
face of difficulties, I had already witnessed; and I had hired three of  
the old hands, in order the more readily to introduce my accustomed camp  
arrangements. Volunteers of all classes had certainly come eagerly  
forward, offering their gratuitous services on this expedition of  
discovery; but discipline and implicit obedience were necessary in such a  
party to ensure the objects in view, as well as its own preservation; and  
it was not judged expedient, where some prisoners were indispensable as  
mechanics, to mix with them men of a different class, over whom the same  
kind of authority could not be exercised.

Following the same road by which I quitted Buree, in 1835, my former line  
of route across Hervey's Range lay to the left. The party thus arrived at  
Bramadura, a sheep station occupied by Mr. Boyd. It was on the same chain  
of ponds crossed by me on the journey of 1835, and then named Dochendoras  
Creek, but now known as the Mundadgery chain of ponds. These ponds had  
been filled by heavy rains which fell on Tuesday the 9th December--the  
day on which I left Sydney, where the weather had been clear and sultry.  
A tornado or hurricane had, on the same day, levelled part of the forest  
near this place, laying prostrate the largest trees, one side of which  
was completely barked by the hailstones. Many branches of trees along the  
line of route, showed that the wind had been very violent to a  
considerable distance.

16TH DECEMBER.--Some of the bullocks missing: the party could not,  
therefore, quit the camp until 11 o'clock. The passage of the bed of the  
chain of ponds (which we travelled up) was frequently necessary, and  
difficult for heavily laden drays, which I found ours were, owing,  
chiefly to a superabundance of flour, above the quantity I intended to  
have taken, but supplied to my party, and brought forty miles by my drays  
before my arrival at the camp.

We halted at another sheep station of Mr. Boyd's. Here I perceived that

Horehound grew abundantly; and I was assured by Mr. Parkinson, a gentleman in charge of these stations, that this plant springs up at all sheep and cattle stations throughout the colony, a remarkable fact, which may assist to explain another, namely, the appearance of the Couchgrass, or Dog's-tooth-grass, wherever the white man sets his foot, although previously unknown in these regions.

17TH DECEMBER.--Set off about 7 A.M. and travelled along a good road, for about 6 miles. Then, at a sheep station, we crossed the chain of ponds, following a road leading to Dr. Ramsay's head station, called Balderudgery. Leaving that road, and, at 7 miles, taking to the left, we finally encamped on Spring Creek, after a journey of about 9 miles. We had passed over what I should have called a poor sort of country, but everywhere it was taken up for sheep; and these looked fat; yet not a blade of grass could be seen; and, but for the late timely supply of rain, it had been in contemplation to withdraw these flocks to the Macquarie.

Calling at a shepherd's hut to ask the way, an Irish woman appeared with a child at her breast and another by her side: she was hut-keeper. She had been there two years, and only complained that they had never been able to get any potatoes to plant. She and her husband were about to leave the place next day, and they seemed uncertain as to where they should go. Two miles further on, a shoemaker came to the door of a hut, and accompanied me to set me on the right road. I inquired how he found work in these wild parts. He said, he could get plenty of work, but very little money; that it was chiefly contract work he lived by: he supplied sheep-owners with shoes for their men, at so much per pair. His conversation was about the difficulty a poor man had in providing for his family. He had once possessed about forty cows, which he had been obliged to entrust to the care of another man, at 5S. per head. This man neglected them: they were impounded and sold as unlicensed cattle under the new regulations.

"So you saw no more of them?"

"Oh, yes, your honour, I saw some of them AFTER THEY HAD BEEN SOLD AT THE POUND!--I wanted to have had something provided for a small family of children, and if I had only had a few acres of ground, I could have kept my cows."

This was merely a passing remark made with a laugh as we walked along, for he was one of the race--

"Who march to death with military glee."

But the fate of a poor man's family was a serious subject: such was the hopeless condition of a useful mechanic ready for work even in the desolate forests skirting the haunts of the savage. So fares it with the DISJECTA MEMBRA of towns and villages, when such arrangements are left to the people themselves in a new colony.

18TH DECEMBER.--The party moved off about 7 A.M., and continued along a tolerable road, crossing what shepherds called Seven Mile Creek, in which there was some water; and a little further on we quitted the good beaten road leading to Balderudgery, and followed one to the left, which brought us to another sheep station on the same chain of ponds, three miles higher up than Balderudgery. Having directed the party to encamp here, I pursued the road south-westward along the chain of ponds, anxious to

ascertain whether I could in that direction pass easily to the westward of Hervey's Range, and so fall into my former line of route to the Bogan. At about five miles I found an excellent opening through which the road passed on ground almost level. Having ascended a small eminence on the right, I fell in with some natives with spears, who seemed to recognise me, by pointing to my old line of route, and saying, "Majy Majy" (Major Mitchell). I little thought then that this was already an outlying picquet of the Bogan Blacks, sent forward to observe my party. The day was hot, therm. 97 deg. in the shade. The chain of ponds, there called "the Little River," contained water in abundance, and was said to flow into the Macquarie, in which case the Bogan can have but few sources in Hervey's Range.

The station beside which we had encamped, comprised a stock yard, and had been formerly a cattle station belonging to Mr. Kite. It was now a sheep station of Dr. Ramsay's, and there was another sheep station a mile and a half from it, along the road I had examined. Thus the country suitable for either kind of stock is taken up by the gradual encroachment of sheep on cattle runs, not properly such. This easily takes place--as where sheep feed, cattle will not remain, and sheep will fatten where cattle would lose flesh. Fortunately, however, for the holders of the latter description of stock, there are limits to this kind of encroachment. The plains to the westward of these ranges afford the most nutritive pasturage in the world for cattle, and they are too flat and subject to inundations to be desirable for sheep. A zone of country of this description lies on the interior side of the ranges, as far as I have examined them. It is watered by the sources of the rivers Goulburn, Ovens, Murray, Murrumbidgee, Lachlan, Bogan, Macquarie, Castlereagh, Nammoy, Peel, Gwydir, and Darling; on which rivers the runs will always make cattle fat. There are two shrubs palpably salt, and, perhaps, there is something salsolaceous in the herbage also on which cattle thrive so well; and the open plains and muddy waterholes are their delight. Excessive drought, however, may occasionally reduce the owners of such stock to great extremities, and subject them to serious loss. The *Acacia pendula*, a tree whose HABITAT is limited and remarkable, is much relished by the cattle. It is found only in clay soils, on the borders of plains, which are occasionally so saturated with water as to be quite impassable; never on higher ground nor on any lower than that limited sort of locality, in the neighbourhood of rivers which at some seasons overflow. In such situations, even where grass seems very scarce, cattle get fat; and it is a practice of stockmen to cut down the *Acacia pendula* (or Myall trees, as they call them) for the cattle to feed on.

At this sheep station where we had encamped, I met with an individual who had seen better days, and had lost his property amid the wreck of colonial bankruptcies--a tea-totaller, with Pope's Essay on Man for his consolation, in a bark hut. This "melancholy Jaques" lamented the state of depravity to which the colony was reduced, and assured me that there were shepheresses in the bush! This startling fact should not be startling, but for the disproportion of sexes, and the squatting system which checks the spread of families. If pastoralisation were not one thing, and colonisation another, the occupation of tending sheep should be as fit and proper for women as for men. The pastoral life, so favourable to love and the enjoyment of nature, has ever been a favourite theme of the poet. Here it appears to be the antidote of all poetry and propriety, only because man's better half is wanting. Under this unfavourable aspect the white man first comes before the aboriginal native; were the intruders accompanied by women and children, they could not be half so unwelcome. One of the most striking differences between

squatting and settling in Australia consists in this. Indeed if it were an object to uncivilise the human race, I know of no method more likely to effect it than to isolate a man from the gentler sex and children; remove afar off all courts of justice and means of redress of grievances, all churches and schools, all shops where he can make use of money, then place him in close contact with savages. "What better off am I than a black native?" was the exclamation of a shepherd to me just before I penned these remarks.

19TH DECEMBER.--The party moved along the road I had previously examined. On passing through to the western side, I recognised the trees, plants, and birds of the interior regions. Granitic hills appeared on each side, and the sweet-scented *Callitris* grew around, with many a curious shrub never seen to the eastward of these ranges. On descending, grassy valleys, with gullies containing little or no water, reminded me of former difficulties in the same vicinity, and it was not until we had travelled upwards of sixteen miles that I could encamp near water. This consisted of some very muddy holes of the Goobang Creek, on which I had formerly been pleasantly encamped with Mr. Cunningham. [\* See Vol. I. of *Three Expeditions, etc.*, page 171.] Two or three natives soon made their appearance, one of whom I immediately recognised to be my old friend Bultje, who had guided me from thence to the Bene Rocks, on my former journey along the Bogan. He brought an offering of honey. Ten years had elapsed since I formerly met the same native in the same valley, and time had made no alteration in his appearance. With the same readiness to forward my views that he formerly evinced, he informed me where the water was to be found; and how I should travel so as to fall in with my former route, by the least possible DETOUR. Mount Laidley bore 23 deg. E. of N.

20TH DECEMBER.--This day I gave the cattle a rest, as the grass seemed good, while I rode to look at my old line of marked trees. A cattle station (of Mr. Kite) was within a mile and a half of our camp, and at about three miles below it, I fell in with the former line. Where it crossed the Goobang, a track still continued by them, but finally diverged, leaving the line of marked trees, without the slightest trace of the wheels or hoofs that had formerly passed by it. Reaching a hill laid down on my former survey, and from which I recognised Mount Laidley, I returned directly to the camp. We had encamped near those very springs mentioned as seen on my former journey, but instead of being limpid and surrounded by verdant grass, as they had been then, they were now trodden by cattle into muddy holes, where the poor natives had been endeavouring to protect a small portion from the cattle's feet, and keep it pure, by laying over it trees they had cut down for the purpose. The change produced in the aspect of this formerly happy secluded valley, by the intrusion of cattle and the white man, was by no means favourable, and I could easily conceive how I, had I been an aboriginal native, should have felt and regretted that change. The springs which issue from the level plains of clay, while the bed of the water-course some twenty feet lower continues dry and dusty, are numerous. One had a strong taste of sulphur, and might probably be as salubrious as other springs more celebrated. They show that, in this country at least, the water-courses are not supplied by springs, but depend wholly on heavy torrents of rain descending from the mountains. Some holes in the bed of the Goobang Creek did however retain some water which had fallen during the last rain. The thermometer stood at 107 deg. in the tent.

21ST DECEMBER.--Guided by my old friend Bultje, we pursued a straight line of route through the forest to Currandong, which was half way to the Bogan. We passed over a very open, gently undulating country, just

heading a gully called Brotherba--showing how well our guide knew the country--and we reached Currandong at 2 o'clock. Here also were two flocks belonging to Dr. Ramsay; Balderudgery, the head station, being fifteen miles distant, by a mountain road through a gap. While travelling this day, Corporal Graham overtook me with letters from Buree, and a cart had also been sent after us by Mr. Barton with a small supply of corn. That country is considered excellent as a fattening run for sheep; the shepherd told me they there find a salt plant, which keeps them in excellent condition and heart for feeding. The scarcity of water at some seasons occasions a conversion here of cattle runs into sheep runs, and VICE VERSA, a contingency which seems to render these lands of Hervey's range of temporary and uncertain value.

22D DECEMBER.--Guided by Bultje we continued to follow down the little chain of ponds which, as he said, led to the Bogan. The road was good--the Currandong ponds running in a general direction about N. N. W. It was the first of the sources of the Bogan we had reached. Crossing at length to its left bank, near an old lambing station of Dr. Ramsay's, we further on came to a large plain with the Yarra trees of the Bogan upon its western skirts. Some large lagoons on the eastern side of the plains had been filled by the late rains, and cattle lay beside them. We at length arrived in sight of a cattle station of Mr. Templar's, called Gananaguy, and encamped on the margin of a plain opposite to it. The cattle here looked very fat, and although the herd comprised about 2000 head, there was abundance of grass. The Bogan thus first appeared on our left hand, and must have its sources in the comparatively low hills, about the country crossed by my former line of route, rather than in Hervey's or Croker's ranges, as formerly supposed. The water in the ponds of the Bogan seemed low.

This fine grazing country had been abandoned more than once from the failure of the water, and yet these ponds seemed capable of holding an almost inexhaustible supply. A single dam would have retained the water for miles, the Bogan always flowing through clay in a bed of uniform width and depth like a canal. No doubt a little art and labour would be sufficient to render the land permanently habitable: but on an uncertain tenure this remedy was not likely to be applied, and therefore the sovereignty of art's dominion remained unasserted there. The incursions of the savage, who is learning to "bide his time" on the Darling, are greatly encouraged by the hardships of the colonists when water is scarce; and I was shown where no less than 800 head of fat bullocks had been run together by them when water was too abundant. Then horses cannot travel, and cattle stick fast in the soft earth and are thus at the mercy of the natives. The stone ovens, such as they prepare for cooking kangaroos, had been used for the consumption of about twenty head of cattle a day, by the wild tribes who had assembled from the Darling and lower Bogan on that occasion. Thermometer in tent 109 deg. at noon, wind W.N.W.

23D DECEMBER.--We crossed the Bogan (flowing eastward) at Mr. Templar's station at Gananaguy, and the overseer most hospitably stood by the party as it passed with a bucket of milk, of which he gave a drink to each of the men. Bultje put us on the right road to the next nearest water-holes (Mr. Gilmore's station), and having rendered me the service he promised, I gave him the tomahawk, pipe, and two figs of tobacco promised him, and also took a sketch of his singularly Socratic face. This native got a bad name from various stockmen, as having been implicated in the murder of Mr. Cunningham. Nothing could be more unfounded; and it must indeed require in a man so situated the wisdom of a Socrates to maintain his

footing, or indeed his life, between the ignorant stockmen or shepherds on one hand, and the savage tribes on the other. These latter savages naturally regard those who are half civilised, in the same light as we should look on deserters to the enemy, and are extremely hostile to them, while perhaps even his very usefulness to our party had most unjustly connected this native's name with the murder of one of our number. His laconic manner and want of language would not admit of any clear explanation of how much he had done to serve our race--and the difficulties he had to encounter with his own; while the circumstance of his having been met with at an interval of ten years in the same valley in a domesticated state, if it did not establish any claim to the soil, at least proved his strong attachment to it, and a settled disposition. Much tact must be necessary on his part to avoid those savages coming by stealth to carry off his gins; and to escape the wrath of white men, when aroused by the aggressions of wild tribes to get up a sort of foray to save or recover their own. How Bultje has survived through all this, without having nine lives like a cat, still to gather honey in his own valley, "surpasseth me to know."

We encamped at two large water-holes of the Bogan near Mr. Gilmore's station, and the overseer sent to the men two buckets of milk. At the station a well had been made to the depth of eighty feet, but a flood had come, and risen so high as to wash in the sides and so fill up the well. The workmen had passed through yellow clay chiefly, and the clay was wet and soft when the further sinking was interrupted. Thermometer in my tent 109 deg., wind W. N. W.

24TH DECEMBER. A lurid haze hung among the trees as the earliest sunbeams shot down amongst them. The party were ready to move off early, but the progress was slow from various impediments. A hot wind blew like a blast furnace. A bullock dropt down dead at the yoke. We encamped on the Currandong, or Back Creek, near a small plain, after travelling about ten miles. Thermometer in tent, 103. deg. Hot wind from the west.

25TH DECEMBER. Halted to rest the cattle. The wind blew this day more from the northward, and was cooler. Thermometer in tent, 107 deg..

26TH DECEMBER.--Proceeded to Graddle, a cattle station belonging to Mr. Coss, 21/2 miles. Thermometer, 109 deg..

27TH DECEMBER.--The bullock-drivers having allowed twenty-two of the bullocks to stray, it was impossible to proceed.

At early morning the sky was overcast, the weather calm, a slight wind from the west carried off these clouds, and at about eleven a very hot wind set in. The thermometer in my tent stood at 117 deg., and when exposed to the wind rose rapidly to 129 deg., when I feared the thermometer would break as it only reached to 132 deg..

28TH DECEMBER.--All the cattle having been recovered, we set off early, accompanied by a stockman from Graddle, Mr. Coss's station. The day was excessively warm, a hot wind blowing from the west. We finally encamped on the Bogan, at a very muddy water-hole, after travelling eleven miles. Thermometer in tent, 115 deg.. At half past five, the sky became overcast, and the hot wind increased to a violent gust, and suddenly fell. I found that tartaric acid would precipitate the mud, leaving a jug of the water tolerably clear, but then the acid remained. Towards evening the sky was overcast, and a few drops of rain fell. The night was uncommonly hot. At ten the thermometer stood at 102 deg., and at day-break at 90 deg..



29TH DECEMBER.--The remaining water was so muddy that the cattle would no longer drink it. The sky was overcast, with the wind from south. Finding a cart road near our camp, I lost no time in conducting the lighter portion of our equipment to Mr. Kerr's station at Derribong. In the hollows I saw, for the first time on this journey, the POLYGONUM JUNCEUM, reminding me of the river Darling, and on the plains a SOLANUM in flower, of which I had only seen the apple formerly. At length, greener grass indicated that the late rains had fallen more heavily there, and at about twelve miles I reached the station situated on a rather clear and elevated part of the right bank of the Bogan. Here the stock of water had been augmented by a small dam, and a channel cut from a hollow part of the clay surface conducted any rain water into the principal pool, where the water was very good. We had now arrived at the lowest station on the Bogan. The line of demarcation between the squatter and the savage had been once much lower down, at Muda, and even at Nyingan (see INFRA), but the incursions of the blacks had rendered these lower stations untenable, without more support than the Colonial government was able to afford. There, at least, the squatter is not only not the real discoverer of the country, but not even the occupier of what had been discovered. The map will illustrate how it happens that the colonists cannot keep their ground here from the marauding disposition of the savage tribes. [\* See map of Eastern Australia--INFRA.] The Darling is peopled more permanently by these natives, than perhaps any other part of Australia: affording as it does a more certain supply of food. It is only in seasons of very high flood that this food, the fish, cannot be got at, and that they are obliged to resort to the higher country at such seasons, between the Darling, the Lachlan, and the Bogan. It also happens that the cattle of the squatter are most accessible from the soft state of the ground; the stockmen cannot even ride to protect them. The tribes from the Lachlan and Macquarie meet on these higher lands, and when tribes assemble they are generally ready for any mischief. The Bogan is particularly within their reach, and when wet seasons do occur the cattle of squatters must be very much at the mercy of the savages. The tribes from the Darling are extremely hostile, even to the more peaceably disposed hilltribes near the colony, and several stations have already been abandoned in consequence of the outrages of the aborigines from the Darling and Lachlan. Nothing is so likely to increase these evils as the precarious or temporary occupation of such a country. The supply of water must continue uncertain so long as there is no inducement from actual possession to form dams, and by means of art to secure the full benefit of the natural supply. Hence it is that half a million of acres, covered with the finest grass, have been abandoned, and even savages smile at the want of generalship by which they have been allowed to burn the white man's dairy station and stockyards on the banks of the Bogan. The establishment of a police station near the junction of the Bogan with the Darling, or the formation of an inland township about Fort Bourke, had been sufficient to have secured the stations along the Bogan and Macquarie, and to have protected the Bogan natives as well as our own countrymen from frequent robbery, murder, and insult. Such are the results where SQUATTING has been permitted to supersede settling. With possession, deficiency of water in dry seasons had been remedied, and no such debateable land had remained on the borders of a British colony.

The part of the Bogan where least water can be found, has always been that between our present camp and Muda, a very large lagoon about 50 miles lower down. I found by the barometer that there is a fall of 206 feet in that distance of 50 miles; whereas the fall in the bed of the Bogan is only 50 feet between Muda and New Year's Range, in a distance of

upwards of 100 miles. The general course of the Bogan changes at Muda from N.W. to north, the former being nearly in the direction of the general declination of the country, the latter rather across it, of which the overflowings of the parallel river Macquarie into Duck Creek, and other channels to the westward, seemed to afford sufficient proofs. Where the declination is least, the water is most likely to remain in ponds in the channel of the river after floods, the water of which can neither flow with so much velocity, nor bear down any of the obstructions by which ponds are formed. Mr. Dixon found the velocity of the Bogan at this part, during a flood in 1833, to be four miles in an hour; which is about double the average rate of the larger rivers of Australia.

I had an order from Mr. Kerr, the proprietor of this station of Derribong, to his superintendant, for such fat cattle as I might require to take with me as live stock. Finding that the sheep answered very well, having lost none, and that they rather improved in travelling, whereas the working oxen had been much jaded and impoverished by the long journey, heavy loads, and warm weather; I determined to take as many young bullocks as might suffice to relieve and assist the others, and break them in as we proceeded.

30TH DECEMBER.--The wind changed to S.E., and brought a cool morning. Thermometer, 68 deg.. This day we selected from the herds of Mr. Kerr 32 young bullocks, and they were immediately yoked up in the stockyard.

Received letters from Sydney, by Corporal Graham.

31ST DECEMBER, 1845.--Thermometer at 5 A. M., 62 deg.: at noon, 109 deg.. Wind S.E. At noon a whirlwind passed over the camp, fortunately avoiding the tents in its course; but it carried a heavy tarpaulin into the air, also some of the men's hats, and broke a half-hour sand-glass, much wanted for the men on watch at night. The sky overcast from the west in the evening.

1ST JANUARY, 1846.--A strong wind from N.E. blew during the day, and was very high at 11 A. M. The party were chiefly employed breaking in the young bullocks. At noon, nimbus, and some rain, tantalised us with the hope of a change; but the sky drew up into clouds of cumulus by the evening. The vegetation of the Bogan now recalled former labours: the *ATRIPLEX SEMIBACCATA* of Brown was a common straggling plant.

2D JANUARY.--The young cattle still occasioned delay. The morning was cloudy and promised rain; but a N.W. wind broke through the clouds, which resolved themselves into cirrostratus, and we had heat again. Besides the *SALSOLA AUSTRALIS*, we found a *HALGANIA* with lilac flowers, probably distinct from the species hitherto described, which are natives of the south-west coast.

3D JANUARY.--This morning the young cattle were yoked up with the old; and, after considerable delay, the party proceeded to some ponds in the Bogan about five miles lower down. We were now nearly opposite to the scene of Mr. Cunningham's disasters: I had recognised, amongst the first hills I saw when on the Goobang Creek, the hill which I had named Mount Juson, at his request, after the maiden name of his mother. The little pyramid of bushes was no longer there, but the name of Cunningham was so identified with the botanical history of almost all the shrubs in the very peculiar scenery of that part of the country, that no other monument seemed necessary. Other recollections recalled Cunningham to my mind; his barbarous murder, and the uncertainty which still hung over the actual circumstances attending it. The shrubs told indeed of Cunningham; of both

brothers, both now dead; but neither the shrubs named by the one, nor the gloomy CASUARINOE trees that had witnessed the bloody deed, could tell more. There the ACACIA PENDULA, first discovered and described by Allan, could only

"Like a weeping mourner stooping stand,  
For ever silent, and for ever  
sad."

4TH JANUARY.--The early cooler part of the morning was taken up with the young cattle. It was now but too obvious that this means of conveyance was likely to retard the journey to an extent that no pecuniary saving would compensate, as compared with light carts and horses. I proceeded forward in search of a deserted stockyard, called Tabbaratong, where some water was said still to remain. We found some mud and water only; although some that was excellent was found about two miles lower down the Bogan, late in the evening.

We had crossed the neutral ground between the savage and the squatter. The advanced posts of an army are not better kept, and humiliating proofs that the white man had given way, were visible in the remains of dairies burnt down, stockyards in ruins, untrodden roads. We hoped to find within the territory of the native, ponds of clear water, unsoiled by cattle, and a surface on which we might track our own stray animals, without their being confused by the traces of others.

5TH JANUARY.--Three of the young cattle having escaped during the night, retarded us in the morning until 8 o'clock, at which hour they were brought into the camp, having been tracked by Yuranigh, a most useful native who had come with us from Buree. I proceeded with the light carts, guided by a very young native boy, not more than ten years old, who had come with the party from Kerr's station, and who, being a native of the lower Bogan, could tell us where water was likely to be found. Our route was rather circuitous, chiefly to avoid a thick scrub of CALLITRIS and other trees, which, having been recently burnt, presented spikes so thickly set together, that any way round them seemed preferable to going through. We reached plains, and came upon an old track of the squatters. The grass in parts was green and rich. I could see no traces of my former route, but we arrived at length at an open spot which Dicky, the young native, said was "Cadduldury." Leaving Dr. Stephenson with the people driving the light carts there, I proceeded towards the bed of the Bogan, which was near, to see what water was there, and following the channel downwards, I met with none. Still I rode on, accompanied by Piper (also on horseback), and the dryness of the bed had forbidden further search, but that I remembered the large ponds we had formerly seen at Bugabada and Muda, which could not be far distant. But it was only after threading the windings of the Bogan, in a ride of at least twelve miles, that we arrived at the most eastern of the Bugabada ponds. The water was however excellent, purer indeed than any we had seen for many days, and we hastened back to the party at Cadduldury, which place we only arrived at as darkness came on, so that Piper had nearly lost his way. The drays with Mr. Kennedy had not come up, and I sent William Baldock and Yuranigh back in haste to inform him that I was encamped without water, and that I wished him, if still EN ROUTE, immediately to unyoke the cattle, encamp on a grassy spot, and have them watched in their yokes during the night, and to come forward at earliest dawn to the water-holes I had found near Bugabada. We passed a miserable night without water at Cadduldury.

6TH JANUARY.--William Baldock returned at daybreak, bringing a message from Mr. Kennedy, saying he should do as I had requested. I went forward

with the light party, and reached the water-holes by 8 A. M.. The morning happened to be extremely hot, which, under the want of water and food the preceding evening, made Drysdale very ill, and John Douglas and Isaac Reid were scarcely able to walk when we arrived at the first water-hole. But how the jaded bullocks were to draw the heavy loads thus far in the extreme heat, was a subject of anxious thought to me. William Baldock again returned to Mr. Kennedy with two barrels of water on a horse, a horn full of tea, etc. On his way he met six of the drays, the drivers of which were almost frantic and unable to do their work from thirst. He brought me back intelligence that Mr. Kennedy still remained at his encampment, with the two remaining drays, whereof the drivers (Mortimer and Bond) had allowed their teams, with bows, yokes, and chains, to escape, although each driver had been expressly ordered to watch his own team during the night. This was a most serious misfortune to the whole party. The rest of the drays could not be brought as far as my camp, but I ordered the cattle to be released and driven forward to the water, which they reached by the evening, sufficient guards being left with the drays. The shepherd with the sheep could not get so far as the water, and the poor fellow had almost lost his senses, when Mr. Stephenson, who had hastened back with several bottles, relieved his thirst, and, as the man said, "saved his life."

Our position might indeed have been critical, had the natives been hostile, or as numerous as I had formerly seen them at that very part of the Bogan. Separated into three parties, and exhausted with thirst and heat, the men and the drays might have been easily assailed. No natives, however, molested us; and I subsequently found that the tribe, with which I was on very friendly terms there formerly, were still amicably disposed towards us.

7TH JANUARY.--Early this morning, M'Avoy brought in the spare bullocks, having been sent forward by Mr. Kennedy to travel on during the night. The shoemaker also brought in one of the lost teams and part of the other. I sent back, by Baldock, this morning, water for the men in charge of the drays, and some tea and bread for Mr. Kennedy. He would also have gone in search of the four bullocks still missing, but Mr. Kennedy sent him again to me to procure something to eat. The drays carrying the provisions had not come up, and my party too was short. The day surpassed in heat any I had ever seen: the thermometer at noon in the shade stood at 109 deg., a gentle hot wind blowing. The camp of Mr. Kennedy was distant at least 16 miles from mine near Bugabada.

The six drays came in about 4 P. M.; the sheep not until long after dark. Bread, gelatine, and ten gallons of water were sent back to Mr. Kennedy, and a memorandum from me apprising him of my arrangement for drawing forward the two drays, which he had taken such good care of, and which was as follows: Two teams to leave my camp on the evening of next day, to be attached on their arrival to the two drays with which they were to come forward, travelling by moonlight during the rest of the night, until they should be met by two other fresh teams, destined to meet them early next morning. Also I informed Mr. Kennedy that it was not my intention to send after the four stray bullocks until the drays came in, and the party could be again united. Thermometer again 109 deg. in the shade all day.

The CALOTIS CUNEIFOLIA was conspicuous amongst the grass. This was the common BURR, so detrimental to the Australian wool. Small as are the capitula of this flower, its seeds or achenia are armed with awns having reflexed hooks scarcely visible to the naked eye; it is these that are found so troublesome among the wool.

8TH JANUARY.--The messenger returned from Mr. Kennedy saying he had found him and the men with him, in a state of great distress from want of water, having given great part of what had formerly been sent to a young dying bullock, in hopes thereby to save its life. He also stated that a tribe of natives were on their track about three miles behind. Baldock had seen several bullocks dead on the way. In the evening the two first teams were sent off as arranged. This day had also been very sultry, especially towards evening.

9TH JANUARY.--Early this morning, the two relieving teams were despatched as arranged, and at noon Mr. Kennedy and the whole entered the camp. We had been very fortunate, under such trying circumstances, to suffer so little loss, and I determined never to move the party again, until I could ascertain where the water was at which it should encamp. I had been previously assured by the young native that water was still to be found at Cadduldury, and the disappointment had nearly proved fatal to the whole party.

On the banks of the Bogan, the *ATRIPLEX HAGNOIDES* formed a round white-looking bush.

I rode forward to Muda, accompanied by Dr. Stephenson and by Piper, and had an interview with some of the heads of the old tribe, who remembered my former visit, and very civilly accompanied me to show me my old track and marked trees, which I found passed a little to the northward of my present encampment. The chief, my old friend, had been killed in a fight with the natives of the Macquarie, not long before. Two old grey-haired men sitting silent in a gunya behind, were pointed out to me as his brothers, one of whom so very much resembled him, that I had at first imagined he was the man himself. These sat doubled up on their hams opposite to each other, under the withered bushes, naked, and grey, and melancholy--sad and hopeless types of their fading race!

The chief who formerly guided us so kindly had fallen in a hopeless struggle for the existence of his tribe with the natives of the river Macquarie, allied with the border police, on one side; and the wild natives of the Darling on the other. All I could learn about the rest of the tribe was, that the men were almost all dead, and that their wives were chiefly servants at stock stations along the Macquarie.

The natives of Muda assured me there was no water nearer than Nyingan, a large pond which I knew was  $22 \frac{1}{3}$  miles distant, in a direct line lower down the Bogan. The ponds of Muda, their great store of water, and known to white men as the largest on the Bogan, were alarmingly low, and it became evident that our progress under such a scarcity of water would be attended with difficulty. These natives gave us also a friendly hint that "GENTLEMEN" should be careful of the spears of the natives of Nyingan, as many natives of Nyingan had been shot lately by white men from Wellington Valley.

Among the woods we observed the white-flowered *TEUCRIUM RACEMOSUM*, the *JUSTICIA MEDIA*, a small herbaceous plant with deep pink flowers; also a *STENOCHILUS* and *FUSANUS* (the Quandang), although not in fruit; a new species of *STIPA*, remarkable for its fine silky ears and coarse rough herbage.[\*] This place produced also a fine new species of *Chloris* in the way of *C. TRUNCATA*, but with upright ears, and hard three-ribbed pales,[\*\*] and we here observed, for the first time, a fine new *EREMOPHILA* with white flowers, forming a tree fifteen feet high.[\*\*\*] The

beautiful DAMASONIUM OVALIFOLIUM, with white flowers red in the centre, still existed in the water.

[\* S. SCABRA (Lindl. MS.), aristis nudis, paleis pubescentibus basi villosis, glumis setaceo-acuminatis glabris, foliis scabropilosis involutis culmis brevioribus, geniculis pubescentibus, ligula oblonga subciliata.]

[\*\* C. SCLERANTHA (Lindl. MS.), culmo stricto, foliis planis glabris tactu scabris, spicis 4--7-strictis, spiculis bifloris, flore utroque breviaristato cartilagineo truncato 3-nervi glabro supremo sterili vacuo.]

[\*\*\* E. MITCHELLI (Benth. MS.), glabra viscidula, foliis alternis linearibus planis, corolla alba extus glabra fauce amplo laciniis 4 superioribus subaequalibus infima majore retusa, staminibus inclusis.]

In the evening it was discovered that no one had seen the shepherd and the sheep since the morning, and Piper and Yuranigh went in search. It was night ere they returned with the intelligence that they had found his track ten miles off to the S. W. when darkness prevented them from following it further.

I ascertained, by observations of the stars Aldebaran and Orionis, that our present camp near Bugabada was in latitude 31 deg. 56', and thus very near the place where Mr. Dixon's journey down the Bogan in 1833 had terminated. Thermometer at noon, 90 deg.; at 9 P. M., 70 deg.; with wet bulb, 63 deg..

10TH JANUARY.--Early this morning Mr. Kennedy and Piper went to the S. W. in search of the shepherd and sheep, while at the same time I sent William Baldock and Yuranigh back along our track in search of the stray bullocks. Meanwhile I conducted the party along my former track to Muda, where we met Mr. Kennedy and Piper with the shepherd and sheep, already arrived there. The shepherd stated that the fatigue of having been on watch the previous night had overcome him; that he fell asleep, and that the sheep went astray; that he followed and found them, but lost himself. He had met one or two natives who offered him honey, etc. which he declined.

We encamped beside the old stock-yard and the ruins of a dairy, only visible in the remaining excavation. But a paddock was still in such a state of preservation, that in one day we completed the enclosure. We had passed near Bugabada similar remains of a cattle station. This position of Muda was a fine place for such an establishment; a high bank nearly clear of timber, overlooking a noble reach of great capacity, and surrounded by an open forest country, covered with luxuriant grass. The last crop stood up yellow, like a neglected field of oats, in the way of a young crop shooting up amongst it.

11TH JANUARY, 1846.--Sunday. Prayers were read to the men, and the cattle and party rested. The day was cool and cloudy.

12TH JANUARY.--Still I halted at Muda for the lost bullocks. To-day I noticed the KOCHIA BREVIFOLIA, a little salt-bush, with greenish yellow fruit, edged with pink.

13TH JANUARY.--Baldock and Yuranigh arrived early in the morning (by moonlight) with five of the stray bullocks. Two others (young ones) could

not be driven along, and one old bullock was still astray at Mr. Kerr's station (to which they had returned) and could not even then be found. We had now in all 106 bullocks, and, considering the great scarcity of water, heat, and consequent drought, I was most thankful that our loss had been so slight.

I proceeded to reconnoitre the country in a straight line towards Nyingan, which bore 353 deg.--and having found a tolerably open country for about six miles, I returned and took the party on so far, and encamped, sending back all the cattle and horses to the water at Muda. Enough had been carried forward for the men who were to remain at the camp. To ensure the early return of the cattle, I had repaired, as already stated, the paddock at Muda, in which during this night, they could be secured, having also sufficient grass,--likewise the horses. In my ride I found a new grass of the genus CHLORIS[\*], something like CHL. TRUNCATA in habit, some starved specimens of TRICHINIUM LANATUM; amongst the grasses I also found the ARISTIDA CALYCINA of Brown, the curious NEURACHNE MITCHELLIANA Nees, discovered originally by me in 1836, and also a new PAPPOPHORUM with the aspect of our European Anthoxanthum.[\*\*] A smart shower fell during the evening.

[\* C. ACICULARIS (Lindl. MS.); culmo stricto, foliis involutis glabris tactu scabris, spicis 8--9 subacutis, spiculis bifloris, flore utroque setaceo aristato, supremo sterili angustissimo, paleis dorso scabris.]

[\*\* P. FLAVESCENS (Lindl. MS.); aristis 9 rigidis pallidis plumosis, spica composita densissima oblonga, paleis lanatis, glumis ovatis pilosis, foliis vaginisque pubescentibus tactu scabris, geniculis villosis.]

14TH JANUARY.--The cattle arrived early from Muda, and were immediately yoked to the drays. I proceeded with the light carts, still on the same bearing, until arriving near Dar, where I had formerly been encamped, I turned to the left to ascertain if there really was no water there. I found two excellent ponds, and encamped beside them after a journey of about ten miles. The drays arrived early and I subsequently found I had encamped near my old ground of 9th May, 1835, when I was guided by the friendly chief of the Bogan tribe to the best water holes his country afforded. By the route I had selected from my former surveys, I had cut off the great bend described by the Bogan in changing from a north-westerly to a northerly course, and the track now left by our wheels will probably continue to be used as a road, when the banks of the Bogan may be again occupied by the colonists. At Dar were still most substantial stock-yards, and, as usual, the deep dug foundations of a dairy that had been burnt down.

15TH JANUARY.--Eight bullocks were missing, and although the day was fine, not too hot, I could not think of moving until these cattle were found. Accordingly, at earliest dawn, I despatched William Baldock and the native to look for them. In the course of the day six were found by Baldock in one direction, and the remaining two, afterwards, in another. An inconspicuous blue-flowered Erigeron grew here, also the JASMINUM LINEARE, with its sweet-scented white flowers--and, near the water, I saw the ALTERNANTHERA NODIFLORA.

16TH JANUARY.--At a good early hour the party moved from Dar, crossing the Bogan and falling into my former track and line of marked trees. We lost these, however, on crossing the Bogan at Murgaba, and made a slight detour to the eastward before we found Nyingan, where we encamped, and

were joined by the drays by twelve o'clock. During this day's journey Piper and Yuranigh discovered fresh traces of horsemen with those of the feet of a native guide, come from the East to my old track, and returning, apparently, as our natives thought, looking for traces of our party.

At Nyingan we found many recent huts and other indications of the natives, but saw none. Large stock-yards and a paddock remained, but a house and garden fences had been burnt down. The great ponds were sunken very low and covered with aquatic weeds. As soon as the camp had been established with the usual attention to defence, I set out to look for the next water, and after riding twelve miles nearly in the direction of my former route, I reached the dry channel of the Bogan, and tracing it thence upwards, I sought in every hollow at all its turnings for water, but in vain, and I reached the camp only at dusk, without having seen, during the day, any other ponds than those of Nyingan.

17TH JANUARY.--Early this morning, I sent Mr. Kennedy with the native Yuranigh, also on horseback, to run back my track of yesterday to the Bogan where I had commenced its examination upwards, and from that point to examine the channel downwards to the nearest water, provided this did not take Mr. Kennedy too far to admit of his return by sunset. Two old women came to the ponds of Nyingan for water, by whom Piper was told that the nearest permanent water was "NIMINE," where white men had attempted to form a cattle-station, and been prevented by natives from the Darling, many of whom had since been shot by the white men. They said the place was far beyond Canbelego, the next stage of my former journey, and where these women also said little or no water remained.

Mr. Kennedy returned at eleven A.M., having found water at Canbelego. Yuranigh brought with him a large green specimen of the fruit of the CAPPARIS MITCHELLII, which he called an apple, being new to him, but which Dicky, the younger native from the Lower Bogan, knew, and said was called "MOGUILE;" he also said that it was eaten by the natives.

18TH JANUARY.--The party moved to Canbelego where one or two small ponds remained, but on the plains adjacent there was better grass than we had hitherto found near those places where, for the sake of water, we had been obliged to encamp. I sent Mr. Kennedy again forward looking for water, but he returned sooner than I expected, and after following the river down twelve miles, without finding any. I was now within the same distance of Duck Creek, in which Mr. Larmer had found abundance of water when I sent him to survey it upwards during my last return journey up the Bogan. It also seemed, from the direction in which Piper pointed, that the old gins referred to Duck Creek, as containing water; and as the course of that creek, so far as shown on maps, led even more directly to the Darling than did the Bogan, I was willing in such a season of extreme drought, to avail myself of its waters. My eye had been much injured by straining at stars while at the camp near Walwadyer, and I was obliged to send Mr. Kennedy on one of my own horses, followed by Graham, to examine the water in Duck Creek. I instructed him to proceed on a bearing of 35 deg. E. of North, until he should reach the creek, and if he found water in it to return direct to the camp, but that if water was not found on first making the creek, then he was to follow Duck Creek up to its junction with an eastern branch, surveyed also by Mr. Larmer, and to return thence to the camp on a bearing of 240 deg.. I also sent Corporal Macavoy with Yuranigh down the Bogan, to ascertain if the channel contained any pond between our camp and the part previously examined by Mr. Kennedy.



This officer returned from Duck Creek after an absence of twelve hours, and reported that he had found no water in Duck Creek after examining its bed twelve miles; but that he had found a fine lagoon on the plains near the head of the eastern branch, but around which there was no grass, all having been recently burnt.

20TH JANUARY.--Macavoy returned at seven A.M., saying he had been twenty-four miles down the Bogan without finding any water. About the same time Sergeant Niblett, in charge of the bullocks, came to inform me that these animals were looking very ill, and could not drink the mud remaining in the pond. At the same time intelligence was brought me that four of the horses had broken their tether ropes during the night, and that William Baldock had been absent in search of them on foot, from an early hour in the morning. I immediately sent back the whole of the bullocks to Nyingan, with a dray containing the empty harness casks, also the horses, and a cart carrying all our other empty casks; and the whole of the cattle and horses returned in the evening with all the casks filled.

21ST JANUARY.--Having again despatched the bullocks back to Nyingan, I conducted the light carts forward along my old track (of 1835), having on two of these carts two of the half-boats, and in the carts under them all the water-kegs that had been filled. My object was to use the iron boat as a tank, at which we might water the bullocks at one stage forward; that by so gaining that point and proceeding onwards towards the water I hoped to find next day, we might encamp at least at such a convenient distance from it, as would admit of the cattle being driven forward to return next day and draw the drays to it. This I considered possible, even if it might be found necessary to go as far for water as the fine reach described in my journal as the place of my encampment on the 14th May, 1835, beyond Mount Hopeless, and which I concluded from the gin's description, must have been what she called Nimine, or the disputed station of Lee. I encamped this party on a plain about twelve miles from Canbelego, where I had left Mr. Kennedy, with instructions to bring the drays on with the spare cattle and horses early next morning. I had sent thence Corporal Macavoy and Yuranigh to follow the track of Baldock and the horses; but it was obvious that we could remain no longer at Canbelego. As soon as we could set up one of the half-boats, the contents of the water-kegs were emptied into it, and the cart was immediately sent back with the empty kegs to Canbelego, where fresh horses had been left, to continue with the same cart and empty kegs to Nyingan during the night, so as to arrive in time to admit of the dray--already there with the harness casks--bringing an additional supply back in the kegs, when the bullocks returned next day.

It was now necessary that I should ascertain as soon as possible the state of the ponds lower down the Bogan, and thereupon determine at once, whether to follow that dry channel further in such a season, or to cross to the pond in Duck Creek, and await more favourable weather. I accordingly set out at 3 P.M., from where the water had been placed in the half-boat, accompanied by Dr. Stephenson, and followed by Corporal Graham and Dicky the native boy. By the advice of the latter, I rode from the camp in the direction of 30 deg. E. of N., and, crossing the Bogan, we reached at about 3 1/2 miles beyond it, a channel like it, which I supposed was Duck Creek; and in it, just where we made it, there was a small pond of water. Having refreshed our horses, we followed this channel downwards, without meeting with more water. To my surprise, I found the general direction was westward, until it JOINED THE BOGAN. We next followed the course of the Bogan as long as daylight allowed us to do so, without discovering any indication that water had recently lodged in any

of the hollows, and we finally tied up our horses and lay down to sleep, in hopes that next day might enable us to be more successful.

22D JANUARY.--Having proceeded some miles along the western bends of the Bogan, hastily--being desirous to see that day the great pond beyond Mount Hopeless--I observed that the clay was very shining and compact in a hollow sloping into an angle of the river-bed, that the grass was green as from recent rain, and that there was more chirping of birds; I was tempted once more by these indications, to look for water in the Bogan's almost hopeless channel, and there we found a pond, at sight of which poor Dicky shouted for joy; then drank, and fell asleep almost in the water. It was small, but being sufficient for our immediate wants, we thankfully refreshed our horses and ourselves, and proceeded on our eventful journey. Almost immediately after leaving this pond I discovered my old track, which we continued to follow across those large plains, whence I had formerly discovered Mount Hopeless. These plains I soon again recognized from the old tracks of my draywheels, distinctly visible in many places after a lapse of nearly eleven years. Arriving at length near the debateable land of Lee's old station, we resumed our examination of the Bogan. There we perceived old cattle tracks; the ovens in which the natives had roasted whole bullocks, and about their old encampments many heaps of bones; but in none of the deep beds of former ponds or lagoons could we discover any water. The grass was nevertheless excellent and abundant; and its waste, added to the distress the want of water occasioned us, made us doubly lament the absence of civilised inhabitants, by whose industry that rich pasture and fine soil could have been turned to good account. We saw no natives; nor were even kangaroos or emus to be seen, as formerly, any longer inhabitants of these parts. I turned at length, reluctantly, convinced that it would have been unsafe to venture with cattle and drays into these regions before rain fell. In returning, we at first found it difficult to find our old track, by which alone we could hope that night to reach the small pond of the morning; but Dr. Stephenson very fortunately found it, and we had also the good fortune, for so we considered it, to arrive at the pond before sunset. There we tied up our horses and lay down, glad indeed to have even that water before our eyes. Dicky, the native boy, had repeatedly thrown himself from his horse during the afternoon, quite ill from thirst.

23D JANUARY.--After our horses had drank, we left no water in the pond; but they had fed on good grass, and we were well refreshed, although with water only, for our ride back to the camp. Setting off from an old marked tree of mine near the Bogan, on a bearing of 160 deg., I several times during our ride fell in with the old track, and finally reached the camp after a rapid ride of four hours. I found the whole party had arrived the previous evening with the water, as arranged; but that Mr. Kennedy was absent, having set off that morning in search of water to the N. E. with Corporal Macavoy, on two government horses, leaving word that he should return by twelve o'clock. He did not return at that hour, however, and at two I moved the party across the Bogan, and proceeded along open plains towards the ponds at Duck Creek, with the intention of there refreshing the cattle and horses, and awaiting more favourable weather. I previously watered out of the half-boat, 106 bullocks, and gave a quart to each of the horses. On the way, the heat was so intense that our three best and strongest kangaroo dogs died, and it was not until 10 P. M. that the drays reached the ponds where I had proposed to encamp. About an hour and a half before, Mr. Kennedy also came in, having galloped the two horses 66 miles, and hurt both their backs, Macavoy being a heavy man. At 9 P. M., therm. 80 deg., wet bulb, 68 deg..

24TH JANUARY.--This morning I awoke completely blind, from ophthalmia, and was obliged to have poultices laid on my eyes; several of the men were also affected in the same manner. The exciting cause of this malady in an organ presenting a moist surface was, obviously, the warm air wholly devoid of moisture, and likely to produce the same effect until the weather changed. At 9 P. M., therm. 84 deg., with wet bulb, 68 deg..

## Chapter II.

SEND TO NYINGAN FOR LEECHES.--BETTER PONDS FOUND TO THE NORTHEAST.--MOVE TO THE PONDS OF CANNONBA AND SET UP OUR BIVOUAC.--HOT WIND.--HEAT GREATER THAN MY TABLE FOR EXPANSION OF MERCURY WAS CALCULATED FOR.--PIPER'S INTENTION TO QUIT THE PARTY.--HIS SENT TO BATHURST.--WEATHER CHANGES.--RAIN.--MR. KENNEDY RETURNS FROM THE MACQUARIE.--SALT MADE FROM THE SALT PLANT.--RECONNOITRE "DUCK CREEK."--THE PARTY QUILTS CANNONBA--CROSSES PLAINS TO MARRA CREEK--AND THENCE TO THE RIVER MACQUARIE.--OPHTHALMIA STILL TROUBLESOME.--APPROACH OF A FLOOD ANNOUNCED.--ITS ARRIVAL IN CLEAR MOONLIGHT.--MR. KINGHORNE GUIDES THE PARTY ALONG THE REEDY BANKS.--NO WATER FOUND IN "DUCK CREEK."--DIFFICULTY OF WATERING THE CATTLE FROM SOFTNESS OF THE BANKS OF PONDS AMONGST THE REEDS.--"YULLIYALLY," A NATIVE, GUIDES THE PARTY.--NEW PLANTS DISCOVERED.--DESCRIPTION OF OUR NATIVE GUIDE.--CONDITION OF HIS COUNTRYMEN.--HOW AFFECTED BY THE INTRUSION OF THE WHITE RACE.--AT LENGTH EMERGE FROM THE REEDS.--WATER SCARCE.--NECESSITY FOR PRESERVING ABORIGINAL NAMES OF RIVERS.--DELAYED BY STRAY BULLOCKS SEVERAL DAYS.--AT LENGTH ARRIVE AT THE JUNCTION OF THE RIVER WITH THE DARLING.--CROSS THE MACQUARIE NEAR ITS JUNCTION--AND FORD THE DARLING AT WYABRY.

25TH JANUARY.--Dr. Stephenson having recommended the application of leeches, and having observed them in the ponds at Nyngan, I sent William Baldock and Yuranigh there in search of some, and they brought back enough. Fourteen were applied to my eyes the same afternoon. The ground here was quite naked; it was, in fact, the blue clay of the Darling, with the same sterile looking plants; and no time was to be lost in seeking some ponds where there might be also good grass for the cattle. Therm. at sunrise, 97 deg.; at noon, 100 deg.; at 9 P.M. 90 deg.; with wet bulb, 71 deg..

26TH JANUARY.--I sent Corporal Graham with Piper, in a N. E. direction to where we had observed the light of burning woods reflected from a cloudy sky last evening; considering that a sure indication that water was near, as natives are seldom found where there is none. He returned early with the welcome tidings that he had found abundance of water in a creek about five miles off, and excellent grass upon its banks. My eyes were so far recovered that I could observe the altitude of a star, thus ascertaining the latitude of this camp to be 31 deg. 20' 20" S. Therm. at sunrise, 85 deg.; at noon, 112 deg.; at 9 P.M. 84 deg.; with wet bulb, 70 deg..

27TH JANUARY.--The whole party moved to the ponds called "Cannonba" by the natives. There we found greater abundance of water and better grass than we had seen near water during the whole journey, and I determined to halt for at least two weeks, as part of the time I had previously intended to devote to the repose and refreshment of the cattle, when we should have reached the Darling. The cattle and their drivers had been much harassed, and both needed and deserved rest. The horses had got out of condition, and I considered that when we arrived at the Darling their services would be more required. I was also to try the experiment here, whether I might prosecute the journey without danger of losing my

eyesight; to have abandoned the undertaking at that point, had been almost as painful to me as the other alternative. There were no hostile natives here, the fire having been set up by some solitary gins; rain was daily to be expected, at least cooler weather would certainly come in a short time; the wheels of the drays had been long represented to me as needing a thorough repair, from the effect of the heat on the wheels;-- and, upon the whole, I considered it very fortunate that we could encamp under such circumstances on so favourable a spot. We placed our tents amongst shady bushes--set up the blacksmith's forge, and soon all hands were at work in their various avocations, whilst the cattle and horses enjoyed the fresh grass, leisure to eat it, and abundance of water.

Amongst the bushes here, a HAKEA, with simple filiform mucronulate leaves without flower, occurred, loaded with oblong hard galls resembling dry plums. Also the *SENECIO CUNNINGHAMI* (D.C.), found by Allan Cunningham on the shores of Lake George. Mr. Stephenson discovered here a very pretty new *TRICHINIUM*, with heads of hoary pink flowers. [\* *T. SEMILANATUM* (Lindl. MS.); *ramosa, pubescens, ramulis, angulatis, foliis linearibus acutis noveillis villosis, capitulis paucifloris hemisphericis, rachi dense bracteis uninerviis acutis scpalisque angustis plumosis parce lanatis.*]

I learnt from the natives that this creek also joined the Bogan, consequently that the real Duck Creek must either be still to the N. E. of us, or be a branch out of this. At all events, the creek surveyed by Larmer is thus proved to have been a discovery of his, and a most useful one it has thus proved to us on this emergency. That chain of ponds (whence we had just come) was called Bellaringa; this "Cannonba;" and to what I suppose must be Duck Creek, water to which the natives point northward, they give the name of "Marra." Therm. at sunrise, 78 deg.; at noon, 115 deg.; at 4 P.M. 96 deg.; at 9, 88 deg.; with wet bulb, 73 deg..

28TH JANUARY.--Several kettles, a good spade, a Roman balance with large chain complete, barrels, and other articles, were found at the bottom of one of the ponds; and old tracks of cattle were numerous about the banks. Thus it was clear that this favourable spot for a cattle station had not been unheeded by the white man. It was vaguely asserted by some old gins seen by Piper, that three men had been killed here when the place was abandoned. We were about twelve or fourteen miles to the W.N.W. of Mount Harris; and certainly the general bed of this watercourse was broader than that of the Bogan, and moreover contained much granitic sand, all but identifying its sources with those of the Macquarie. This day was very hot; a thunder cloud passed over us, and a shower fell about 3 P.M. Thermometer at sunrise, 78 deg.; at noon, 115 deg.; at 4 P.M. 108 deg.; at 9, 84 deg.; with wet bulb, 63 deg..

29TH JANUARY.--A more than usually hot wind raised the thermometer to 115 deg. in the shade; but distant thunder was soon heard, and the horizon became clouded. The day was very sultry, and although no rain fell near us, it was evident that other parts to the north-east were receiving a heavy shower. Thermometer at sunset, 102 deg..

30TH JANUARY.--An easterly wind brought a refreshing air from the quarter where the thunder-cloud had exhausted itself last evening. This day the doctor found the tree mentioned as bearing a nondescript fruit in my former journal, Vol. I. page 82., but this tree bore neither flower nor fruit. Thermometer at sunrise, 80 deg.; at noon, 103 deg.; at 4 P.M., 108 deg.; at 9, 100 1/2 deg.; with wet bulb, 79 deg..

31ST JANUARY.--The weather still very sultry. I commenced a series of observations with a syphon barometer (made by Bunten of Paris). The table for expansion of mercury and mean dilatation of glass, sent me by my friend Captain P. P. King, came but to 88 deg. of Fahrenheit, whereas at 4 P.M., the centigrade thermometer stood at 44 1/2 deg., which is equal to 112 deg. of Fahrenheit.

This day I was apprised of Piper's intention to leave the party, taking with him the two younger and more useful natives. He had recently made some very unreasonable demands. It was now obvious from various sayings and doings thus brought to my recollection, that he had never any serious intention of accompanying this expedition throughout its progress. The services of other more intelligent natives might easily have been obtained, having been proffered by many in the settled districts, but Piper from having been with me before, was preferred as a matter of course. He had not improved in speech or manners during the long interval of ten years that had elapsed since our former acquaintance, although during that time he had visited Adelaide, Sydney, Moreton Bay, the river Hunter, etc., etc. From the day on which he had joined the party on this last occasion, he had been allowed a horse, saddle, doublebarrelled gun, clothing, and the same rations as the other men, blankets, place in a tent with the men, etc. Unlike most other natives, he was a very bad shot, and very awkward about a horse; it was impossible to obtain any clear intelligence from his countrymen through him as interpreter; he went very unwillingly about doing anything. He had drawn his rations and those of the two young natives separately from the men's mess the week before this, on the plea that they did not obtain their fair share; he was thus premeditatedly preparing for his clandestine departure, foreseeing that on the Saturday, when rations were issued, he could thus obtain a week's provisions in advance, without suspicion. He also had it in his power, like a true savage, to take the lion's share from the other two, in thus drawing rations apart from the men's mess. He had heard of the gins who had made the conflagration having retired towards the cattle-stations on the Macquarie. Here, then, while other men were actively at their work,--blacksmiths, carpenters, bullock-drivers,--this man, who was as well fed and clothed as they, carried on a horse to boot, and doing no work, was the only dissatisfied person. Me, whom he called his "old master," he would heartlessly leave, without a native guide, just at the time when such guides were most required. The only difficulty I felt on this occasion was how to secure the services of the two others, and yet dismiss him. He had just received a week's ration in advance, and he was baking the whole of the flour into bread. I sent to have him instantly seized, and brought with the dough and the other native, Yuranigh, before Mr. Kennedy and myself, as magistrates. He denied the intention to decamp. The other declared he had proposed to him to leave the party and go in search of gins, and that he could not understand him; that he was afraid to accompany Piper in a country so far from his own home (Buree). On this I ordered Piper to be sent to Bathurst, and the rations he was about to carry off, to be given to the other two, and that he should be kept apart from them during the night. Thermometer at sunrise, 85 deg.; at noon, 111 deg.; at 4 P.M., 112 deg.; at 9, 101 deg.;--with wet bulb, 78 deg..

1ST FEBRUARY.--This morning Piper was sent off with Corporal Graham. Mr. Kennedy rode on also in order to find out the nearest police station, and make arrangements, if possible, there, for forwarding Piper to Bathurst, his own district, which would put it out of his power to molest the party by endeavouring to induce the other natives to leave it. On them this measure appeared to have a salutary effect, Yuranigh calmly observing

that Piper had only himself to blame for what had befallen him, and that he had acted like a fool. Mr. Kennedy undertook also to obtain, if he could, some more kangaroo dogs to replace those which had died from excessive heat. By that loss our party was left almost without dogs; and dogs were useful not only to kill kangaroos and emus, but to afford protection from, or to give notice of, nightly attacks by the natives, in which attacks those on that part of the Darling we were approaching, had been rather too successful against various armed parties of whites. Thermometer at sunrise, 88 deg.; at noon, 104 deg.; at 4 P.M., 106 deg.; at 9 P.M., 88 deg.;--with wet bulb, 76 deg..

2ND FEBRUARY.--The setting sun descended on a blue stratus cloud which appeared along the edge of all other parts of the horizon, and eagerly watching any indication of a change, I drew even from this a presage of rain. Thermometer at sunrise, 88 deg.; at noon, 104 deg.; at 4 P.M., 106; at 9, 88 deg.;--with wet bulb, 72 deg..

3RD FEBRUARY.--High winds whistled among the trees this morning, and dark clouds of stratus appeared in the sky. A substantial shower fell about 9 A.M., and the horizon was gradually shut in by clouds of nimbus. The high wind had blown steadily from north both yesterday and this morning, and in the same quarter a thunder cloud seemed busy. But when the rain began to fall, the wind shifted to the S.W., from which quarter the rain seemed to come. With it came a very peculiar smell, which I had noticed near Mount Arapiles in 1836, about the time of the commencement of the rainy weather there; and nothing could have been more welcome to us now, than the prospect of rain, and the decided change in the temperature from 115 deg. to 73 deg.. This was almost the first day during a month in which the air had not been warmer than our blood; often had it been greater than fever heat, so that 73 deg. felt to us as cool as 50 deg. would have been to a resident of Sydney. Much rain did not fall at our camp, but it seemed that rain was falling about the sources of the Bogan and other places at which a supply of water was indispensable to enable us to proceed. At sunset, glimpses of a clear sky appeared about the horizon, and during the night the moon and stars came forth, and destroyed all hopes of more rain. We were thankful, however, for the relief afforded by what had fallen, which had lowered the temperature about 40 degrees, and enabled us to enjoy a night of refreshing rest. Thermometer at sunrise, 85 deg.; at noon, 80 deg.; at 4 P.M., 73 deg.; at 9, 68 deg.;--with wet bulb, 67 deg..

4TH FEBRUARY.--The morning dawned in a most serene sky, with refreshing breezes from the south, and the thermometer at 61 deg.. This day we had completed the repair of the wheels of half the drays. Many of the tire-rings had been cut, rewelded, and again fixed and bolted on the wheels; the wood of these having contracted so much in the intense heat, as to have rendered these repairs indispensable. The same repairs were required by the wheels of the remaining drays and those of the light carts, and the smith and wheelwright continued their work with activity and zeal. Meanwhile the cattle were daily regaining strength and vigour for another effort. Thermometer at sunrise, 61 deg.; at noon, 89 deg.; at 4 P.M., 89 deg.; at 9, 72 deg.;--with wet bulb, 62 deg..

5TH FEBRUARY.--This morning the mercurial column stood higher than I had yet observed it here, and clouds of cirrus lay in long streaks across the sky, ranging from east to west, but these were most abundant towards the northern horizon. The day was comparatively cool and pleasant, the thermometer never having risen above 96 deg.. By 6 P.M., the barometer had fallen nearly four millimetres, and even upon this apparently trivial circumstance, I could build some hope of rain; such was my anxiety for a

change of weather at that time, when the earth was so parched as not only to preclude our travelling, but almost to deprive us of sight. Thermometer at sunrise, 60 deg.; at noon, 94 deg.; at 4 P.M., 96 deg.; at 9, 73 deg.; with wet bulb, 64 deg..

6TH FEBRUARY.--Dark stratus-shaped clouds wholly covered the sky, and shut out the sun, to my unspeakable delight. A most decided change seemed to have taken place; still the barometer remained as low as on the previous evening. A slight breeze from south-east changed to north, and at about 7 A.M. the rain began to fall. Clouds of nimbus closed on the woody horizon, and we had a day of rain. In the evening the barometer had fallen still lower, and it was probable that the rain might continue through the night. Range of thermometer from 74 deg. to 72 deg..

7TH FEBRUARY.--Some heavy showers fell during the night, and the mercurial column stood exactly at the same point as on the last evening. About 10 A.M. a very heavy shower fell, after which the sun broke through, and the mass of vapour separated into vast clouds of nimbus. Much rain seemed to be still falling in the east, where the Macquarie, Bogan, and other rivers had their sources. At noon, the barometer had risen one millimetre. The rain had penetrated the clay soil of the plains about five inches.

Mr. Kennedy returned in the afternoon, having duly provided for Piper's conveyance by the mounted police to Bathurst, and brought back a good bull-dog, and also some useful information respecting the various water-courses, and the river Macquarie, which he had gathered from the natives about the stations along the banks of that river. Thermometer at sunrise, 74 deg.; at noon, 86 deg.; at 4 P.M., 90 deg.; at 9, 80 deg.;--with wet bulb, 75 deg..

8TH FEBRUARY.--The moisture recently imbibed by the earth and air made us much more sensible of the high temperature in which we had been living, although it had been reduced by the late rains. The night air, especially, breathed no refreshing coolness as heretofore during the dry heat. The drier earth below seemed to be steaming the wet soil above it (as Brown, our cook, justly observed). Thermometer at sunrise, 80 deg.; at noon, 96 deg.; at 4 P.M., 95 deg.; at 9, 80 deg.;--with wet bulb, 75 deg..

9TH FEBRUARY.--The leisure we enjoyed at this camp, enabled us to bestow more attention on the vegetable and animal productions of these remarkable plains, than had been given during my former journey. It appeared that the saltwort plants, which were numerous, were not only efficacious in keeping the cattle that fed on them in the best possible condition; but as wholly preventing cattle and sheep from licking clay, a vicious habit to which they are so prone, that grassy runs in the higher country nearer Sydney are sometimes abandoned only on account of the "licking holes" they contain. It is chiefly to take off that taste for licking the saline clay, that rock-salt is in such request for sheep, lumps of it being laid in their pens for this purpose. At all events, it is certain that by this licking of clay both sheep and cattle are much injured in health and condition, losing their appetite for grass, and finally passing clay only, as may be seen near such places. In the salt plants on these plains, nature has amply provided for this taste of these large herbivora for salt. Our sheep nibbled at the mesembryanthemum, and the cattle ate greedily of various bushes whereof the leaf was sensibly salt to the taste. The colour of the leaves of such bushes is usually a very light bluish green, and there are many species. That with the largest leaves, called salt-bush by stockmen, and by Dr. Brown RHAGODIA PARABOLICA, was very useful as a vegetable after extracting the salt

sufficiently from it. This we accidentally discovered from some experiments made by Mr. Stephenson, for the purpose of ascertaining the proportion of salt contained in the leaves. The leaves contained as much as a twentieth part of salt, nearly two ounces having been obtained from two pounds of the leaves.[\*] We also found that after twice boiling the leaves a few minutes in water to extract the salt, and then an hour in a third water, the leaves formed a tender and palatable vegetable, somewhat resembling spinach. As the superior excellence of these runs for fattening cattle is admitted on all hands, as compared with others more abundant in grass on the eastern side of the great range, would it not be advisable for the colonists to cultivate this salt-supplying bush, and thereby to produce a vegetable substitute for the rock salt, which is not only expensive, but only a very imperfect remedy for the clay-licking propensities of sheep and cattle on many runs? Thermometer at sunrise, 70 deg.; at noon, 94 deg.; at 4 P.M., 98 deg.; at 9, 86 deg.;--with wet bulb, 75 deg..

[\* The process of Mr. Stephenson was as follows:--"Two pounds of the green leaf were boiled in eight quarts of water for half an hour, then strained and evaporated nearly to dryness. The mass was then submitted to a red heat for half an hour. The residuum was next digested in one pint of water, filtered, and again evaporated to six ounces. It was then exposed to the sun's rays, which completed the desiccation; crystals of a cubic shape having previously been formed."]

10TH FEBRUARY.--This morning the natives caught, in a hollow tree, an animal apparently of the same genus as the *DIPUS MITCHELLII*, and which seemed to live solely on vegetables. The barometer had fallen three millimetres last evening, and by noon this day it had declined three more. A fresh breeze blew from N. N. E., and at 2 P.M. a dark thunder cloud came from the S. S. W. and passed over the camp. The thunder was very loud, the lightning close and vivid; the wind for some time high, and rain heavy. The sky was, however, clear by 4 P.M., except in the N. E. where the thunder continued. Thermometer at sunrise, 75 deg..

11TH FEBRUARY.--The real "Duck Creek" was still to the northeastward of our camp, as Mr. Kennedy had ascertained when on the Macquarie. I hoped to find in it water sufficient at least to serve the party halting on it one night, on its way to the Macquarie, by which line alone I was now convinced water enough might be obtained to supply the party until it could arrive at the Darling; I therefore rode this day to examine it, with the elder native. I followed the bearing of N. N. E. from our camp, a direction in which it was likely to be met with, so as equally to divide the journey of the drays to the Macquarie, into two days. I crossed plains covered with luxuriant crops of very rich grass, and at length obtained a sight of Mount Foster bearing east. I reached Duck Creek (that of Sturt), or the "Marra" of the natives, ascertained by the bearing of Mount Foster, the native name of which is Narrab. I examined the bed of the Marra downwards for about two miles, without seeing therein the least indication of water, and returned to the camp fully resolved to proceed next day to the Macquarie, so as to reach it a little way below Mount Foster, a distance in that direction rather too great for the cattle to travel over in one day. Thermometer at sunrise, 59 deg.; at noon, 73 deg.; at 4 P.M., 76 deg.; at 9, 61 deg.;--with wet bulb, 57 deg.. From an average of twenty-five observations of the mercurial column, the height of this station has been determined to be 566 English feet above the level of the sea.

12TH FEBRUARY.--We broke up our encampment on Cannonba ponds, where we had greatly recruited ourselves, both men and cattle, and crossing the



channel of the water-course near our camping ground, we travelled over open grassy plains towards the river Macquarie. At thirteen miles we reached the western branch of Duck Creek, or "Marra," a name by which it is universally known to natives and stockmen. Of this we crossed several branches, from which it would appear as if the name was derived from that of the hand, which is the same, especially as natives sometimes hold up the hand and extend the fingers, when they would express that a river has various branches or sources. I went on with an advanced party towards the Macquarie, and encamped on the bank of that river at 5 P. M. The thick grass, low forests of yarra trees, and finally the majestic blue gum trees along the river margin, reminded me of the northern rivers seen during my journey of 1831. Still even the bed of this was dry, and I found only two water holes on examining the channel for two miles. One of these was, however, deep, and we encamped near it, surrounded by excellent grass in great abundance. The Macquarie, like other Australian rivers, has a peculiar character, and this was soon apparent in the reeds and lofty yarra trees growing on reedy plats, and not, as usual in other rivers, on the edge of water-worn banks. The channel was here deep and dry. We found this day, in the scrubs by Marra Creek, the ACACIA SALICINA, whereof the wood has a strong perfume resembling violets, also a new small-leaved KOCHIA with intricate branches.[\*] Thermometer at sunrise, 47 deg.; at 4 P. M., 77 deg.; at 9, 57 deg.;--with wet bulb, 56 deg..

[\* K. THYMIFOLIA (Lindl. MS.); fruticosa, ramosissima, ramulis intricatis pubescentibus, foliis carnosis obtusis teretibus fructibusque glabris.]

13TH FEBRUARY.--I was again laid up with the MALADIE DU PAYS--sore eyes. Mr. Stephenson took a ride for me to the summit of Mount Foster, and to various cattle stations about its base, with some questions to which I required answers, about the river and stations on it lower down. But no one could tell what the western side of the marshes was like, as no person had passed that way; the country being more open on the eastern side, where only the stations were situated; Mr. Kinghorne's at Graway, about five miles from our camp, being the lowest down on the west bank. Mr. Stephenson returned early, having met two of the mounted police. To my most important question--what water was to be found lower down in the river--the reply was very satisfactory; namely, "plenty, and a FLOOD COMING DOWN from the Turmountains." The two policemen said they had travelled twenty miles with it, on the day previous, and that it would still take some time to arrive near our camp. About noon the drays arrived in good order, having been encamped where there was no water about six miles short of our camp, the whole distance travelled, from Cannonba to the Macquarie, having been about nineteen miles. In the afternoon two of the men taking a walk up the river, reported on their return, that the flood poured in upon them when in the river bed, so suddenly, that they narrowly escaped it. Still the bed of the Macquarie before our camp continued so dry and silent, that I could scarcely believe the flood coming to be real, and so near to us, who had been put to so many shifts for want of water. Towards evening, I stationed a man with a gun a little way up the river, with orders to fire on the flood's appearance, that I might have time to run to the part of the channel nearest to our camp, and witness what I had so much wished to see, as well from curiosity as urgent need. The shades of evening came, however, but no flood, and the man on the look-out returned to the camp. Some hours later, and after the moon had risen, a murmuring sound like that of a distant waterfall, mingled with occasional cracks as of breaking timber, drew our attention, and I hastened to the river bank. By very slow degrees the sound grew louder, and at length, so audible as to draw various persons besides from the camp to the river-side. Still no flood

appeared, although its approach was indicated by the occasional rending of trees with a loud noise. Such a phenomenon in a most serene moonlight night was quite new to us all. At length, the rushing sound of waters and loud cracking of timber, announced that the flood was in the next bend. It rushed into our sight, glittering in the moonbeams, a moving cataract, tossing before it ancient trees, and snapping them against its banks. It was preceded by a point of meandering water, picking its way, like a thing of life, through the deepest parts of the dark, dry, and shady bed, of what thus again became a flowing river. By my party, situated as we were at that time, beating about the country, and impeded in our journey, solely by the almost total absence of water--suffering excessively from thirst and extreme heat,--I am convinced the scene never can be forgotten. Here came at once abundance, the product of storms in the far off mountains, that overlooked our homes. My first impulse was to have welcomed this flood on our knees, for the scene was sublime in itself, while the subject--an abundance of water sent to us in a desert--greatly heightened the effect to our eyes. Suffice it to say, I had witnessed nothing of such interest in all my Australian travels. Even the heavens presented something new, at least uncommon, and therefore in harmony with this scene; the variable star ARGUS had increased to the first magnitude, just above the beautiful constellation of the southern cross, which slightly inclined over the river, in the only portion of sky seen through the trees. That very red star, thus rapidly increasing in magnitude, might, as characteristic of her rivers, be recognized as the star of Australia, when Europeans cross the Line. The river gradually filled up the channel nearly bank high, while the living cataract travelled onward, much slower than I had expected to see it; so slowly, indeed, that more than an hour after its first arrival, the sweet music of the head of the flood was distinctly audible from my tent, as the murmur of waters, and the diapason crash of logs, travelled slowly through the tortuous windings of the river bed. I was finally lulled to sleep by that melody of living waters, so grateful to my ear, and evidently so unwonted in the dry bed of the thirsty Macquarie. Thermometer, at sunrise, 47 deg.; at noon, 79 deg.; at 4 P. M., 88 deg.; at 9, 63 deg.;--with wet bulb, 57 deg..

14TH FEBRUARY.--The river had risen to within six feet of the top of the banks, and poured its turbid waters along in fulness and strength, but no longer with noise. All night that body of water had been in motion downwards, and seemed to me enough to deluge the whole country to the Darling, and correct at least any saltness in its waters, if stagnant; a probability which had greatly reconciled me to the necessity for changing the line of my intended route, as the waters above the junction of the Castlereagh had never been known to become salt. We proceeded, falling soon into a cart track which led us to Graway, Mr. Kinghorne's cattlestation, and we encamped about five miles beyond it, near a bend of the river. We were already in the midst of reeds, but these had been so generally burnt, that we had little difficulty in crossing those parts of the marshes. The IMPERATA ARUNDINACEA, with its long head of white silky flowers, was common, and a straggling naked branched species of dock, on the parts unburnt. Thermometer at sunrise, 54 deg.; at noon, 91 deg.; at 4 P. M., 82 deg.; at 9, 72 deg.;--with wet bulb, 60 deg.. Height above the level of the sea, 475 feet.

15TH FEBRUARY.--Mr. Kinghorne obligingly accompanied me this day, and guided us across arms of the marshy ground. I was very glad to have his assistance, for I saw no line of trees as on other rivers, nor other objects by which I could pursue its course or keep near its waters; trees of the aquatic sort and reeds grew together. At one time nothing was visible to the eastward but a vast sea of reeds extending to the horizon.

Where the long reeds remained unburnt, they presented a most formidable impediment, especially to men on foot and sheep, and twenty of these got astray as the party passed through. We encamped on a bank of rather firm ground, in lat. 30 deg. 53' 55" S. The grass was very rich on some parts of open plains near the marshes, and the best was the PANICUM LOEVINODE of Dr. Lindley, mentioned in my former journals[\*] as having been found pulled, and laid up in heaps for some purpose we could not then discover. Mr. Kinghorne now informed me that it was called by the natives "coolly," and that the gins gather it in great quantities, and pound the seeds between stones with water, forming a kind of paste or bread; thus was clearly explained the object of those heaps of this grass which we had formerly seen on the banks of the Darling. There they had formed the native's harvest field. There also I observed a brome grass, probably not distinct from the BROODS AUSTRALIS of Brown; it called to mind the squarrose brome grass of Europe. Thermometer at sunrise, 59 deg.; at noon, 87 deg.; at 4, 89 deg.; at 9, 73 deg.;--with wet bulb, 66 deg..

[\* Vol. i. p. 237.]

16TH FEBRUARY.--Mr. Kinghorne set out with a man of our party to examine Duck Creek, a native boy having told him that water was to be found in it lower down. I sent back early this morning, our native, with the store-keeper, some of the men, and the shepherd, to look for the lost sheep in the reeds, and Yuranigh fortunately found them out, still not very far from the spot where they had been separated from the rest of the flock. Our greatest difficulty in these marshes was the watering of the cattle. We had still the Macquarie at hand--deep, muddy, and stagnant--not above thirty feet wide, the banks so very soft that men could scarcely approach the water without sinking to the knees. We could water the horses with buckets, but not the bullocks. The great labour of filling one of the half-boats, and giving the cattle water by that means, was inevitable, and this operation took up three hours of the morning; a wheel required repair, the box having been broken yesterday. I for these reasons found it advisable to halt this day, which I did very reluctantly. At sunset, Mr. Kinghorne returned, having found no water in the "Marra," (Duck Creek).

Among the grasses growing among the reeds, we perceived the ANDROPOGON SERICEUS and an ERIANTHUS, which appeared to differ from E. FULVUS in having no hair upon the knees. The smooth variety of the European LYTHRUM SALICARIA, raised its crimson spikes of flowers among the reeds of the Macquarie, as it does in England on the banks of the Thames. We saw also MORGANIA FLORIBUNDA, SENEIO BRACHYLOENUS (D. C.), a variety with toothed leaves, also a BRACHYCOME resembling B. HETERODONTA, only the leaves were entire. A new species of LOTUS appeared among the reeds, very near the narrow-leaved form of L. AUSTRALIS on the one hand, and the South European narrow-leaved form of L. CORNICULATUS on the other; the flowers were pink, and smaller than in L. AUSTRALIS.[\*] Also an ETHULIA [\*\*], which may, on further examination, constitute a new genus; it was found by Allan Cunningham on the Lachlan. Thermometer at sunrise, 54 deg.; at noon, 86 deg.; at 4 P.M., 84 deg.; at 9, 61 deg.;--with wet bulb, 54 deg..

[\* L. LAEVIGATUS (Benth. MS.); subglaber glaucescens, foliis linearibus v. lineari-cuneatis vix acutatis, pedunculis folio longioribus 3--6-floris, calycis subsessilibus appresse pubescentibus dentibus setaceo-acuminatis tubo suo paullo longioribus, legumine recto tereti glabro.]

[\*\* ETHULIA CUNNINGHAMI (Hooker MS.); glaberrima, caule dichotomo, foliis oblongis sessilibus dentato-serratis, capitulis paucis corymbosis

globosis, involucris squamis oblongis imbricatis viridibus, pappo e setis paucis brevibus.]

17TH FEBRUARY.--The party moved off early, and Mr. Kinghorne having shown me a few miles more of the best ground between the scrubs and reeds, went towards a cattle station beyond the Macquarie, where a belt of open forest separated the reeds and enabled him to pass. He prevailed on a native whom he met with there to come with him to me, and to guide me to water until I reached the Barwan. This native at first seemed rather afraid of our numerous party, but our own native, Yuranigh, endeavoured by every means to make him at ease, and to induce him to remain with us. He guided us this day by fine open ground westward of the marshes, to a part of the Macquarie where the banks were solid enough to admit of the cattle drinking. The name was Bilgawangara; I reached the spot early, but at sunset no drays had come up. At length I was informed that such was the softness of the soil, that the drays had sunk frequently, that two were fast in one place, four in another, and that two of the bullocks were astray. The marshes were said to be just then occupied by some angry tribes, of whom Mr. Kinghorne had warned me to be on my guard. The patience necessary to any traveller depending on bullocks and bullock drivers, I then thought ought to exceed that of Job. Our native guide was very shy, and Yuranigh feared he meant to "bolt." We depended on him for finding water--on our own native for finding bullocks; but it would not have done then to have sent him away. The weather might change, and these marshes become impassable; indeed, we were as much at the mercy of Providence in this respect as the Israelites were in the bed of the Red Sea. It depended on the weather whether we should deserve to be considered Jews or Egyptians. The teams came in about midnight, after the moon had risen, by which the drivers were enabled to see my track. Lat. 30 deg. 45' 55" S. Thermometer at sunrise, 48 deg.; at noon, 85 deg.; at 4 P.M., 88 deg.; at 9, 60 deg.;--with wet bulb, 54 deg..

18TH FEBRUARY.--Two bullocks were still astray some miles behind, and the iron axle of one of the drays having got bent, required repair. The cattle, I was told, were so jaded, as to be unable to make a day's journey without more rest, and I was again obliged to halt. One only of the two lost bullocks was found, and for this one we were indebted to little Dicky, a native only ten years of age, whom the big fool who had lost them was at some trouble to coax to go and assist him in the search, as Yuranigh could not be spared from the more important duty of entertaining our less civilised guide, and preventing him from making his escape. It must, indeed, appear strange to these people of the soil, that the white man who brought such large animals as oxen with them into the country, should be unable to find them without the assistance of a mere child of their own race. Dicky had soon found both, but one of them being young and wild, escaped again amongst the tall reeds.

In the rich soil near the river bed, we saw the yellowish flowers of the native tobacco, *NICOTIANA SUAVEOLEUS*, the *MINURIA HETEROPHYLLA* (D.C.), found by Allan Cunningham near the Lachlan, and a *FUGOSIA* near *F. DIGITATA* of Senegambia. In the scrub we found a fine new silvery *ATRIPLEX* with broad rounded leaves and strings of circular toothed fruits.[\*] Thermometer at sunrise, 53 deg.; at noon, 93 deg.; at 4 P.M., 96 deg.; at 9, 67 deg.;--with wet bulb 59 deg..

[\* *A. NUMMULARIA* (Lindl. MS.); caule suffruticoso glabro ramoso, foliis alternis ovato-subrotundis integerrimis petiolatis basi cuneatis utrinque argenteis, floribus monoicis, spicis longis pendulis, bracteis subrotundis dentatis basi connatis.]

19TH FEBRUARY.--We set off early, guided by our native friend. He was a very perfect specimen of the GENUS HOMO, and such as never is to be seen, except in the precincts of savage life, undegraded by any scale of graduated classes, and the countless bars these present to the free enjoyment of existence. His motions in walking were more graceful than can be imagined by any who have only seen those of the draped and shod animal. The deeply set yet flexible spine; the taper form of the limbs; the fulness yet perfect elasticity of the GLUTEI muscles. The hollowness of the back, and symmetrical balance of the upper part of the torso, ornamented as it was, like a piece of fine carving, with raised scarifications most tastefully placed; such were some of the characteristics of this perfect "piece of work." Compared with it, the civilised animal, when considered merely in the light of a specimen in natural history, how inferior! In vain might we look amongst thousands of that class, for such teeth; such digestive powers; for such organs of sight, hearing, smelling, tasting, feeling; for such powers of running, climbing, or walking; for such full enjoyment of the limpid water, and of all that nature provides for her children of the woods. Such health and exemption from disease; such intensity of existence, in short, must be far beyond the enjoyments of civilised men, with all that art can do for them; and the proof of this is to be found in the failure of all attempts to persuade these free denizens of uncultivated earth to forsake it for the tilled ground. They prefer the land unbroken and free from the earliest curse pronounced against the first banished and first created man. The only kindness we could do for them, would be to let them and their wide range of territory alone; to act otherwise and profess goodwill is but hypocrisy. We cannot occupy the land without producing a change, fully as great to the aborigines, as that which took place on man's fall and expulsion from Eden. They have hitherto lived utterly ignorant of the necessity for wearing fig leaves, or the utility of ploughs; and in this blissful state of ignorance they would, no doubt, prefer to remain. We bring upon them the punishments due to original sin, even before they know the shame of nakedness. Such were the reflections suggested to my mind by the young savage as he tripped on lightly before me by the side of his two half-civilised brethren of our party, who, muffled up in clothes, presented a contrast by no means in favour of our pretensions to improve and benefit their race. Yet our faithful Yuranigh was all that could be wished. He was assiduously making to the stranger such explanations of our wants and purposes, as induced him to conduct us in the direction these required. He led us, thus admonished, over those parts of the country most favourable for the passage of wheels. The rosewood acacia was abundant, but many parts were covered with most luxuriant grass. We encamped on the edge of a salt-bush plain, where there was a small pond of water left by the last rains on a clay surface. There was certainly enough for ourselves and horses, but it appeared that our guide had greatly underrated the capacity for water, of our hundred bullocks. For these, however, there was superb grass to the westward, and a little dew fell on it during the night. Thermometer at sunrise, 59 deg.; at noon, 102 deg.; at 4 P. M., 104 deg.; at 9, 77 deg.;--with wet bulb, 65 deg..

20TH FEBRUARY.--From the necessity for obtaining water as soon as possible for the bullocks, we travelled over ground which was rather soft, otherwise our guide would have pursued a course more to the westward, and over a firmer surface. We, at length, crossed two narrow belts of reeds not more than twenty feet across, and had the great satisfaction to learn from him that these were the last of the reeds. A shallow creek appeared soon thereafter on our right, in which our guide had expected to find water, but was disappointed; cattle having recently

drank up there, what had been a large pond when he was there formerly. He showed us the recent prints of numerous cloven feet, and thus we were made to feel, in common with the aborigines, those privations to which they are exposed by the white man's access to their country. On proceeding some miles further, our guide following down the channel, he at length appeared at a distance making the motions of stooping to bathe, on which Yuranigh immediately said "He has found plenty of water;" and there, in fact, our guide had found two large ponds. They were still in the attenuated channel of the Macquarie, here called by them Wammerawa, the course of which river is continuous throughout the marshes; and marked by some high reeds greener than the rest, even when the reeds may have been generally burnt. These reeds are distinctly different from the "balyan," growing on the marshy parts of the rivers Lachlan, Murrumbidgee, and Millewa; the former being a cane or bamboo, the latter a bulrush, affording, in its root, much nutritious gluten. We found good grass for the cattle on both sides of the water-course, which was fringed with a few tall reeds, near which the pretty little KOCHIA BREVIFOLIA observed at Muda on the Bogan, again occurred. The native name of the spot was "Warranb." The soft earth had again impeded the drays; the teams of two came in at twilight, an axle of one dray having been damaged; the six others were brought up in the course of the evening. Thermometer at sunrise, 60 deg.; at 4 P. M., 103 deg.; at 9, 78 deg.;--with wet bulb, 68 deg..

21ST FEBRUARY.--The first thing done this morning was to send back cattle to draw forward the dray with a bent axle, to the camp, that it might be repaired. This was done so as to enable the party to continue the journey by 1 P. M. The barometer was going down at a rate which was alarming enough, considering what our position must have been there in a flood, or even after a heavy fall of rain. I therefore pressed forward with the light carts, and guided by the native. He brought us at 5 P. M. to "Willery," the place where he had expected to find water; but here again, he had been anticipated by cattle, which had drunk up all, and trodden the ponds as dry as a market-place. He gave us no hopes of finding water that night, nor until we could reach the Barwan, then distant, I was quite sure, at least twenty-four miles, according to the latitude observed (30 deg. 19' 54" South). We encamped here, and I sent back directions that the drays should at once halt, taking their places beside the leading dray, and that the cattle should be driven back in the morning to be watered at the last camp (Warranb), and then to return and follow in my track. Mr. Drysdale, the storekeeper, had also to go back to serve out a week's rations to the party with the drays, and he returned to my camp by 2 A. M., in the moonlight, bringing, on the horse of the former messenger, rations for my party. Here we found the KERAUDRENIA INTEGRIFOLIA. Thermometer at sunrise, 70 deg.; at noon, 105 deg.; at 9, 83 deg.;--with wet bulb, 57 deg..

22D FEBRUARY.--My guide was now desirous that I should cross the Macquarie, to open plains which he represented to be much more favourable for wheel carriages; but I endeavoured to explain to him, by drawing lines in the clay surface, how the various rivers beyond would cross and impede my journey to the Barwan. There were the Castlereagh, Morissett's Ponds, and the Nammoy.[\* If Arrowsmith's map had been correct, which it was not, for the Nammoy joins the Darling separately, at least fifty miles higher than the junction of the Castlereagh.]

An instance occurred here of the uselessness of new names, and the necessity for preserving the native names of Rivers. I could refer, in communicating with our guide, to the Nammoy only, and to the hills which partly supplied the Castlereagh, whereof the native name was

Wallambangle. I wanted to make them understand the probability that some flood had come down the channel of the Castlereagh, and that we might therefore hope to find water below its junction with the Macquarie. This, with the aid of Yuranigh, our own native, was at length made intelligible to our Barwan guide, and he shaped his course accordingly. He took us through scrubs, having in the centre those holes where water usually lodges for some time after rain, where some substratum of clay happens to be retentive enough to impede the common absorption. But the water in these holes had been recently drunk, and the mud trampled into hard clay by the hoofs of cattle. Thus it is, that the aborigines first become sensible of the approach of the white man. These retired spots, where nature was wont to supply enough for their own little wants, are well known to the denizens of the bush. Each locality has a name, and such places are frequented by helpless females with their children, or by the most peaceably disposed natives with their families. There they can exist apart from belligerent tribes, such as assemble on large rivers. Cattle find these places and come from stations often many miles distant, attracted by the rich verdure usually growing about them, and by thus treading the water into mud, or by drinking it up, they literally destroy the whole country for the aborigines, and thereby also banish from it the kangaroos, emus, and other animals on which they live. I felt much more disgusted than the poor natives, while they were thus exploring in vain every hollow in search of water for our use, that our "cloven foot" should appear everywhere. The day was extremely hot, which usually happened to be the case whenever we were obliged to experience the want of water. The thermometer under a tree stood at 110 deg.. The store-keeper was taken ill with vertigo. Our bull-dog perished in the heat, and the fate of the cattle, still a day's journey behind us, and of the sheep, which had not drunk for two days, were subjects of much anxiety to me at that time. It may, therefore, be imagined with what pleasure I at length saw before me large basins of water in the channel of the Macquarie, when I next approached the banks, after a journey at a good pace for six hours and a half. We had made it below the junction of Morissett's Ponds, and found that a recent flood had filled its channel with water. The natives dived into it to cure their headaches, as they said, and seemed to go completely under water, in order to take a cool drink. We had reached the united channel of the Macquarie and Morissett's Ponds, and were at an easy day's journey only distant from the junction with the BARWAN or "Darling." The use of the aboriginal name of this river is indispensable amongst the squatters along its banks, who do not appear to know it to be the "Darling." It is most desirable to restore to such rivers their proper names as early as possible after they have been ascertained, were it only to enable strangers thereby to avail themselves of the intelligence and assistance of the natives, in identifying the country by means of the published maps. The river Castlereagh is known to the natives as the Barr; Morissett's Ponds, as the Wawill; and the lower part of the Macquarie, as the Wammerawa. The squatting system of occupation requires still more that the native names of rivers should be known to commissioners empowered to parcel out unsurveyed regions of vast extent, whereof the western limits would be, indeed, beyond their reach or control, but for the line of an angry savage population, which line the squatter dares not to cross unsupported by an armed mounted police. Thermometer at sunrise, 59 deg.; at noon, 110 deg.; at 4 P. M., 107 deg.; at 9, 89 deg.; --with wet bulb 72 deg..

23RD FEBRUARY.--The drays did not come up, nor was any intelligence of them received at our camp until late in the afternoon, when a man I had sent back in the morning to tell the drivers to halt in good time to send forward the cattle by daylight along my track to the water, brought me

word that he left them on the way ten miles off about eleven in the morning. This man (Smith) also brought forward the sheep with him. They had not drank for two nights, and ran skipping and baaing to the water, as soon as they saw it. The heat of this day and yesterday was excessive, a hot wind blowing hard all the time. Among the scrub on the banks of the Macquarie, a salt plant belonging to the genus SCLEROLOENA was remarked; it was perhaps not distinct from S. UNIFLORA. The GOODENIA GENICULATA overran the ground, with its strawberry-like runners, and yellow flowers. Latitude, 30 deg. 12' 56" S. Thermometer at sunrise, 75 deg.; at noon, 105 deg.; at 4 P.M., 94 deg.; at 9, 73 deg.;--with wet bulb, 62 deg..

24TH FEBRUARY.--Some of the teams came up, having been out all night. The drivers brought me word that they had been detached at twilight to come six miles; the night was very dark; of course they could not see my track, and as a matter equally of course, the spare bullocks had strayed from them. Such were the almost daily recurring causes of delay by the bullock drivers on this journey. Here, within a day's journey (thirteen miles) of the Barwan, I was compelled to halt thus several days, and really the prospect of performing so long a journey with such drivers seemed almost hopeless. Thermometer at sunrise, 59 deg.; at noon, 80 deg.; at 4 P.M., 85 deg.; at 9, 64 deg.;--with wet bulb, 59 deg..

25TH FEBRUARY.--In the evening, the carpenter brought in ten of the stray bullocks; four were still wanting, and I dispatched Mortimer, a bullock driver, and the carpenter to show him where he had last left the track of the animals still astray; both were mounted. Thermometer at sunrise, 53 deg.; at noon, 90 deg.; at 4 P.M., 94 deg.; at 9, 79 deg.;--with wet bulb, 62 deg..

26TH FEBRUARY.--Mortimer came in early, saying he had found only one of the bullocks, that the others had gone back to the last wateringplace twenty-two miles distant. His companion did not arrive during the day; he said he had left him bringing on the animal they had fallen in with. I blamed him for leaving him, and ordered him to find him forthwith on foot. I could not afford to lose horses. Here, it seemed, we were doomed to remain. I endeavoured to make the most of the time by carrying on the mapping of our survey, in order to make good our longitude at crossing the Barwan. Thermometer at sunrise, 60 deg.; at noon, 94 deg.; at 4 P.M., 101 deg.; at 9, 72 deg.;--with wet bulb, 62. deg.

27TH FEBRUARY.--When the teams were about to be put to the drays this morning, I was informed that five bullocks were astray. This delayed the party until 10 A.M., and then we left one lame bullock still missing. I reduced the men's rations by one pound per week, and declared that a proportional reduction should be regularly made to correspond with such unlooked-for delays in the journey. We proceeded over firmer ground, having the river almost always in sight, until, after travelling about six miles, our guide showed me the river, much increased in width, and said they called that the "Barwan." As it was still a mere chain of ponds, though these were large, I was sure this was not the main channel; he also said this joined the main channel a good way lower down. I was convinced that it was only the Castlereagh that had thus augmented the channel of the Macquarie, which I found afterwards to be the case, the junction taking place two miles higher. I willingly encamped on it, however, to afford more time for the lost man, and the man sent after him, to rejoin the party.

I this day gave "Yulliyally," our guide, the promised tomahawk, a pipe, tobacco; and, in addition, a shirt; also a few lines to Mr. Kinghorne, certifying that this native had done what he had engaged to do.



Thermometer at sunrise, 62 deg.; at noon, 94 deg.; at 4 P.M., 97 deg.; at 9, 70 deg.;-- with wet bulb, 57 deg..

28TH FEBRUARY.--The wheelwright and Mortimer came into the camp at 6 A.M., bringing back the horse of the former, and one of the lost bullocks. We set out early, and after travelling about six miles I came upon a cart-track, which I followed to the westward until overtaken by a stockman, who informed me that the Wammerawa, on which I had been encamped, joined the Barwan, then on my right, within two miles of the spot on which we stood; that he belonged to the cattle station of Mr. Parnell, Jun., which was distant from my last camp about five miles, and on the main river; also that the track I was following led to Mohanna, Mr. Lawson's station, seventy-five miles lower down the Barwan. I turned with him towards the junction of the Macquarie and Barwan, and encamped thereby, right glad to reach at length, the river beyond which our exploratory tour was to commence. The river looked well, with a good current of muddy water in it, of considerable width, and really like a river. I understood from my guide to this point, that there was a good ford across the river at his station; also that Commissioner Mitchell had been down the river a short time back, making a map to show all the cattle stations on both banks. We had neither seen nor heard anything of Mr. Wright, the commissioner of the Macquarie district through which we had just passed, except that he "might visit the district when the hot weather was over." Here we found a new species of CALOTIS.[\*] Thermometer at sunrise, 61 deg.; at noon, 101 deg.; at 4 P.M., 100 deg.; at 9, with wet bulb, 62 deg..

[\* Calotis SCAPIGERA (Hook. MSS.); stolonifera glaberrima, foliis omnibus radicalibus lineari-spathulatis, scapo nudo monocephalo, achenii aristis robustis subulatis retrorsum pilosis apice rectis vel uncinatis.--A very distinct species. Habit of BRACHYSTEPHIUM SCAPIGERUM D. C.: but that ought to have no aristae to the achenium: here the awns are very stout in proportion to the size of the capitulum.]

1ST MARCH.--When, fifteen years before, I visited this river at a higher point where it was called the Karaula [\*], no trace of hoofs of horses or bullocks had been previously imprinted on the clayey banks. Now, we found it to be the last resource of numerous herds in a dry and very hot season, and so thickly studded were the banks of this river with cattle stations, that we felt comparatively at home. The ordinary precautionary arrangements of my camp against surprise by savage natives seemed quite unnecessary, and, to stockmen, almost ridiculous. We had at length arrived at the lowest drain of that vast basin of clay absorbing many rivers, so that they lose themselves as in the ocean. Here the final outlet or channel of the waters of the Macquarie, was but a muddy ditch one might step across, which the magnificent flood we had seen in the same river above the marshes was not at all likely to reach. That flood had gone to fill thousands of lagoons, without which supply, those vast regions had been unfit for animal existence. Here we discover another instance of that wonderful wisdom which becomes more and more apparent to man, when he either looks as far as he can into space, or attentively examines the arrangement of any matter more accessible to him. The very slight inclination of the surface of these extensive plains seems finely adapted to the extremely dry and warm climate over this part of the earth. If the interior slope of the land from the eastern coastranges were as great as that in other countries supplying rivers of sustained current, it is obvious that no water would remain in such inclined channels here; but the slope is so gentle that the waters spread into a net-work of reservoirs, that serve to irrigate vast plains, and fill

lagoons with those floods that, when confined in any one continuous channel, would at once run off into the ocean.

[\* We then understood the natives very imperfectly and might have been wrong about the name, which is the more likely, as CARAWY, which the name resembles, means any deep water-hole.]

In a wet season, the country through which we had traced out a route with our wheels had been impassable. The direction I should have preferred, and in which I had endeavoured to proceed, was along the known limits of this basin, and formed a curved line, or an arc, to which the route necessity had obliged us to follow was the chord; thus we had not lost time; but had, in fact, shortened the distance to be travelled over very considerably. A permanent route had, however, seemed to me more desirable to any country we might discover, than one liable to be interrupted by flooded rivers and soft impassable ground. The track of our drays, along the western side of the Macquarie marshes opened a new and direct route from Sydney to the banks of the river Darling, by way of Bathurst; and afforded access to a vast extent of excellent pasturage on the Macquarie, along the western margin of the marshes, which land would, no doubt, be soon taken up by squatters. In so dry a climate, and where water is so frequently scarce, it may, indeed, be found that the shortest line of route with such advantages would be more frequented than any longer line, possessing only the remote advantage of security from interruption by too much water. Thermometer at sunrise, 64 deg.; at noon, 100 deg.; at 4 P.M., 101 deg.; at 9, 81 deg.; with wet bulb, 61 deg..

2ND MARCH--MONDAY. I took a ride to examine the ford at Wyabry, (Mr. Parnell, Jun.'s station,) which I found practicable for our drays, although, for their descent and ascent, it was necessary to cut better approaches on each side. The Macquarie, although the channel was so attenuated and ditch-like, was likely to prove also an obstacle without some work of the same kind. Accordingly, on my return to the camp, I sent some men to the last-mentioned work.

I learnt from natives whom I met at Mr. Parnell's station, that the rivers Bolloon, Culgoa, and Biree were then flowing, some abundant rains having fallen about their sources. Also, from the stockman, that the Narran was thirty-five miles distant, but that a native could be found to guide me to water only ten miles off. Water was also to be obtained at a distance of only seven miles beyond the Barwan there at the "Morella Ridges," to which the natives were in the habit of resorting at certain seasons, by a path of their own, to gather a fruit of which they were very fond, named by them "Moguile," and which I had previously ascertained to be that formerly discovered by me, and named by Dr. Lindley CAPPARIS MITCHELLII.[\*] We found back from this camp the RUTIDOSIS HELYCHRYSOIDES of De Candolle. Thermometer at sunrise, 72 deg.; at noon, 101 deg.; at 4 P.M.; 100 deg.; at 9, 78 deg.; and with wet bulb, 62 deg..

[\* See "Three Expeditions," etc., vol. i. page 315.]

3D MARCH.--Early this morning a party of men were sent to cut better approaches to the ford across the Barwan at Mr. Parnell's station. Ascertained the longitude of the junction of the rivers Macquarie and Darling at our present camp to be 147 deg. 33' 45" E., by actual measurements connected with my former surveys of the colony. Mr. Kennedy had chained the whole of the route from Bellaringa, and I had connected his work with latitudes observed at almost every encampment, and after determining at various points the magnetic variation, which appeared to be very steady,

I made the latitude of this camp 30 deg. 6' 11" south. Thermometer at sunrise, 72 deg.; at noon, 99 deg.; at 4 P.M., 97 deg.; at 9, 72 deg.; and with wet bulb, 65 deg.. The height above the sea level of the bed of the river here, the average result of eight observations, as calculated by Capt. King, was 415 feet.

4TH MARCH.--The party moved off towards the ford over the Barwan at Wyabry, crossing the bed of the Macquarie about half a mile above its junction with the Barwan; there, although the approaches had been well enough cut, we found the bottom too soft for our heavy vehicles, one of which dipped its wheel to near the axle. We were obliged to pave the soft and muddy bed with logs, and to cover these with branches, on which earth was thrown, ere the rest could be got across. The party arrived about noon at Wyabry, and by 2 P.M. the whole was safely encamped on the right bank of the Barwan. I had received this morning a dispatch from my son, commissioner of this district, in which he gave me a most favourable account of several rivers he had explored in the direction of my proposed route. These dispatches came to me at the last camp by the hands of a native, in forty-four hours after the superintendent of Mr. Lawson, being then on his way down the river, had promised to send them to me, from a station forty-five miles off, towards Fort Bourke, where it had been supposed my party would pass. Lat. of this camp, 30 deg. 5' 41" S. On this northern bank of the Darling we looked for novelty in botany, and found some interesting plants, such as a toothed variety of *SENERIO BRACHYLOENUS* D. C., a kind of groundsel; *MORGANIA FLORIBUNDA*, loaded with purple blossoms, and a variety of *HELICHRYSUM BRACTEATUM*, somewhat different in the leaves from the usual state of the species. Thermometer at sunrise, 70 deg.; at 4 P.M., 98 deg.; at 9, 72 deg.;--with wet bulb, 61 deg..

### Chapter III.

THE PARTY ADVANCES INTO THE UNKNOWN REGION BEYOND THE DARLING,--GUIDED BY TWO ABORIGINAL NATIVES.--PLAINS AND LOW HILLS.--ARRIVE AT PONDS OR SPRINGS CALLED "CARAWY."--DELAYED BY THE WEAKNESS OF THE CATTLE.--REACH THE NARRAN SWAMP SOONER THAN EXPECTED.--BRIDGE MADE TO CROSS SOFT PART OF SWAMP,--WHILE AWAITING THE ARRIVAL OF TIRED BULLOCKS.--SWAMP VERY EXTENSIVE TO THE EASTWARD.--NEW PLANTS.--RIDE ACROSS THE SWAMP AND RECONNOITRE THE RIVER NARRAN THIRTY MILES UPWARDS.--THE SWAMP THE LAST RECEPTACLE OF THE RIVER.--BRIDGE LAID DOWN BY MOONLIGHT.--THE WHOLE PARTY CROSSES IT, AND AFTERWARDS FORD THE NARRAN,--CROSSING TO THE LEFT BANK.--ADVANCE BY VERY SHORT STAGES FROM WEAKNESS OF THE CATTLE.--RICH GRASS ON THE NARRAN.--ELEVATED STONY GROUND TO THE WESTWARD.--AGAIN RECONNOITRE THE RIVER IN ADVANCE WHILE THE CATTLE REST.--PARLEY WITH A NATIVE.--TWO NATIVES OF THE BALONNE GUIDE ME TO THAT RIVER.--APPROACH THE ASSEMBLED POPULATION OF ITS BANKS.--INTERVIEW WITH THE TRIBES.--CORDIAL RECEPTION.--CROSS THE BALONNE,--AND REACH THE CULG.--CIVILITY OF THE NATIVES.--CROSS THE CULG.--TRAVEL UP ALONG THE RIGHT BANK OF THE BALONNE.--GRASSY PLAINS ALONG ITS BANKS.--THE OLD DELAY, CATTLE MISSING.--A NATIVE SCAMP.--SPLENDID REACHES OF THE RIVER.--DEPOT CAMP AT A NATURAL BRIDGE.--RIDE TO THE NORTHWEST.--RECEIVE DISPATCHES FROM SYDNEY.--RETURN TO THE CAMP AT ST. GEORGE'S BRIDGE.

5TH MARCH.--Early this morning the stockman brought over two natives, brothers, who were to guide us to water ten miles on towards the Narran, which was said to be thirty-five miles off. In the first two miles we

passed over some soft ground. Further on, hills were visible to the left, which our native guides called Goodeingora. Fragments of conglomerate rocks appeared in the soil of the plains, pebbles and grains of quartz cemented by felspar. These plains appeared to become undulating ground as we proceeded northward, and the surface became firmer. At length the country opened into slight undulations, well clothed with grass, and good for travelling over, the soil being full of the same hard rock found on the rising grounds nearest to the Darling, in the lowest parts of that river explored formerly by me. The red earth seemed to be but the decomposed matrix of that rock, as the water-worn pebbles of quartz so thickly set therein, here covered the ground in some places so thickly as to resemble snow. Much Anthistiria and other good grasses grew on those plains. I was, indeed, most agreeably surprised at the firm undulating stony surface and open character of the country, where I had expected to see soft clay, and holes and scrubs. At six miles, other slight elevations appeared to the N. E. which the natives called Toolowly, a name well calculated to fix in white men's memory elevations TOO LOW to be called hills. They were quite high enough, however, along a line of route for such heavy drays as those following us. There appeared much novelty in the trees on this side the Darling. The ANGOPHORA LANCEOLATA was every where; Callitris grew about the base of the hills, and some very singular acacias, a long-leaved grey kind of wattle, the ACACIA STENOPHYLLA of Cunningham. On one tree large pods hung in such profusion as to bend the branches to the ground. From this abundance I supposed it was not good to be eaten; nevertheless, I found in another place many of the same pods roasted at some fires of the natives, and learnt from our guides that they eat the pea. The pod somewhat resembled that of the Cachou nut of the Brazils,--Munumula is the native name. The grasses comprised a great variety, and amongst the plants a beautiful little BRUNONIA, not more than four inches high, with smaller flower-heads than those of BR. SERICEA, quite simple or scarcely at all lobed, and a hairy indusium.[\*] The tree, still a nondescript, although the fruit had been gathered by me in 1831, and then sent to Mr. Brown, was also here; and I saw one or two trees of a species of CAPPARIS. Mr. Stephenson found a great variety of new insects also.

[\* B. SIMPLEX (Lindl. MSS.); pumila, foliis undique scapisque longitudinaliter sericeis, villis appressis, capitulis subsimplicibus, bracteis majoribus oblongis, indusio extus piloso.]

Our guides brought us at length to some waterholes, amongst some verdant grass on a plain, where no stranger would have looked for water; and here we encamped fifteen good miles from the Barwan. The ponds were called "Carawy," and were vitally important to us, enabling us to pass on towards the Narran, which was still, as we had been informed, twenty-five miles off. As we approached these springs, I saw some natives running off, and I sent one of the guides after them to say we should do them no harm, and beg them to stop, but he could not overtake them. The undulations crossed by us this day seemed to extend east and west in their elongations, and were probably parallel to the general course of the main channel of drainage. The same felspathic rock seen in other parts of this great basin, seems the basis of the clay, although the fragments imbedded are very hard. The earth is reddish, and much resembles in this respect the matrix of the conglomerate. Near these springs we found a new HELICHRYSUM.[\*] Thermometer at sunrise, 61 deg.; at noon, 100 deg.; at 4 P. M., 102 deg.; at 9, 79 deg.;--with wet bulb, 65 deg..

[\* HELICHRYSUM RAMOSISSIMUM (Hook. MSS.); suffruticosum valde ramosum arachnoideo-tomentosum, foliis lineari-spathulatis subflaccidis acutis,

capitulis in racemis terminalibus parvis globosis flavis, involucri squamis lineari-subulatis undulatis fimbriato-ciliatis.]

6TH MARCH.--The drays not having come up, in consequence of the excessive length of yesterday's journey, and very hot weather--(16 1/2 miles by latitude alone)--we were obliged to remain inactive here on a beautiful cool morning. I found near the ponds, several huts made of fresh branches of trees and the remains of fires, doubtless the deserted home of the fugitives of yesterday. At these fires I found the roasted pods of the acacia already mentioned (Munumula). The water was surrounded by fresh herbage, and such was the simple fare of those aborigines, such the home whence they fled. As I looked at it in the presence of my sable guides, I could not but reflect that the white man's cattle would soon trample these holes into a quagmire of mud, and destroy the surrounding verdure and pleasant freshness for ever. I feared that my good-natured but acute guides thought as much, and I blushed inwardly [\*] for our pallid race.

[\* The author of Waverley maintains that one may LAUGH inwardly--conscience may, I suppose, make us also blush inwardly sometimes.]

All day we sat still in anxious suspense about the non-arrival of our drays--the ground having been so good. With a country so interesting before us, this delay was doubly irksome, and as the cattle could only be watered by coming forward, why they did not come was the question; and this was not solved until evening, when a messenger came forward to ask if they might come, and to inform me that they were nearly exhausted. The fatal alternative of endeavouring to make them work in the morning, after passing a night without water, had been adopted, and as, on the day before, they had been worked until dusk in expectation of reaching my camp, they could not draw on the morning after; I instantly directed them to be brought forward; but the consequence of this derangement was the death of one, and much injury to many others. This contretemps arose wholly from the guides not having been understood at the Barwan as to the real distance, and this we had calculated too surely upon. Latitude 29 deg. 52' 26" south. Thermometer at sunrise, 68 deg.; at noon, 96 deg.; at 4 P. M., 102 deg.; at 9, 83 deg.;--with wet bulb, 68 deg..

7TH MARCH, 1846.--The bullocks having been sent back after they had been watered last evening, the drays came up about 9 A. M. I left them in Mr. Kennedy's charge, and proceeded with the light carts followed by all the bullocks yoked up. They had trodden into mud the little water that had been left at that camp, and could not live much longer without more. The guides assured us the Narran was not far off, although we had understood when at the Barwan that the distance was twenty-five miles from these springs. We passed over very good ground, and found the country to improve as we advanced. We were conducted through the most open parts of scrubs by our guides, who were made to comprehend clearly how desirable that was for our "wheelbarrows;" and after travelling about seven miles, they pointed to a line of trees as the "Narran," beyond an extensive open country, which had a singular appearance from being higher than that we were upon. We crossed one or two slight elevations wholly composed of compact felspar in blocks--forming ridges resembling an outcrop of strata, whereof the strike always pointed N. W. and S. E. Various curious new plants and fruits appeared; amongst others a solanum, the berry of which was a very pleasant-tasted fruit. The plant was a runner and spread over several yards from one root. There was also a fruit shaped like an elongated egg; it appeared to be some Asclepiad, and was called by the natives "Doobah." They ate it, seeds and all, but said it was best roasted. As we approached the elevated country between us and the distant

line of trees, we perceived that the vast level was covered with POLYGONUM JUNCEUM in a verdant state. The colour was dark green, such as I had never seen elsewhere in this "leafless bramble," as Sturt called it, which looks ever quite dry and withered along the margins of the Darling. We had good reason to love and admire its verdure now, when we found amongst it pure water in great abundance, into which all our native companions immediately plunged, and rolled about like porpoises. This, they said, was the "Narran," but to the vast swampy plain they gave the name of Keegur, a name quite useless for white men's memories or maps. They seemed to say it was wholly an emanation from the Narran, and pointed to the nearest part of the trees beyond, saying the river Narran was there. I still endeavoured to proceed, as they wished, towards the nearest trees beyond, until a winding narrow pond of water, in very soft mud, precluded all hopes of crossing with our drays, without some sort of bridge; I therefore immediately counter-marched the party with me, now far advanced in that sea of dark green polygonum, and conducted it into a position on open stony ground to the westward of our route, with the intention to await there the arrival of the drays, and to prepare materials for a bridge to be laid across the muddy pond, as I had seen a small clump of pines (Callitris) at no great distance back. My guides did not encourage a hope I entertained, that this swamp might be turned by the westward, in which direction the open country extended to the horizon. The man who travels with bullocks must expect to be impeded by wet ground, as well as by the scarcity of water, in many situations where horses could pass without difficulty. I directed the bullocks, that had been driven forward with me, to be allowed to graze beside the water until sunset, and then to be taken slowly back by moonlight to Mr. Kennedy. Five had dropped down on the way, and had not come forward to the water. Those sent back were also ordered to be allowed to feed all the next day at Mr. Kennedy's camp, and only to start with the drays there next evening, to come on by moonlight, thus avoiding the intense heat, so oppressive under extreme thirst. The thermometer during the day, rose to 103 deg. in the shade. Latitude of the camp on Narran swamp, 29 deg. 45' 51" S. Thermometer at sunrise, 47 deg.; at noon, 97 deg.; at 4 P. M., 97 deg.; at 9, 69 deg.; ditto with wet bulb, 57 deg.. The height of this camp above the sea, the average of five registered observations, is 442 feet.

8TH MARCH.--The view northward from our present camp was most extensive. Far in the northeast a yellow slope presented the unusual appearance there, of a cultivated country. It was doubtless ripe grass, yet still the earth there had not even been imprinted with any hoof. Between that slope and our camp, lay the element, in abundance, which had been so scarce on the other side of the Darling. To the northward, at no great distance, was the river, where, as our guides informed us, we should no longer be ill off for water in pursuing our journey along its banks. I set the carpenter to cut sleepers and slabbing to enable us to bridge the muddy creek, for I had examined it early in the morning, and had crossed it with my horse; although I found several watercourses almost as soft, beyond. The natives maintained that the water in this extensive swamp came neither from the east nor west, but from the river directly before us, which came from the northward. Just behind our camp, to the southward, was a gentle elevation, almost a hill, consisting of the usual rock, felspar; and it seemed to me that this stony ground alone impeded the further progress of the water towards the Barwan. The ridge trended north-west, as most others did in this extensive basin; and this direction being nearly parallel to that of the coast ranges further northward, seemed to afford additional reason for expecting to find anticlinal and synclinal lines, and, consequently, rivers, much in the same direction. D'Urban's group, distant 150 miles lower down the

Darling, consisted of a quartzose rock, exactly similar to this, exhibiting a tendency, like it, to break into irregular polygons, some of the faces being curved. This rock is most extensively distributed in the interior of New South Wales. It was not until the evening of this day that the approach of the drays was announced, and then prematurely, the teams only having been brought forward to the water without them. So weak were the unfortunate animals, that not even by night, nor by doubling the numbers, could they be made to draw the drays forward, for the short distance of eight miles; a distance which we had been given to understand was so much greater. Forward, all was most promising, and it may be imagined how bitterly I regretted the alteration of my original plan of equipment, which had reference to horses and light carts alone. A new species of ANTHISTIRIA occurred here, perfectly distinct from the kangaroo grass of the colony, very like APLUDA MUTICA, and remarkable for the smooth shining appearance of the thin involucreal leaves.[\*] The TRICHINIUM ALOPECUROIDEUM, in great abundance, was conspicuous, with its long silky ears of green flowers. On the stony ground occurred a very curious new woolly KOCHIA [\*\*], also a species of CYPERUS; the TRICHINIUM LANATUM in great perfection; a grass resembling the close reed (CALAMAGROSTIS of England), and which proved to be the little-known TRIRAPHIS MOLLIS. On the margin of the morass the DACTYLOCTENIUM RADULANS, spreading over the interstices, reminded the traveller of the grasses of Egypt; and, in stony ground near the morass, we observed the JUSTICIA MEDIA of Brown. Thermometer at sunrise, 66 deg.; at noon, 98 deg.; at 4 P. M. 102 deg.; at 9, 81 deg.; ditto with wet bulb, 74 deg..

[\* A. MEMBRANACEA (Lindl. MSS); involucreis carinatis margine membranaceis foliis vaginisque glaberrimis, floribus verticillatis pedicellatis (masculis?), glumis omnibus scabris, arista glaberrima gluma 3plo longiore.]

[\*\* K. LANOSA (Lindl. MSS); ramis strictis foliisque linearibus acutis cinereis tomentosis, fructibus lanatis, calycis laciniis elongatis.]

9TH MARCH.--My native guides, tired of the delay, were anxious to return, and as the assistance they could afford me was likely to be extremely useful, and the arrival of the drays was most uncertain, I went forward this morning with one of them, two men, and Youranigh, our interpreter, all mounted. Amongst the trees, beyond the swamp, fine reaches of water appeared in a river channel, apparently continuous to the northward, but which, in the other direction, or towards the swamp, abruptly terminated like a cul-de-sac. On my asking the natives where it went to, they pointed to the various narrow water courses and the swamp as the final depositories of the water. Admirable distribution of the contents of a river in a country where water is so scarce, and the climate so hot and dry! We proceeded along the margin of the "Narran," which led us nearly due north, until we forded it, at the desire of our guides, on a good gravelly bottom, the water reaching to our saddle-flaps. Crossing a slight elevation where the soil was gravelly, and in which grew the shrubs of the ordinary scrubs with several interesting novelties, we again came upon an angle of the Narran, and continued along its banks for about thirty miles, until near sunset, when we tethered our horses, and lay down for the night. The Narran was full of water every where, and with this abundance of water there was also plenty of most excellent grass. The PANICUM LOEVINODE of Dr. Lindley seemed to predominate, a grass whereof the seed ("Cooly") is made by the natives into a kind of paste or bread. Dry heaps of this grass, that had been pulled expressly for the purpose of gathering the seed, lay along our path for many miles. I counted nine miles along the river, in which we rode through this grass

only, reaching to our saddle-girths, and the same grass seemed to grow back from the river, at least as far as the eye could reach through a very open forest. I had never seen such rich natural pasturage in any other part of New South Wales. Still it was what supplied the bread of the natives; and these children of the soil were doing every thing in their power to assist me, whose wheel tracks would probably bring the white man's cattle into it. We had followed well-beaten paths of natives during the whole of this day's ride, and most anxious were my guides and I to see them; but they avoided us. Our guide was of that country, and not at all unwilling or timid; but evidently very desirous to introduce us to the inhabitants, and procure amongst them other guides to lead us further. The night was very hot, and flies and mosquitos did their utmost to prevent us from sleeping. Thermometer at sunrise, 75 deg.; at noon, 99 deg.; at 4 P. M., 105 deg.; at 9, 83 deg.; ditto with wet bulb, 75 deg..

10TH MARCH.--Anxious for an interview with some of the natives, I continued the pursuit of the Narran's course about five miles higher, but with no better success. I then turned, after obtaining from our guide, through Youranigh, what information could be gathered thus, as to the river's further course, the best bank for the passage of our drays, etc. We were still, he said, a long way from the "Culgoa." There was no perceptible change in the aspect of the "Narran" as far as we had examined it, except that where we turned, there were flood-marks, and the dead logs and river wreck, deposited on the upper side of trees and banks, showing a current and high floods. The last of these, our guide said, had occurred about five moons before. In riding back to the camp we kept the eastern bank, that the track might be available for our drays. This ride along a river where we could, when we pleased, either water our horses, or take a drink ourselves, was quite new and delightful to us, under a temperature of 105 deg. in the shade. Our guide, aged apparently about fifty, walked frequently into the river, while in a state of perspiration; dipped quite under water, or drank a little with his lip on the level of its surface, and then walked on again. He was at last very tired, however, and pointed to the large muscles of the RECTUS FEMORIS as if they pained him. We found at the camp, on our return, five of the drays that had come up, the other three being still behind, and requiring double teams of exhausted cattle to bring them forward. In the vicinity of our camp we found the TRICHINIUM ALOPECUROIDEUM, with heads of flowers nearly five inches long; an eucalyptus near E. PULVERULENTA, but having more slender peduncles; a sort of Iron-bark. We found also a tall glaucous new HALORAGIS [\*], and a curious new shaggy KOCHIA was intermingled with the grass.[\*\*] Thermometer at sunrise, 77 deg.; at noon, 102 deg.; at 4, 107 deg.; at 9, 76 deg.;--with wet bulb, 71 deg..

[\* H. GLAUCA (Lindl. MSS.); annua, stricta, glaberrima, glauca, foliis oppositis lineari-oblongis obtusis petiolatis grosse serratis, racemis apice aphyllis, fructu globoso tuberculato laevi.]

[\*\* K. VILLOSA (Lindl. MSS.); ramis erectis foliisque linearibus villosissimis, fructibus glabris.]

11TH MARCH.--All the drays came in early. I gave to the two natives, the tomahawks, tobacco, and pipes, as promised; also a note to the stockman on the Barwan, who had provided me with them, saying that they had been very useful. I this morning examined the country to the westward of the swamp, and found a narrow place at which we could pass, and so avoid much soft heavy ground. The ramifications of the watery Narran penetrated into the hollows of the stony ridge, presenting there little hollows full of rich verdure and pools of water, a sight so unwonted amongst rocks



characteristic of D'Urban's arid group. In one little hollow, to the westward of our camp, it seemed possible for two men with a pickaxe and shovel to have continued it through, and so to have opened a new channel for the passage of the waters of the Narran swamp, into the dry country between it and the Barwan. Thermometer at sunrise, 55 deg.; at noon, 105 deg.; at 4 P. M., 102 deg.; at 9, 75 deg.;--with wet bulb, 59 deg..

12TH MARCH.--I found it necessary to sit still here and refresh the jaded bullocks; thus days and months passed away, in which with horses I might have continued the journey. The very extensive country before us, which appeared to absorb these waters, was quite clear of timber, and irrigated by little canals winding amongst POLYGONUM JUNCEUM. This open country appeared to extend north-eastward about eight miles, thence to turn eastward, as if these waters found some outlet that way to the Barwan. I regretted that this swamp led too far out of our way, to admit of our tracing its limits to the eastward.

This day I received letters from Commissioner Mitchell, in which he strongly recommended to my attention the rivers Biree, Bokhara, and Narran, as waters emanating from, and leading to, the Balonne, a river which he said might supply our party with water, in this very dry season, almost to the tropic. I was able to inform him in reply, that I was already on the Narran, and that I had already availed myself of his account of the rivers formerly sent me, on which I must have been obliged to depend, even if the party had passed by Fort Bourke.

This evening, by moonlight, I conducted a dray, carrying two platforms, to the place where the narrow channel, feeding the swamp, could be passed without our meeting beyond any other impediment to the drays. The sleepers used for this purpose were made of pine (CALLITRIS PYRAMIDALIS), found half a mile back from our camp. They were fourteen feet long, two feet wide, being composed of cross-pieces, two feet long, fixed at each end between two sleepers, so that they somewhat resembled a wooden railway. These, when laid at the proper distance apart to carry both wheels, were bedded on the soft earth, and the interval between was filled to a level with them, by layers of polygonum and long grass, alternate with earth, forming together a mass of sufficient resistance to support the feet of the draught oxen. The whole formed a compact bridge or gangway. Thermometer at sunrise, 51 deg.; at noon, 95 deg.; at 4 P. M., 107 deg.; at 9, 70 deg.;--with wet bulb, 61 deg..

13TH MARCH.--The party once more moved onward, and the drays trundled across the swampy arm by means of our bridge, which, even in the event of an accession of water there, might have proved serviceable on our return. Three miles beyond it we had to ford the Narran, passing over a gravelly bottom to the eastern bank, and encamping there. The drays were slow in arriving at this ford and camp, as the ground was soft and hollow, but by sunset all had crossed, and our camp established on the Narran. Thermometer at sunrise, 71 deg.; at noon, 100 deg.; at 4 P. M., 100 deg.; at 9, 71 deg.;--with wet bulb, 65 deg.. The height of this camp above the sea, according to ten registered observations, is 487 feet.

14TH MARCH.--We now had before us water and grass in abundance, to a distance as unlimited and indefinite, as our hopes of discovery. I intended to set out early each morning, and travel only four or five miles, that the jaded animals, exhausted by want of water and hard work, might have time to feed and refresh. One old cause of delay, however, again occurred to impede us,--three bullocks were reported missing. Now it was nearly full moon, and two men had been on watch all night. It

really seemed that delay and disappointment must attend all who depend on bullocks and bullock-drivers. The stray cattle were not brought up until 9 A. M., when we proceeded, and encamped on an angle of the Narran, after travelling about five miles. In the scrubs passed through, we found the fragrant *JASMINUM LINEARE* in fruit, the flowers being nearly past; a bulb which proved to be the *ANTHERICUM BULBOSUM* of Brown; a shrub ten feet high, in fruit, the *CANTHIUM OLEIFOLIUM* of Sir William Hooker; a fine new *CHENOPODIUM*, with long naked spikes of woolly yellow flowers [\*]; and a hoary variety of *ACACIA LEPTOCLADA*, or perhaps a distinct species, having a good deal of the aspect of *A. DEALBATA*, but the leaves and glands nearer those of *A. LEPTOCLADA*, according to Mr. Bentham. Thermometer at sunrise, 70 deg.; at noon, 103 deg.; at 4 P. M., 102 deg.; at 9, 81 deg.;--with wet bulb, 75 deg..

[\* *C. AURICOMUM* (Lindl. MSS.); totum glaucum farinosum, caule stricto, foliis petiolatis oblongis subhastatis lobisque posticis obtusis supremis lanceolatis, spicis compositis nudis aphyllis glomeratis multifloris tomentosis.]

15TH MARCH.--The sand amongst the scrubs was so soft and yielding, that the draught animals could not draw the drays through it without great difficulty; indeed, it was only possible by double-backing, as the drivers termed their practice of alternately assisting one another, a process to which all had had recourse with one exception. It was not until 1 A. M. of this morning, therefore, that the last dray was brought to the camp. Another bullock died on the way, and thus I felt, when the field of discovery lay open before me, that my means of conveyance were unsuited to the task. Overloading at Boree, unskilful driving, excessive heat, and want of water, had contributed to render the bullocks unserviceable, and I already contemplated the organization of a lighter party and fewer men, with which I might go forward at a better rate, leaving the heavy articles of equipment and tired cattle in a depot, on some good grassy spot. The latitude of this camp was 29 deg. 38' 21" south. Thermometer at sunrise, 73 deg.; at noon, 84 deg.; at 4 P. M., 86 deg.; at 9, 65 deg.;--with wet bulb, 60 deg..

16TH MARCH.--I proceeded six miles, and chose a camp beside a bend of the Narran, full of deep water, and in the midst of most luxuriant grass. The drays arrived by 11 A. M. in such good order, that I was induced to try whether, by early starting, good feeding, and short journeys, the party could not be got forward to the Balonne, where I could leave the whole in one depot, to rest and refresh, while I took my intended ride forward. Latitude, 29 deg. 34' 11" S. Thermometer at sunrise, 43 deg.; at noon, 86 deg.; at 4 P. M., 87 deg.; at 9, 62 deg.;--with wet bulb, 55 deg..

17TH MARCH.--I proceeded seven miles, and the drays came forward as well as they did yesterday, so that I again entertained hopes of the progress of the united party, which was very desirable, as these plains were evidently sometimes so saturated with water as to be rendered wholly impassable for wheel-carriages or even horses. Latitude, 29 deg. 29' 11" S. Thermometer at sunrise, 47 deg.; at noon, 87 deg.; at 4 P. M., 91 deg.; at 9, 62 deg.;--with wet bulb, 52 deg..

18TH MARCH.--Again we made out a short journey over rather soft ground; all the drays coming in, although slowly. I rode to a gently rising ground, a great novelty, which appeared bearing E. N. E. from our camp, at a distance of 2 1/2 miles. I found it consisted of gravel of the usual conglomerate decomposed--of rounded fragments of about a cubic inch in bulk. The grass was good there, and I perceived that the same gravelly

ridge extended back from the river in a north and south direction. Graceful groups of trees grew about this stony ground, which looked, upon the whole, better than the red sandy soil of the scrubs and callitris forest. This seemed the dividing ridge between the Narran and Barwan. From this elevation, I saw that the course of the former ran still in a good direction for us, to a great distance northward. On that stony ground I found a new *PITTOSPORUM* five feet high, with long narrow leaves, in the way of *P. ROEANUM* and *ANGUSTIFOLIUM*, but distinct from both in the form of its fruit.[\*] Latitude of camp 29 deg. 25' 21". Thermometer at sunrise, 53 deg.; at noon, 90 deg.; at 4 P. M., 96 deg.; at 9, 69 deg.;--with wet bulb, 61 deg..

[\* *P. SALICINUM* (Lindl. MS.); foliis lineari-lanceolatis coriaccis acutissimis aveniis, pedunculis unifloris aggregatis axillaribus, fructibus subglobosis vix compressis.]

19TH MARCH.--Pursuing the Narran, keeping its eastern or left bank, our course this day was more to the northward. I encamped after travelling six miles, not only because the ground was soft and heavy for the drays, but because I saw that the Narran turned much to the eastward, and I contemplated the passage across it, intending to look for it again, by travelling northward. Accordingly, as soon as our ground had been marked out, I crossed to reconnoitre the country in that direction. I found a fine, open, grassy country, but no signs of the river at the end of five miles, nor even until I had ridden as far eastward. There, recrossing it, I returned to the camp through some fine open forest country. Latitude observed, 29 deg. 21' 51", S. Thermometer at sunrise, 57 deg.; at 4 P. M., 96 deg.; at 9, 71 deg.;--with wet bulb, 62 deg..

20TH MARCH.--Retracing my homeward tracks of yesterday, we proceeded in a nearly E. N. E. direction, along much firmer ground than we had recently traversed. The great eastern bend of the river was found amongst much excellent grass and amidst much fine timber. A species of *Anthistiria* appeared here, which seemed different from the ordinary sort, although this was no stranger to me, when exploring the waterless plains westward of the Lachlan, where it looked as if stunted for want of moisture. Here, however, this variety presented the same knotty head, where other grasses grew luxuriantly. After getting round the extreme eastern turn of the Narran we encamped. Near the spot large rocks appeared in the bed, as if the river was passing through the stock of the gravelly ridge I had visited on the 18th. The rock consisted of that found about the basin of the Darling; a quartzose conglomerate with much felspar, and having pebbles of quartz imbedded. The large fragments of the conglomerate in the river bed were angular, and not at all rounded at the edges. Here the poor natives had been very industrious, as was evident from heaps of the grass *PANICUM LOEVINODE*, and of the same redstalked coral-like plant, also mentioned as having been observed in similar heaps, on the banks of the Darling, during my journey of 1835 (vol. i. p. 238). I now ascertained that the seed of the latter is also collected by the natives and made into a paste. This seed was black and small, resembling fine gunpowder when shaken out. Nevertheless it was sweet and pleasant to the taste, possessing a nutty flavour.

The human inhabitants were few, and as invisible as other animals in these forests--the prints of whose feet were also plain in the soft smooth surface. As faithless as the snows of the North [\*], this soil bore the impressions of all animals obliged to go to the water, and amongst them those of the naked feet of men, women, and children, with the prints likewise of other *BIPEDS*, such as emus and kangaroos, and also

those of the native dog. Here still was our own race amongst other animals all new and strange to Europeans. The prints of the foot of man alone were familiar to us. But here he was living in common with other animals, simply on the bounty of nature; artless, and apparently as much afraid of us, and as shy, as other animals of the forest. It seemed strange, that in a climate the most resembling that of Milton's paradise, the circumstances of man's existence should be the most degrading. Latitude of our camp, 29 deg. 19' 26" S. Thermometer, at sunrise, 55 deg.; at noon, 100 deg.; at 4 P. M., 101 deg.; at 9, 70 deg.;--with wet bulb, 65 deg.. The mean elevation above the sea of our camps thus far on the Narran, seven in number, was 477 feet; the bed of the river being about 15 feet lower.

[\* "And hungry Maukin's ta'en her way To kailyards green, While faithless snaws ilk step betray Whar she has been." BURNS.]

21ST MARCH.--Proceeded as usual through fine grass, the river coming favourably round towards the north. At about two miles I found some traces of horses, and I looked at the river bank for Commissioner Mitchell's initials, supposing this might be "Congo," where he had forded the Narran. But we had not reached the latitude of Congo according to his map. Nevertheless we found here such an excellent dry ford, with gently sloping banks to a stony bottom, that the two circumstances induced me to cross the Narran with the party. I travelled west-ward, until meeting with a dense scrub, I turned towards the friendly Narran, where we encamped in latitude 29 deg. 15' 31" S. Thermometer, at sunrise, 56 deg.; at noon, 97 deg.; at 4 P. M., 101 deg.; at 9, 72 deg.; ditto with wet bulb, 66 deg..

22D MARCH.--Gave the party a day's rest, prayers being read by the surgeon, as was usual whenever circumstances admitted of our halting on Sunday. The bed of the Narran presented in several places the denuded rock, which seems the basis of all the soil and gravel of the country. At one place irregular concretions of milk-white quartz, cemented by a ferruginous basis, was predominant; at another, the rough surface of compact felspar weathering white presented merely the cavities in which large rounded pebbles had been imbedded, until the partial decomposition of the felspar, under the river floods, had exposed them once more to the action of water. The force of those waters, however, had not been sufficient to cut a channel through very soft rocks extending right across their course--a circumstance rather characteristic, perhaps, of a river like the Narran, watering a nearly level country, and terminating in a swamp. Thermometer at sunrise, 53 deg.; at noon, 95 deg.; at 4 P. M., 98 deg.; at 9, 72 deg.;--with wet bulb, 66 deg.. Height above the sea, 515 feet, from eight observations.

23RD MARCH.--All hands were bent on an early start this morning, and, soon after seven, the party moved off. We crossed much grassy land, almost approaching to the character of scrub as to bushes; but we pursued a tolerably straight course to the N.W., until we again made the Narran at 8 1/2 miles. Various new plants attracted my attention this day, especially a beautiful Loranthus on the rosewood Acacia, and a small bush bearing a green pod resembling a small capsicum in shape. Among the sedges by the river we found the KYLLINGA MONOCEPHALA; and, on the rich black clayed soil near it, a species of bindweed out of flower, with large sagittate leaves: in the scrubs back from the river, grew a small bush, about four feet high, which has been considered either a variety of Brown's SANTALUM OBLONGATUM, or a new species distinguished by its narrow sharp-pointed leaves. The LORANTHUS LINEARI. FOLIUS was growing on the rosewood Acacia, and the branches of Eucalypti were inhabited by the parasitical ORANGE LORANTH.[\*] Lat., 29 deg. 10' 6" S. Therm. at sunrise,

51 deg.; at noon, 95 deg.; at 4 P. M., 99 deg.; at 9, 70 deg.;--wet bulb, 63 deg..

[\* *L. AURANTIACUS* (All. Cunn. MS.); ramis elongatis laxis gracilibus, foliis oppositis longe petiolatis oblongis obtusis lanceolatisve acuminatis glabris 3-5-nerviis tenui-marginatis, paniculis folio brevioribus ditrichotomis, floribus erectis, calycibus subcylindraces superne latioribus truncatis, petalis linearibus 6, stylo infra apicem geniculato, stigmatate dilatato truncato.--W. J. H.]

24TH MARCH.--We set off still earlier this morning. I hoped to reach the Bokhara, on the West, a river shown on the map sent me by the Commissioner of the district, but after travelling about seven miles to the northward, I saw rising ground before me, which induced me to turn towards our own friendly river the Narran; but it proved to be very far from us, while in my search for it, to my surprise, I found it necessary to descend several considerable declivities, covered with waterworn pebbles. At length a slight opening in the dense scrubs through which we had forced our way, afforded a view towards the south-east of the low range we were upon, which trended very continuously to the north-west, covered thickly with the "Malga" tree of the natives; to the traveller the most formidable of scrubs. After several other descents, we reached the Narran, but only at half-past three in the afternoon, when we had travelled nearly twenty miles. How the teams were to accomplish this, it was painful to consider. I sent back a messenger to desire that the cattle should be detached and brought forward to the water; content to lose one day, if that indeed would suffice to recover the jaded animals. Casuarinae now grew amongst the river trees, and reminded me of the banks of the Karaula in 1831. We had also noticed another novelty in the woods we passed through this day; a small clump of trees of iron-bark with a different kind of leaf from that of the tree known by that name in the colony. On the higher stony land, a bush was common, and proved to be a broad-leaved variety of *EREMOPHILA MITCHELLII*, if not a distinct species. We there met with a new species of the rare and little-known genus, *GEIJERA*; forming a strong-scented shrub, about ten feet high, and having long, narrow, drooping leaves. Its fruit had a weak, peppery taste.[\*] The rare *ENCHYLOENA TOMENTOSA* formed a shrub a foot high, loaded with yellow berries: all the specimens were digynous, in which it differed from the description of Brown. The *CAPPARIS LASIANTHA* was observed amongst the climbing shrubs still in fruit; and a beautiful new *LORANTH*, with red flowers tipped with green, was parasitical on trees.[\*\*] On the bank of the Narran we found the *AMARANTHUS UNDULATUS* of Brown.

[\* *G. PARVIFLORA* (Lindl. MS.); ramis erectis, foliis longis linearibus pendulis in petiolum sensim angustatis 4 unc. longis.]

[\*\* *Loranthus LINEARIFOLIUS* (Hook. MS.); foliis lineari-filiformibus acutis carnosis glabris teretibus, pedunculis axillaribus brevibus bifloris, calycibus cylindraces truncatis contractis, petalis 6 linearibus supra basin coalitis.]

The cattle arrived in the dark, and were watered in the muddy-banked Narran, by the light of burning boughs; then set to feed. Lat. 29 deg. 6' 33" S.; therm. at sunrise, 48 deg.; at 4 P. M., 101 deg.; at 9, 74 deg.; ditto with wet bulb, 62 deg..

25TH MARCH.--The cattle had now to return to bring forward the drays. Meanwhile I took a ride up the river, in order to ensure a moderate journey for these exhausted animals. Proceeding along the right bank, I found gravelly slopes almost closing upon the river. The direction of its

course for four miles, was nearly southward. Then I saw gravelly ridges on the left, and a line of wood before me, while the river evidently came from the East round the margin of an extensive plain. I continued northward; found a rosewood scrub: then saw the Malga tree; passed through scrubs thereof; found myself on stony ridges, whence descending in a N. E. direction, again passed through rosewood scrubs, and only reached the river after riding 21/2 miles in that direction. I saw a continuous ridge, bare and distant, beyond what I considered the river bed, and a similar ridge to the westward. I crossed a native camp where the newly deserted fires still smoked. We saw one man at a distance, who did not mind us much; I could not have obtained any information from him, and therefore did not seek a parley. Crossing the Narran there, by a beaten track, beside a native fishing fence, I returned to the camp, on the bearing of S. S. W., and found a grassy plain the whole way back, until within sight of the tents, and a good rocky ford for the passage of the party next day. On the stony ridge I found a remarkable shrub, a species of *Sida* (*ABUTILON*), allied to *S. GRAVEOLENS*, Roxb., but distinct. The teams brought the drays in, about 5 P. M.; one animal of all being missing. Therm. at sunrise, 72 deg.; at noon, 89 deg.; at 4 P. M., 91 deg.; at 9, 60 deg.;--with wet bulb, 53 deg..

26TH MARCH.--Early this morning, William Baldock was sent back in search of the stray bullock, while the party crossed the Narran, and proceeded along my horse's track of yesterday. Baldock over took the party, having found the bullock on the river, four miles below our late encampment. The natives seen yesterday had disappeared, having previously set fire to the grass. We proceeded two miles beyond their fires, and encamped on the river bank in lat. 29 deg. 1' 57" S.

A small path along the river margin; marks on trees, where hollow portions of bark had been taken off; some ancient, some recent, huts of withered boughs and dry grass; freshwater muscle shells, beside the ashes of small fires; and, in some places, a small heap of pulled grass (*PANICUM LOEVINODE*), or of the coral plant; such were the slight but constant indications of the existence of man on the Narran. Such was the only home of our fellow-beings in these parts, and from it they retired on our approach. Ducks, which were rather numerous, and emus (coming to drink), probably constituted their chief food, as nets to ensnare both these kinds of birds, were found about their huts. Youranigh brought me one of their chisels, a small bit of iron fastened to a stick with gum, and tied with a piece of striped shirting. I directed him to place it carefully where he had found it. Thermometer at sunrise, 47 deg.; at noon, 90 deg.; at 4 P. M., 95 deg.; at 9, 69 deg.;--with wet bulb, 60 deg.. The mean height above the sea of the camps of 23d, 24th, and 26th March, was 461 feet.

27TH MARCH.--Pursuing, as well as we could, the course of the Narran, which came more from the northward, we again encamped on its banks after a journey of seven miles, without recognising any indication of the vicinity of the larger stream, which, according to our latitude, we ought by this to have reached. The current here had evidently been more decided, and dry trunks and other *FLUVIATILE DEBRIS* lay more in masses against whatever had lain in the water's way. Excellent grass clothed the plains over which we had passed during the two last days, and grew abundantly also about the banks of the river; but, in general, a belt of the *POLYGONUM JUNCEUM*, about 400 or 500 yards wide, grew between the immediate margin and the grassy plains. This shrub was found an infallible guide to the vicinity of the river, when, as sometimes happened, other lines of trees, resembling those on its banks, had led me to a distance from it. The day was cool and rather cloudy, a great

novelty to us; for every day had been clear and unclouded, since long before we crossed the Barwan. Abundance of the stones of the quandang fruit (*FUSANUS ACUMINATUS*) lay at an old fire of the natives, and showed that we were not far from the northern limit of the great clay basin, as the quandang bush grows only upon the lowest slopes of hilly land. Lat. 28 deg. 55' 13" S. Thermometer at sunrise, 70 deg.; at noon, 90 deg.; at 4 P. M., 89; at 9, 70 deg.;--with wet bulb, 61 deg..

28TH MARCH.--At 2 A. M., loud thunder was heard in the south-west, where a dark cloud arose and passed round to the northward; a few drops of rain fell. The morning was otherwise clear, with a cooling breeze from S. W. Thermometer at sunrise, 56 deg.. We proceeded, travelling chiefly amongst very luxuriant grass. The river now disappeared as far to the westward of my northerly course on this left bank, as it had left me when on the other bank by unexpected turns to the eastward. I came upon its banks after travelling about eight miles. At the spot where I wished to place the camp I perceived a native, and with Youranigh's assistance, managed to prevent him from running away. He spoke only "Jerwoolleroy," a dialect which my native did not understand at all well. He told us, however, that this was still the Narran, and pointed N. W. to the Balonne. Upon the whole we gathered from him that neither that river nor the Bokhara was far from us. I endeavoured to convince him, by Youranigh's assurances, and our own civility to him, that we meant no harm to any natives, and were only passing through the country. He did not seem afraid, although he had never, until then, seen white men. We encamped near him. The river channel was very narrow, and contained but little water hereabouts. I understood from the native (through Youranigh) that the river here spread into various channels, and that "BARRO" was the name of a river beyond the Culg, which falls into it from the northward; "TOORINGORRA," the lagoon on which we encamped after meeting natives on the 31st March. Near this camp we found a *PHYLLANTHUS*, scarcely different from *P. SIMPLEX*; a *SESBANIA* near *S. ACULEATA*, but with smaller flowers; and the *CHENOPODIUM AURICOMUM*, formed a white-leaved shrub, three or four feet high. Thermometer at sunrise, 56 deg.; at noon, 78 deg.; at 4 P. M., 82 deg.; at 9, 61 deg.;--with wet bulb, 56 deg..

29TH MARCH.--After prayers (the day being Sunday) I sent Mr. Kennedy forward to explore the course of the river, in order to ensure a more direct line for to-morrow's route. Mr. Kennedy was accompanied by one of the men armed, and also by Youranigh, all being mounted. He returned in about four hours, having found the river coming from the northward, and he also reported favourably of the ground. Thermometer at sunrise, 48 deg.; at 4 P. M., 81 deg.; at 9, 51 deg.;--with wet bulb, 47 deg..

30TH MARCH.--The night had been cool and pleasant, Thermometer at sunrise only 42 deg.. The cattle were yoked up early, and we travelled on over fine grassy plains, and with open gravelly ridges on our right. At length, about the sixth mile, these ridges closed on the river, where there was one hill almost clear of trees or bushes. I ascended it, but could only see plains to the westward, and a dense line of river-trees running north. We at length encamped on what appeared to be still the Narran, after a journey of about eight miles.

We this day passed a small group of trees of the yellow gum, a species of eucalyptus growing only on the poor sandy soil near Botany Bay, and other parts of the sea-coast near Sydney. Thermometer at sunrise, 42 deg.; at 4 P. M., 83 deg.; at 9, 61 deg.;--with wet bulb, 57 deg.. Mean height of the camps of the 27th, 28th, and 30th, above the level of the sea, 509 feet.

31ST MARCH.--The various lines of trees were now so much dispersed across the country, that to follow the line of the Narran, it was necessary to see its ponds and channel as frequently as possible. The course, if not of the river, at least of its ana-branches; and there were besides those, branches of another kind, namely, true branches coming from the main channel, as branches leave the stem of a tree, never to unite with it again. Some of those of this description, so closely resembled in every respect the Narran, that the difference was only to be distinguished by observing the marks of flood on trees, and ascertaining the direction of the current. We had crossed several such, and were rather in a "fix" with some lagoons, when I perceived several native children in one of them. I wished here to intercept some natives who might tell us where was the ford of "Congo," where white men had crossed the Balonne, or where was the river Balonne. The children fled, but two manly voices were heard immediately, and two natives came confidently up to Youranigh and then to me. The eldest seemed about fifty-five years of age; the other was a lad of about twenty. They spoke of "Congo," and the Balonne (BALONGO) as quite at hand, and undertook to conduct us to both. It was quite evident from their pronunciation, that "Baloon" was not the proper native name, but Bal, the termination they gave it of "GO," being an article they very often use, Bal-go being equivalent to THE Balonne; as in speaking of the Barwan, they say "Barwango." I had nearly completed the usual short journey when we fell in with these natives, but I was unwilling to lose the advantage of their assistance, and so travelled on under their guidance, full five miles further, before I fixed on a spot for the camp. This was by a splendid piece of water, named by them Tooningora, nearly on a level with the adjacent plains, and covered with ducks. We had passed other fine sheets of water guided by our native friends, and over a rich grassy country remarkably level and free from scrub. It was evidently changed by the vicinity of the larger river. I continued to follow our new friends beyond where I had directed the party to encamp, in expectation of seeing the marked tree at Congo, and the river Balonne. After going forward thus about four miles, we saw five gins running off at a great distance across some open plains, apparently near the river. The eldest of our guides ran after them, and I requested him to assure them that the white men would do no harm, and to tell them not to run away. At length he overtook them. Two appeared to carry unseemly loads across their backs, dangling under large opossum-skin cloaks, and it was evident that these were mummied bodies. I had heard of such a custom, but had not before seen it. I had then but a distant view of these females, as they resumed their flight, and continued it until they reached woods bounding the plain on the westward. The line of Yarra trees of the great Balonne river ran parallel to our march westward, and there also, according to my guides, was "Congo," the ford marked out by my son, and which spot I most anxiously desired to see and identify by his initials. Still my guides led westward towards the woods, and as we approached them, the shout or scream of little Dicky, a native child of the Bogan, follower of my camp, first drew my attention to a black phalanx within the forest, of natives presenting a front like a battalion. Youranigh my interpreter halted and remonstrated: our elder guide ran forward, and on his reaching that body, the sound of gruff voices that arose from it strongly reminded me of Milton's description of Satan's army:

"Their rising all at once was as the sound Of thunder heard remote."

Youranigh would not advance another step, although much pressed by the other native remaining with us to do so, but declared that "those fellows were murry coola," (very angry). We therefore retraced our footsteps to the camp, without having seen either the Balongo or Congo. Our guide soon



overtook us, accompanied by fourteen of the strange natives, who, all curiosity, passed the night at our camp, and they brought with them a lad named "Jemmy," who spoke a little English, and had visited many of our cattle-stations. He was very intelligible to Youranigh, who but very imperfectly understood the language of the rest. They seemed upon the whole a frank and inoffensive race. Their food consisted of the fish of the river, ducks, and the small indigenous melon, CUCUMIS PUBESCENS, which grew in such abundance, that the whole country seemed strewn with the fruit, then ripe, and of which the natives eat great quantities, and were very fond. It is about the size of a plum only, and in the journal of my first interior journey (in 1831), is mentioned as a cucumber we were afraid to eat. (Vol. I. p. 88.) Latitude of camp, 28 deg. 38' 47" S. Thermometer at sunrise, 42 deg.; at 4 P. M., 83 deg.; at 9, 61 deg.;--with wet bulb, 57 deg..

1ST APRIL.--The whole party moved off about the usual hour, 7 A. M., still under the guidance of our new acquaintance, towards the Balonne. On our way the natives were very careful to point out how muddy hollows could best be avoided by our drays. I saw seated at a distance, in due form, the tribe to which they belonged; and having directed the party to halt, went up to them. They were seated in three groups; old men on the right, painted red; old women in the centre, painted white; and other women and children on the left. The few strong men who appeared, formed a circle around me, and told me their names as they came up to me. I desired Youranigh to tell them that we were passing that way across the Balonne to a very far-off country, and did not wish to disturb them, etc. When all was said that could be said, and I was about to return, one of the chiefs, "Yarree," said "good night," words which he must have learnt at some cattle station. Although it was only morning, I returned the compliment with all possible gravity, and took my leave. Soon after, we arrived on the bank of the Balonne, as fine a looking river as I have seen in the colony, excepting only the Murray. There was a slight current, and the waters lay in broad reaches, under banks less elevated above the bed than those of the Darling. In breadth the channel surpassed that of the last named river in any part, I believe, of its course.

We encamped near a shallow place, which the natives at first said was "Congo," but where we found no marks on the trees. The curiosity of the natives having been gratified, they disappeared; but I must mention that, having missed the elder of the two men who had guided us here since the first evening, I learnt, on inquiring what had become of him, that he had gone back to his little boys, whom he had left at the water-holes where he first met us, six miles back, and for whom he had apparently gathered his little net of melons. Nothing could have been finer than this man's conduct. He had at once come on with us to guide us where we wanted to go; took great pains to make us known to his own tribe, and, I believe, to other assembled tribes at some risk to himself; and then, without claiming my promised gifts, he had returned to his little family, left at such a distance, only that he might do that which was civil, to us strangers. Yet we call these men savages! I fear such disinterested acts of civility on the part of the civilised portion of mankind are rather rare. He had rendered to us, at all events, a very great service; for the danger of sudden collision with the natives was at an end, after our introduction by him to the tribes. In the afternoon, Slater, one of the bullock-drivers, found a good fording-place; and I sent a few men to cut the banks, and fill up a soft part of the river bed with logs, branches, and earth, for the better passage of the drays; a work they completed before night. I rode about five miles beyond the river to the north-west, and met, first with a very broad lagoon full of water, nearly on a level

with the plains, and apparently permanent; secondly, I found beyond this, a river or chain of ponds somewhat like the Narran. This I ascertained was called the Cawan by the natives, and that it meandered very much. The country was rather fine. These waters were bordered by well-grown trees, and the plains were covered with good grass. Lat. of our camp, on the Balonne, 28 deg. 25' 38" S. Thermometer at sunrise, 44 deg.; at noon, 75 deg.; at 4 P.M., 79 deg.; at 9, 60;--with wet bulb, 54 deg.. Height of the bed of the Balonne above the level of the sea, 494 feet; an average of three observations.

2D APRIL.--All the drays and the party crossed the river this morning in good order, and without any accident or much delay, by the little bridge we had made in its bed. While they were crossing, the place seemed to me so favorable for a ford that it might still be possible to find some of the marked trees said to be at "Congo." I again questioned the natives on this point, and one youth undertook to point out some marks made by white men. Mr. Kennedy ran with him on foot up the left bank of the river, and was shown two trees marked, the one with "J. Towns," the other with "Bagot, 1845." Being thus convinced that this ford was really at or near the place called "Congo," where Commissioner Mitchell had crossed, and found the Culgoa, at a distance of only seven miles north-west, I determined to go forward, in the same direction, to that river, taking my track of yesterday, which enabled me to avoid the broad lagoon.

On arriving at the "Cawan" we saw two natives fishing in a pond with hoop nets, and Yuranigh went to ask them about the "Culgoa." He returned accompanied by a tall athletic man; the other was this man's gin, who had been fishing with him. There he had left her to take care of his nets, and, without once looking at me or the party, proceeded to conduct us to the Culgoa. I never saw a Spanish or Portuguese guide go with a detachment half so willingly. Yuranigh and he scarcely understood a word of what each other said, and yet the former had the address to overcome the usual difficulties to intercourse between strange natives, and their shyness to white men, and to induce this native thus to become our guide. He took us to the Culgoa, which we made at about seven miles from the Balonne, and I was so much pleased with the willing service and true civility of this native, that I presented him with an iron tomahawk, and I heard him twice ask Yuranigh if it really was meant for him to keep. He then hastened back to his gin, whom he had left five miles off. This river presented as deep a section as, but a narrower bed than, the one we had just left. It had all the characteristics, however, of a principal river, and really looked more important than the Barwan, except that its waters were not then fluent. Gigantic blue gum trees overhang the banks, and the Mimosa grew near the bed of the current. I should say that these and much sand were the chief characteristics of the Culgoa. There were no recent marks of natives' fires, and I was informed that they did not much frequent that part of the river. The grass along the banks was very luxuriant. Latitude 28 deg. 31' 19" south. Thermometer at sunrise, 39 deg.; at noon, 75 deg.; at 4 P.M., 76 deg.; at 9, 50 deg.;--with wet bulb, 46 deg.. The height of this camp above the level of the sea, being forty feet above the bed of the river, 543 feet; from the mean of four observations.

3RD APRIL.--The section of this river being forty feet deep, and the banks in general steep, the work necessary to render it passable to our heavy drays could not be accomplished yesterday afternoon. This day, however, our camp was established on the right bank of the Culgoa. Thermometer at sunrise, 35 deg.; at noon, 80 deg.; at 4 P.M., 77 deg.; at 9, 49 deg.; and with wet bulb, 46 deg..

4TH APRIL.--We were now to proceed along the right bank of the Culgoa upwards to the United Balonne, and thence to continue ascending along the right bank of that river also, as far as the direction was favourable to our progress northward. This remained to be ascertained in exploring that river upwards. In gaining the right bank of the Culgoa, we had crossed the vast basin of clay extending from the Bogan on the south, to this river on the north, and westward to New Year's Range and Fort Bourke. That country was liable to be rendered quite impassable, had the rains set in. But even in such seasons we could still travel over the dry, firm ground bounding this basin of clay on the northward, as the left bank of the Bogan was also passable, however rainy the season, indeed more conveniently than during a dry one. Rain, if it had fallen at this time, had greatly facilitated our exploration of the northern interior; but these rivers we had reached would supply us with water for some degrees to the northward, as I had been informed by the Commissioner of the district, and in our progress so far, I hoped we should arrive at a better watered country.

Taking a northerly course, we traversed fine grassy land, on which grew luxuriantly the ACACIA PENDULA and other shrubs, that reminded us of the banks of the Bogan, to which country we found here the exact counterpart, only that this was better watered. The course of the Culgoa was more easterly than I had calculated on, for, after going six miles northward, I had to travel at least as many eastward before I again found the river. We encamped on the acute north-western angle of an anabranch biting into the firm soil, and it was evident that we had reached the Balonne Major, or that part above the separation of the Culgoa from the Minor Balonne, both of which we had already crossed, and which ran thus, as from our camp the lines of trees along each of the minor channels were distinctly visible.

The character of these rivers had been described to me by Commissioner Mitchell, the discoverer thereof. It was late before the drays came in, and Mr. Kennedy was led into the camp quite blind, having been suddenly attacked with purulent ophthalmia, when engaged in the survey of our route, about four miles from the camp. The heat had somewhat abated, but still this complaint, which we had attributed to it, had lately affected many of the party suddenly, as in the case of Mr. Kennedy. Latitude, 28 deg. 27' 11" S. Thermometer at sunrise, 33 deg.; at noon, 83 deg.; at 4 P.M., 88 deg.; at 9, 53 deg.; with wet bulb, 47 deg..

5TH APRIL.--The party halted, and I took a ride to explore the course of the river, proceeding first northward. In that direction I came upon an angle of the Balonne, at about three miles from the camp. Beyond, after passing through much ACACIA PENDULA, I crossed a small plain, bounded by a Casuarina scrub. Partly to ascertain its extent and character, and partly in the hope of falling in with the river beyond, I entered it. I found this scrub full of holes, that obliged me to pursue a very tortuous course, impeded as I was too by the rugged stems and branches. I got through it, only after contending with these impediments for three miles. The country beyond it looked not at all like that back from the river, and I turned to the N.E., pursuing that course some miles; then eastward two miles, and next two miles to the S.E., still without finding any river; but, on the contrary, scrub in every direction. The sun was declining, and I turned at last to the S.W., and in that direction reached an extensive open forest, beyond which I saw at length the river line of trees. I continued to ride S.S.W., and finally south, until I saw our cattle grazing, and the tents, without having regained first, as I wished, my outward track. On the bank of the Balonne we found an

apparently new species of ANDROPOGON with loose thin panicles of purplish flowers, and in the scrub I passed through, in my ride, I found a CASUARINA, indeterminable in the absence of flowers or fruit. It produces a gall as large as a hazel nut. Thermometer at sunrise, 37 deg.; at noon, 90 deg.; at 4 P.M., 94 deg.; at 9, 57 deg.;--with wet bulb, 53 deg..

6TH APRIL.--Mr. Kennedy's eyes being still very bad, I could not proceed, as the survey of our route was very important, in order to keep our account of longitude correctly. The necks of the cattle were much galled, and I therefore the more willingly halted another day. It was not without some impatience, however, that I did so, as we were approaching a point whence I could set out with horses to the north-west, and leave the cattle to refresh in a depot on this fine river, which afforded an excellent base for our exploratory operations, in the wholly unknown regions immediately beyond it. This line of exploration I had anxiously wished to pursue in 1831, when obliged to return from the Karaula or Upper Barwan; and whatever had since been ascertained about that part of the interior, confirmed me the more in my first opinion as to the eligibility of that direction. It had occurred to me, on crossing the Culgoa, that by marking deeply on a tree, at each camp, a number of reference, our survey might be more practically useful and available to the colonists, as connecting so many particular localities therewith. I therefore marked that No. I. in Roman numerals; this II., and I shall add in this journal, at the end of the narrative of each day's proceedings, whatever number or mark may be made to distinguish the place of encampment described.

In the scrub near this, we observed an Acacia, apparently new, a broadleaved, white-looking wattle. There was also a branching Composite, which Sir W. Hooker has determined to be a very distinct and undoubted species of FLAVERIA of which all the other species are natives of the New World.[\*] The CAPPARIS LASIANTHA was also found here growing on EXOCARPUS APHYLLA of Brown; it was found by Allan Cunningham and Frazer on Liverpool Plains, also, at Swan River. Thermometer, at sunrise, 44 deg.; at noon, 95 deg.; at 4 P.M., 96 deg.; at 9, 63 deg.;--with wet bulb, 57 deg.. Height above the sea, 497 feet.

[\* FLAVERIA AUSTRALASICA (Hook. MSS.) foliis lineari-lanceolatis integerrimis basi dilatatis, capitulis densissime globoso-fasciculatis, fasciculis subinvolucratis, bracteis exterioribus praecipue fasciculos superantibus omnibus late amplexantibus.]

7TH APRIL.--When all were preparing to set off early this morning, I was informed that two bullocks were missing, and a third fast in the mud on the river bank. The two stray animals were soon found; but it was impossible to bring on the other in the mud, for he was blown, from having drunk too much water, after over-eating himself with grass. Our journey was continued round one angle of the river in my horse's track. Afterwards turning to the N. E., we crossed two miles of open forest land, where the grass was good, and having the river in sight. At length, even on an easterly course we could not keep it longer in view, but got involved in a scrub on soft red sand. Emerging from this on a course of E. S. E., we again got upon open ground, and soon saw the majestic trees of the river in a line circling round to the northward. Coming upon it at an angle where scrubs of rosewood and ACACIA PENDULA crowned the slopes, we encamped on a beautiful spot. The river was magnificent, presenting a body of water of such breadth, as I had only seen in one other river of Australia, and the banks were grassy to the water's edge.

This day, "Jemmy," a young native whom we had seen on the Minor Balonne, came to our camp with another youth, and the voices of a tribe were heard in the woods. As Jemmy had not kept his word formerly, having left us suddenly, and was evidently a scamp, I peremptorily ordered him away. I had heard of his having brought gins to my camp at night on the former occasion, and he was very likely to be the cause of mischief, and could not, or at least, would not, render us any service. We desired no further intercourse, at that time, with the natives, as those with us did not understand their language. The misfortunes of Mr. Finch arose through that sort of intercourse with his men, and had arrested my journey fifteen years ago, when I had advanced to within forty miles of this camp, intent on those discoveries I hoped at length to make even now. I had good reason, therefore, to keep the natives at a distance here, at a time, too, when the bodies of six white men were said to be still uninterred in this neighbourhood. A species of CYPERUS with panicled globular heads of flowers was found here in the sloping bank.

Thermometer, at sunrise, 47 deg.; at noon, 97 deg.; at 4 P. M. 97 deg.; at 9, 69 deg.;--with wet bulb 57 deg.. Height above the sea 634 feet. Latitude 28 deg. 23' 59" S. (Camp III.)

8TH APRIL.--We continued our journey nearly northward, keeping the river woods in sight, as much as the country permitted. An arm or anabranch, at first containing much water, and coming from the north, was on our right for some miles. In following it, our natives found the tracks of three horses, one only having had shoes on, and two foals, as if proceeding first towards our camp, then returning. The branch from the river became dry and sandy, but still we followed its course. We saw about a mile to the eastward, beyond this dry channel, a splendid sheet of water on a level with the general surface, and having extensive tracts of emerald green vegetation about it. The dry channel obliged me to make a longer journey than I had intended. At length, on finding the requisite water in its bed, I encamped. This was near a pond, on whose sandy margin we saw still the tracks of the three horses that had been there to drink. The scrubs came close to the river with intervals of grassy plain. The ACACIA PENDULA, and its concomitant shrubs, the SANTALUM OBLONGATUM, and others, gave beauty to the scenery, and with abundance of water about, all hands considered this a very fine country. At sunset, thunder-clouds gathered in the S. W., and at about 7 P. M. the storm reached our camp, accompanied by a sudden, very strong gale from the S. E. The lightning was very vivid, and for half an hour it rained heavily. By 8 P. M. it was over, and the serene sky admitted of an observation of Regulus, by which the latitude was found to be 28 deg. 17' 8" S. (No. IV.) Thermometer at sunrise, 61 deg.; at noon, 91 deg.; at 4 P. M. 94 deg.; at 9, 66 deg.;--with wet bulb 63 deg..

9TH APRIL.--The branches of the river, and flats of Polygonum, obliged me to follow a N. W. course. I did so most willingly, as we had already got further to the eastward than I wished. The arm of the river spread into a broad swamp, in which two of the drays sank, the drivers having taken no notice of a tree I had laid across the track, to show where the carts had been backed out. I made them unload the drays and carry the loads to firm ground. Keeping afterwards along the margin of this swamp for many miles, I perceived abundance of water in it, and passed the burning fires of natives, where their water kids and net gear hung on trees about. At length, upon turning to the eastward, I came upon the main river, where it formed a noble reach, fully 120 yards wide, and sweeping round majestically from N. E. to S. E. We here encamped, after a long journey. The banks were grassy to the water's edge. We saw large fishes in it; ducks swam on it, and, at some distance, a pair of black swans. This

surpassed even the reach at camp III., and I must add, that such an enormous body of permanent water could be seen nowhere else in New South Wales save in the river Murray during its floods. The *Anthistiria* grew abundantly where we encamped, which was in latitude, 28 deg. 13' 34" S. and marked V. Thermometer, at sunrise, 63 deg.; at noon, 94 deg.; at 4 P. M., 97 deg.; at 9, 63 deg.;--with wet bulb, 62 deg..

10TH APRIL.--Pursuing a N. W. course, we crossed small grassy plains, fringed with rosewood and other acacias; but, in order to keep near the river, I was soon obliged to turn more towards the east, as *Callitris* scrubs were before me. In avoiding these, I again came upon the more open and firm ground adjacent to the river, and saw its course in the line of large Yarra trees, which always point out its banks with their white and gnarled arms. I may here state that the scrubs generally consist of a soft red sandy soil; the land near the river, of clay, which last is by far the best of the two soils for crossing with wheel carriages; the soft red sand being almost as formidable an impediment in some situations as mud. At length, in travelling N. eastward, we came upon a spacious lagoon, extending westward, and covered with ducks. Perceiving, by drift marks, that it came from the West, I kept along its margin, following it as it trended round to N. E., where we arrived at the main channel, about that part whence the waters of the lagoon emanate during high floods. That lagoon presented an excellent place for a cattle-station. Water could never fail, as the main stream was at hand, if even the lagoon dried up, which seemed not at all likely. *PSORALEA ERIANTHA* was abundant in the bed of the river, along with *INDIGOFERA HIRSUTA*, and *CROTALARIA MITCHELLII*.[\*] Thermometer, at sunrise, 44 deg.; at noon, 99 deg.; at 4 P. M., 97 deg. at 9, 66 deg.;--with wet bulb, 58 deg..

[\* *C. MITCHELLII* (Benth. MS.) *erecta*, *ramulis flavescenti-tomentosis*, *stipulis parvis subulatis*, *foliis ovali-ellipticis obtusis retusisve basi angustatis supra glabris subtus calycibusque subsericeo-pubescentitomentosis*, *bracteolis in pedicello brevissimo minutis setaceis*, *legumine sessili glabro*. Allied to *C. RETUSA* and *SERICEA*, but flowers much smaller, in short dense spikes. It agrees in most respects with the short character of *C. NOVOE HOLLANDIOE*, etc., but the leaf is not articulated on the footstalk, and the stipules exist.]

11TH APRIL.--Proceeding due north we had the river close on our right hand, when two miles on. After making a slight detour to avoid a gully falling into it, we continued the same course over open forest land, and, at length, saw an immense sheet of water before us, with islands in it. This was also a lagoon supplied by floods in the Balonne. It was covered with ducks, pelicans, etc. I called it Lake Parachute, no natives being near to give me their name for it. I must here add that the true aboriginal name is not Baloon, however, but Balonne, and this I the more readily adopt to avoid the introduction of a name so inappropriate amongst rivers. I was obliged to turn this lagoon, by moving some way about to my right, for it sent forth a deep arm to the S. W. which lay across my intended route. Continuing to travel northward, we arrived upon the banks of a lagoon, where they resembled those of the main channel, having trees of the same kind and fully as large. The breadth was very uniform, and as great as that of the river, so that it seemed this had once been the bed of the Balonne. We crossed it at a dry part of the swamp, the waters extending and increasing in it to the eastward. In the opposite direction it was equally uniform and continuous, but apparently dry. On crossing this old channel, I turned sharply to the N. E., aware that it is usually at acute angles in a river's course that such overflowings break out. I found it necessary in the present case to turn

eastward, and even to the southward of east before I could find the river again. At length we came upon the channel divided amongst ridges of sand, where the waters took a sharp turn and broke thus into separate currents. I was now very desirous to select a camp where the cattle might remain to rest and refresh while I proceeded with a small party to the N. W. This place did not please me, having been too scrubby, the water not well tasted, and the grass dry, therefore liable to be set on fire by the natives, or by accident. A bulbous species of CYPERUS grew on the bank of the Balonne, and in the river we found the common European reed, ARUNDO PHRAGMITES: a Loranthus allied to L. LINEARIFOLIUS, but with broader leaves, grew on some of the trees, and we saw a fine new species of ADRIANIA.\* (No. VII.) Thermometer, at sunrise, 47 deg.; at noon, 102 deg.; at 4 P. M., 104 deg.; at 9, 69 deg.; with wet bulb, 62 deg.. Average height above the sea, of camps V. VI. and VII., 559 feet.

[\* A. HETEROPHYLLA (Hooker MSS.) foliis ovato-acuminatis grosse sinuoserratis integris cordatisve trifidis, utrinque bracteisque glaberrimis.]

12TH APRIL.--I accordingly put the party in motion at an early hour, and soon came upon the river, where it formed a noble reach of water and came from the westward, a new direction, which, with the sand that had for some days appeared in shallow parts of its bed, raised my hopes that this river might be found to come from the north-west, a direction it maintained for five miles. The breadth was uniform, and the vast body of water was a most cheering sight. The banks were 120 yards apart, the course in general very straight, contributing much to the perspective of the scenery upon it. At one turn, denuded rocks appeared in its bed, consisting of ironstone in a whitish cement or matrix, which might have been decomposed felspar. I at length arrived at a natural bridge of the same sort of rock, affording easy and permanent access to the opposite bank, and at once selected the spot for a depot camp, which we established on a fine position commanding long vistas both up and down the river. It was, in fact, a tete-de-pont overlooking the rocky passage which connected the grass on both sides. This was No. VIII., and in latitude 28 deg. 1' 37". Thermometer, at sunrise, 68 deg.; at noon, 104 deg.; at 4 P. M., 101 deg.; at 9, 74 deg.;--with wet bulb, 64 deg..

13TH APRIL.--Here I could leave the jaded cattle to refresh, while, with a small party on horse-back, I could ascertain the farther course of the river, and explore the country to the north-west where centred all my hopes of discovery. I set on foot various preparations, such as the stuffing of saddles, shoeing of horses, drying of mutton, and, first of all in importance, though last likely to be accomplished, the making a pair of new wheels for a cart to carry water. Thermometer, at sunrise, 47 deg.; at noon, 100 deg.; at 4 P. M., 101 deg.; at 9, 67 deg.;--with wet bulb, 62 deg..

15TH APRIL.--This day I sent Mr. Kennedy to examine the country in the direction of 331 1/2 deg., my intended route, and he returned about 10 P. M., having seen what he considered indications of the river on his right when about twelve miles from the camp, and plains to the left. Upon the whole, I resolved, from what he said of the scrubs he had met with, to travel north-west, that direction being perpendicular to the general course of this river, and therefore the most likely to lead the soonest to higher ground. Thermometer, at sunrise, 68 deg.; at noon, 104 deg.; at 4 P. M., 103 deg.; at 9, 72 deg.;--with wet bulb, 67 deg..

16TH APRIL.--In order better to contend with the difficulty of wanting water, and be better prepared for it, I formed my party rather of

infantry than cavalry, taking only two horses, drawing a cart loaded chiefly with water, and six trusty men, almost all old soldiers. We were thus prepared to pass several nights without requiring other water than that we carried with us. I hoped thus to be enabled to penetrate the scrubs, and reach, and perhaps cross, the higher land bounding this great basin. Our first day's progress, being rather experimental, did not extend above ten miles. I had been obliged to send back the shaft horse, and exchange him for a better, as our load of water was heavy. The day was very sultry. Thermometer 105 deg. Fahrenheit, in the shade. We had passed over ground more open than I expected, but by no means clear of scrubs. Thermometer, at sunrise, 64 deg.; at 4 P. M., 105 deg.; at 9, 71 deg.;--with wet bulb, 67 deg..

17TH APRIL.--The messenger returned early with two horses, one being my own second charger, which I put as leader to the cart. We then got forward on foot as fast as the men could walk, or rather as fast as they could clear a way for the cart. We passed through much scrub, but none was of the very worst sort. The natives' marks on trees were numerous, and the ground seemed at first to fall westward as to some water-course; and, after travelling about five miles, there appeared a similar indication of water to the eastward of our route. At one place even the white-barked gum trees appeared; but, although they had the character of river trees, we found they grew on an elevated piece of clay soil. After completing about ten miles, I halted for two hours to rest the horses, where there was a patch of good grass, and we gave them some water from our stock. The mercurial column afforded no indication that we were at all higher than our camp overlooking the river, and it seemed, therefore, not improbable that we might meet with some other channel or branch of that prolific river. After resting two hours we continued, passing through woods partly of open forest trees, and partly composed of scrub. Towards the end of our day's journey, we crossed land covered with good grass, and having only large trees on it, so thinly strewed as to be of the character of the most open kind of forest land. Saw thereon some very large kangaroos, and throughout the day we had found their tracks numerous. We finally set up our bivouac a little before sunset, on a grassy spot surrounded by scrub. In this scrub I found the *CLEOME FLAVA* of Banks, and the strong-smelling *AMBRINA CARINATA*. A very remarkable whiteness appeared on the leaves of the *EUCALYPTUS POPULIFOLIUS*, which, on very close examination, appeared to be the work of an insect.[\*] On the plains the *SALSOLA AUSTRALIS* formed a round bush, which, when loose from its very slight root, was liable to be blown about. Thermometer at sunrise, 71 deg.; at 9 P. M, 68 deg.;--with wet bulb, 64 deg..

[\* The following letter from Mr. Westwood to Dr. Lindley relates to specimens of this brought to England:--

"I am sorry that the state of the specimens from Sir Thomas Mitchell (or rather, I should say, the time when they were gathered) does not allow me to say much about the insect by which they are formed. It is an extremely beautiful production, quite unlike any thing I have yet seen, and is, I have no doubt, the scale of a coccus. It is of a very peculiar form, resembling a very delicate, broad, and flattened valve of a bi-valve shell, such as the genus *Iridina*, the part where the hinge is being a little produced and raised, and forming the cover of the coccus which secretes the beautiful material just in the same unexplained way as the scale insects form the slender attenuated scales beneath which they are born. I could not discover any insect beneath the specimens of Sir Thomas Mitchell's production in a state sufficient to determine what it really is, as I only found one or two exceedingly minute atoms of shrivelled up



insects. It is extremely brittle, and looks more like dried, white, frothed sugar than any thing else."]

18TH APRIL.--A pigeon had flown last evening over our camp in a N. N. E. direction, and as the ground sloped that way, and the men believed that water was there, I rode this morning in that direction, leaving the other horses to feed in the meantime. At two miles from our bivouac I found some hollows in a scrub where the surface consisted of clay, and which evidently at some seasons contained water, although they were then dry. Polygonum grew around them, and I doubt not that after a fall of rain water would remain there some time. On riding two miles beyond, in the same direction, I found open forest land only. The country was well covered with good grass, very open, yet finely wooded. We again proceeded north-west over some fine forest land. The soil was, however, only soft red sand, and made it very heavy work for our horses drawing the watercart.

On passing through a Casuarina scrub, we entered upon a different kind of country as to wood and grass, the soil being much the same, or still more loose and sandy. The surface bore a sterile heathy appearance, and the trees consisted chiefly of a stunted box, growing but thinly. Instead of grass, black, half-burnt roots of a wiry plant appeared, which I afterwards found in flower (SEE INFRA), and one small, shrubby, brown bush, very much resembling heath; apparently a Chenopod with heathlike leaves, and globular hairy heads of flowers. The roots of the firstmentioned plant presented much obstruction to our cart-wheels in passing over the soft sand. As I stood awaiting the cart's arrival, some birds drew my attention, as I perceived I had attracted theirs. They descended to the lowest branches of the tree in whose shade I stood, and seemed to regard my horse with curiosity. On my imitating their chirp one fluttered down, and attempted to alight on my horse's ears. On my whistling to them, one whistled some beautifully varied notes, as soft as those of an octave flute, although their common chirp was harsh and dissonant. The male and female seemed to have very different plumage, especially about the head; that on the one having the varying tint of the Rifle bird, the head of the other more resembling in colour, that of the DACELO GIGANTEUS. They were about the size of a thrush, and seemed the sole residents of that particular spot, and I had not seen them elsewhere. The carts came slowly forward, the horses being much distressed. I continued to ride some miles ahead, and passed through a scrub in a clay hollow, to which succeeded another open forest country with more of the soft red sand. The people with the cart could not overtake me, and I returned. Meeting them at a rather bad place, I determined to encamp at some patches of grassy ground somewhat out of our line, in latitude, 27 deg. 43' S. It is remarkable that, according to the barometer, we had not ascended higher than our depot camp on the river, at a distance of nearly forty miles from it. I had just quitted my horse's back, and had resolved to return, when two horsemen were seen approaching along our track. They were two of our party come from the depot to bring me a despatch, which had been forwarded by Commissioner Wright, communicating the news of Dr. Leichardt's return from Port Essington, and enclosing the Gazette with his own account of his journey. Thus it became known to us that we could no longer hope to be the first to reach the shores of the Indian Ocean by land. Thermometer, at sunrise, 62 deg.; at 4 P. M., 93 deg.; at 9, 71 deg.;--with wet bulb, 64 deg..

19TH APRIL.--I left the men with the cart, to follow while I rode forward along its track, and sat down to peruse the newspapers sent me, until the cart overtook me in the evening, the horses being quite exhausted by the

heat and the heavy sand. Thermometer, at sunrise, 61 deg.; at noon, 86 deg.; at 9, 63 deg.;--with wet bulb, 59 deg..

20TH APRIL.--The men who brought the despatches yesterday having been ordered to bring fresh horses this day from the depot, I sent our tired animals on thither at once, as we could give them but a limited quantity of water. I rode forward also to the camp, and met the fresh horses about half-way. I immediately ordered the repair of the wheels of another light cart, determined to lose no time in exploring a passage towards the head of Carpentaria. Thermometer, at sunrise, 48 deg.; at noon, 95; at 4 P. M., 93 deg.; at 9, 63 deg.;--with wet bulb, 58 deg..

21ST APRIL.--The cart came in about 9 A. M. The morning was cloudy, for the first time this month, and a slight shower fell. Had three or four days' rain fallen at that time, it would have enabled me to have explored by much less circuitous routes, than along the bank of this great river, the country to the north-west. In this case, the tour from which I had just returned might have been continued, as I wished and intended, had it been possible to find water, to the mountains or higher ground, whatever it might be that formed the limits to this basin on that side. Thermometer, at sunrise, 65 deg.; at noon, 76 deg.; at 4 P. M., 77 deg.; at 9, 60 deg.;--with wet bulb, 53 deg..

22D APRIL.--The clouds continued to lower, and a great change in the temperature accompanied this visible change in the sky, but the mercurial column remained uncommonly steady. Arrangements for a concentrated party engrossed my attention so fully this day, with the insertion also of our late work on the general map, that even the newspapers from the colony lay unread. Mr. Kennedy took a ride across the river in a S. S. E. direction, and found a fine grazing country with open forest, as far as he went, which was about twelve miles. On the banks of the Balonne, during my absence, they had found, besides a small bearded CYPERUS, a new creeping PSORALEA [\*], and a new species of Acacia, which Mr. Bentham has named A. VARIANS.[\*] Thermometer, at sunrise, 41 deg.; at noon, 76 deg.; at 4 P. M., 77 deg.; at 9, 61 deg.;--with wet bulb, 56 deg.. Mean elevation of this camp above the level of the sea, being 50 feet above the river, 623 feet.

[\* P. ERIANTHA (Benth. MS.) prostrata, canescenti-pubescentis, foliis pinnatim trifoliolatis, foliolis ovatis oblongisve dentatis, pedunculis elongatis multifloris, floribus inferioribus remotis superioribus approximatis, calycibus pube molli albida dense tomentosis, legumine molliter villosa.]

[\* A. VARIANS (Benth. MS.) glabra, pallida v. glauca, ramulis subangulatis, phyllodiis oblongo-lanceolatis v. inferioribus late obovatis summisve linearibus, omnibus basi longe angustatis apice obtusis v. oblique mucronatis subimmarginatis vix obscure glanduliferis uninerviis tenuiter reticulato-penniveniis, capitulis sub 20-floris solitariis subracemosis v. in racemos foliatos dispositis, calycibus truncatis, legumine glabro crasso sublignoso. Very near A. SALICINA, and possibly a mere variety; but the phyllodia are generally considerably broader, and the inflorescence different.]

Chapter IV.

ADVANCE WITH A LIGHT PARTY--LEAVING THE REMAINDER WITH THE BULLOCKS AND DRAYS TO REST THREE WEEKS AT ST. GEORGE'S BRIDGE.--DISCOVER A RIVER

JOINING THE BALONNE FROM THE NORTH-WEST.--CROSS IT, AND STILL TRACE THE BALONNE UPWARDS.--FINE RIVER SCENERY.--VAST PLAINS EXTENDING TO THE EASTERN HORIZON DISCOVERED FROM A TREE.--TRIBUTARY FROM THE NORTH-WEST--AND RICH PLAINS.--TRACE THIS SMALL RIVER UPWARDS.--EXCELLENT COUNTRY FOR GRAZING PURPOSES.--MOUNTAINS, SEEN AT LENGTH, TO THE NORTHWARD.--NATIVES AT OUR CAMP.--ASCEND MOUNT FIRST VIEW.--MOUNT INVITING.--ASCEND MOUNT RED CAP.--RIDE TO THE BORDERS OF FITZROY DOWNS, AND ASCEND MOUNT ABUNDANCE.--THE BOTTLE TREE.--ASCEND MOUNT BINDANGO.--DISCOVERY OF THE RIVER "AMBY."--DANGEROUS FOLLOWERS OF A CAMP.--RECONNOISSANCE TO THE NORTH-WEST.--ASCEND A TRAPITIC RANGE.--A GAP OR GOOD OPENING THROUGH IT FOUND FOR THE CARTS.--SMALL RIVER DISCOVERED BEYOND, CONTAINING ONE POND OF WATER.--THE CHANNEL DISAPPEARS ON OPEN FLATS.--DISCOVER THE RIVER MARAN.--SELECT A POSITION FOR A DEPOT.--RIDE OF RECONNOISSANCE TO THE NORTHWARD.--RIDE INTO THE WESTERN INTERIOR.--ASCEND MOUNT LONSDALE.--EXTENSIVE VIEW FROM THE SUMMIT.--WATER NOT VERY PLENTIFUL.--RETURN TO THE CAMP.--ASCEND A HIGH POINT TO THE EASTWARD.--VIEW THENCE OF THE SUMMITS OF A RANGE TO THE NORTHWARD.--CAMP VISITED BY HOSTILE NATIVES DURING MY ABSENCE.--ARRIVAL OF MR. KENNEDY WITH THE MAIN BODY OF THE PARTY.--HIS ACCOUNT OF THE HOSTILITY OF THE CHIEF AND TRIBE AT "TAGANDO."--VARIOUS PREPARATIONS MADE FOR AGAIN ADVANCING WITH A LIGHT PARTY.--DEPOT CAMP ESTABLISHED ON THE MARAN.

23RD APRIL.--Our little party started at noon. I took with me eight men, two native boys, twelve horses, besides my own two, and three light carts with provisions for ten weeks--determined, if possible, to penetrate northward, into the interior country, and ascertain where the division of the waters was likely to be found. I intended, with this view, to trace upwards the course of the Balonne, until I found mountains to the north-westward of it; then, to endeavour to turn them by the west, and thus acquire some knowledge on that most interesting point, the watershed towards the Gulf. I left instructions with Mr. Kennedy to follow my track with the drays and main body of the party, and to set out on Monday, the 4th of May, when the cattle would have had three weeks' rest.

The first few miles of this day's journey were along a clayey flat or hollow, which enabled me to avoid scrubby and sandy ground on each side. I believed its direction (N. E.), to be about parallel to the river. Leaving it at length to make the river, I met with rather a thick scrub; but came upon the river where the banks were very rocky and picturesque. Its course seemed to be from N. E.; but, following another flat of firm clay, I got again into scrub so thick that I turned eastward towards the river, and travelled along its bank until I encamped in lat. 27 deg. 56' 12" S. There was but little water in the bed of the river there; but long islands of sand, water-worn banks, with sloping grassy bergs behind. The bed, in most places, consisted of rock, the same ferruginous conglomerate, or clay ironstone, seen in the same river lower down. Grass was excellent and abundant on the bergs and near the river, but thick scrub crowned these bergs on our side. It was too late to admit of my examining the other. On our way through the scrub this day, we saw the ENOCARPUS SPARTEA of Brown, a leaf-like wing-branched shrub; and the beautiful parasite, LORANTHUS AURANTIACUS, occupied the branches of Eucalyptus. Thermometer, at sunrise, 49 deg.; at 9 P. M., 47 deg.;--with wet bulb, 41 deg.. [\* The dates on the map show my camps; the Roman numerals those afterwards taken up by Mr. Kennedy, in following my track with the main body.]

24TH APRIL.--Set off early, travelling along the bank. The direction was N. N. W. and N. W. For the first few miles, the scenery was wild and very fine. Masses of rock, lofty trees, shining sands and patches of water, in

wild confusion, afforded evidence of the powerful current that sometimes moved there and overwhelmed all. At this time, the outlines were wild, the tints sublimely beautiful. Mighty trees of Casuarinae, still inclined as they had been made to bend before the waters, contrasted finely with erect Mimosae, with prostrate masses of driftwood, and with perpendicular rocks. Then the hues of the Anthistiria grass, of a redbrown, contrasted most harmoniously with the light green bushes, grey driftwood, blue water, and verdure by its margin; all these again--grass, verdure, driftwood, and water--were so opposed to the dark hues of the Casuarinae, Mimosae, and rifted rocks, that a Ruysdael, or a Gainsborough, might there have found an inexhaustible stock of subjects for their pencil. It was, indeed, one continuous Ruysdael.

"That artist lov'd the sternly savage air, And scarce a human image plac'd he there."

May the object of our journey be successful, thought I then; and we may also hope that these beauties of nature may no longer "waste their sweetness in the desert air;" and that more of her graces may thus be brought within the reach of art. Noble reaches next extended in fine perspective before us; each for several miles, presenting open grassy margins along which we could travel on firm ground unimpeded by scrub. At length I perceived before me a junction of rivers, and could see along each of them nearly a mile. I had no alternative but to follow up that nearest to me, and found upon its bank many recent encampments of natives; at one of which the fires were still burning. The country was grassy, and so open, as almost to deserve the colonial name of "plain." This channel took me a long way northward, and to the N. N. E.; but finally turned west, and at last south. Its bed was full of sand; and at length we found it quite dry, so that, when I would have encamped, I could find no water. Yet it bore all the character of a large river; marks of high floods, Mimosae, sand, and river driftwood, like the other. It might, and probably did, finally come out of the main channel; but this seemed too remote a contingency for our wants then, and I crossed it, to look for the other. In riding eastward, I found a wide plain bounded by trees that looked like those along the river. No time could be spared for further reconnoissance: I took the party across, and made for the nearest part. My course was first N. E., then East, finally South, in following the various slopes; and it was only after travelling fifteen miles beyond the point where I met with this river, that I reached the bank of the other, at a spot distant only FOUR miles from where I had quitted it. This was only accomplished at forty minutes after 4 P. M., when we had travelled twenty-six miles. As our circuitous route was likely, if followed by Mr. Kennedy with the heavy drays, to cause delay and inconvenience, I resolved to halt next day, and write to him on the subject, explaining how he could most readily fall into my track by crossing the other channel, quitting first the other track, at a spot to be marked by Graham, who took the letter. Nevertheless, it had been imperative on me to follow it up as I had done; because, whether as a separate tributary or an ana-branch only, the right bank was likely to suit us best, provided only that water could have been found in its bed. Near the new river, the *INDIGOFERA HIRSUTA* of Linnaeus, with its spikes of reflexed hairy pods, was common; and also the *MOSCHOSMA POLYSTACHYUM*. Lat. 27 deg. 47' 57" S. Thermometer, at sunrise, 38 deg.; at 9 P. M., 59 deg.;--with wet bulb, 56 deg..

25TH APRIL.--

"The dawn is overcast, the morning lowers, And heavily in clouds brings

on the day."

A grateful change in the weather promised rain; but suggested to me a contingency for which I had not provided in my letter to Mr. Kennedy, and Graham was gone. A flood coming down, might fill the channel of the other, and prevent Mr. Kennedy's party from crossing to fall into my track; or, if that should finally prove only an ana-branch, shut me up in an island. On this point I again, therefore, wrote to Mr. Kennedy, and buried my letter at the spot marked by Graham, and according to marks on trees, as I had previously arranged with him. I then instructed him to examine the dry channel far enough upwards (halting his party for the day) to ascertain whether it was a separate river, or an ana-branch; and, in the latter case, to keep along its banks, and so avoid the possible difficulty of crossing it during rainy weather. Thermometer, at sunrise, 65 deg.; at noon, 70 deg.; at 4 P. M., 66 deg.; at 9, 64 deg.;--with wet bulb, 63 deg.. Mean height above the sea, 586 feet.

26TH APRIL.--Sunday. Corporal Graham returned from the depot camp at 1 P. M. The sky continued cloudy, and the barometer low. High wind from the west arose about 3 P. M. Thermometer, at sunrise, 63 deg.; at noon, 78 deg.; at 4 P. M., 78 deg.; at 9, 56 deg.;--with wet bulb, 53 deg..

27TH APRIL.--The party set off early. We found that a river from the north joined the channel we were about to follow up in its course from the east. The northern river contained water in abundance; and I determined to follow it up so long as the course was favourable, and water remained in it. The general course was much the same as that of the first (about 39 E. of N.). The bed and ponds increased; and after following it up about eleven miles, I encamped the party, and rode northward to ascertain if it was likely to change its course. In ten minutes, I came upon a splendid reach, extending north-west as far as I could see it. Lat. of our camp, 27 deg. 42' 42" S. Thermometer, at sunrise, 37 deg.; at noon, 69 deg.; at 4 P. M., 72 deg.; at 9, 57 deg.;--with wet bulb, 55 deg..

28TH APRIL.--Masses of a ferruginous rock extended across the river bed like a dyke, in a N. W. and S. E. direction; and as the river here broke through these rocks, changing, at a sharp angle, its course to the S. W., it seemed probable that the general course from above might be parallel to these rocks. Continuing along the bank, we found the reaches large, full of water; the country clear of scrub and covered with luxuriant grass. One singular flat sweeping round to the W. S. W. was covered with the rich grass PANICUM LOEVINODE. The tropical PEROTIS RARA, a delicate grass, producing long purple tufts of reflexed bristles, was also here observed. The general direction of the river was towards the N. W., and whenever it took any turn towards the east, I continued to travel northward, and thus, on three occasions, came upon its bank again, cutting off detours I must otherwise have described in following its course. We encamped on a beautiful spot, the sight of which would have rejoiced the heart of a stockholder. A fresh westerly breeze blew during the day, and we were as free from the annoyance of heat, as if we had been in England during the same month. Latitude 27 deg. 32' 37" S. The direction of the river's course was uncommonly straight, and its long sweeping reaches, full of water, seemed capable of being rendered available for the purpose of forming water communications. The surface of the adjacent country presented a thin deposit of sand, near the river, attesting the great height to which its waters sometimes rise; and minor features of ground near, showed, in their water-worn sections, that they had been wholly deposited by the river. Thermometer, at sunrise, 39 deg.; at 4 P. M., 69 deg.; at 9, 48 deg.;--with wet bulb, 46 deg..

29TH APRIL.--The tendency of the soft earth of the banks to break into gullies, branching back into impervious scrubs, was such as to prevent me from either seeing much of the river during this day's journey, or pursuing a straight course. At one place I could only follow the grassy margin of the river, by passing between its channel and the berg, all seared as it was with water-worn gullies, and crowned with scrub; but I was soon locked up under these where a bad hole impeded our progress along the river, and I was obliged to back the carts out, the best way I could. While travelling along the margin I perceived a slight current in a gravelly part of the bed. I had previously observed a whitish tinge like that of a fresh in the river water, this day and yesterday, doubtless the product of the late rain, and probably from these clay gullies. After a circuitous journey, we came out on a clear grassy brow over-looking much open country. There I still met with heads of gullies, but could easily avoid them, and after traversing a fine grassy plain, we encamped as near the river as the gullies would allow, in latitude 27 deg. 28' 27". One of the party, John Douglas, from the top of a tree, discovered vast plains in the N. E. extending to the horizon, a river line pursuing a northerly course, and in the N. W. a mass of cloud hung over what he supposed to be mountains. Thermometer, at sunrise, 36 deg.; at 4 P. M., 63 deg.; at 9, 47 deg.; with wet bulb, 44 deg..

30TH APRIL.--Obliged to keep at some distance from the river, I came upon open forest land, where gentle undulations took the place of the rugged gullies. Thus we travelled over a beautiful country, due north, with sufficient indications of the river on our right, in the slopes that all fell to that side. There were ponds in some hollows, and we made the river itself at various parts of our route. At length, where it bit on a high scrubby bank, I again proceeded northward and came upon a large lagoon, sweeping round to S. W. and S. S. W., further than we could see. It had on its surface numerous ducks, and a large encampment of native huts appeared at one end. We encamped by this lagoon, in latitude 27 deg. 20' S. Again vast plains and downs to the N. E. were seen by Dicky, our youngest native, from a tree. Thermometer, at sunrise, 27 deg.; at 4 P. M., 65 deg.; at 9, 43 deg..

1ST MAY.--On leaving the lagoon, passing between its head and the river, we were soon enveloped in a thick scrub of Casuarinae, on ground broken into gullies falling to the river. I tried to pass by the lower margin of this, but gullies in the way obliged me to ascend and seek a passage elsewhere. Forcing our way, therefore, through the scrub and out of it, we found outside of it, in an open forest, the box and Angophora, and could go forward without impediment, first to the N. W., afterwards northward, and N. E. At length the woods opened into fine grassy plains, bounded on the east by trees belonging to the river berg. There I saw still the trees we had so gladly got away from, the Casuarina; also the cheering white arms of the Yarra, or blue gum. The prospect before us improved greatly; fine plains presented a clear way to the northward, with the river apparently coming thence, and even round from the N. W. From a tree, Yuranigh descried hills in the N. E. and the plains extending before us. I also perceived, from the wide plain, a distant low rise to the N. W. We crossed two hollows on these grassy plains, each containing deep ponds, and descended towards what seemed a branch of the river; we encamped near it, in latitude 27 deg. 15' 4" S. As we approached this spot, natives were seen first looking at us, and then running off--Yuranigh said he recognized one of them as a countryman of his own. I endeavoured to make him cooey to them, or call them, but they made off, setting fire to the grass. Any information from natives of these parts

might have been very useful to us then, and I hoped they would at length come to us. Thermometer, at sunrise, 26 deg.; at 4 P. M., 67 deg.; at 9, P. M., 48 deg.;--with wet bulb, 46 deg..

2D MAY.--There was a decided difference between the river we were now upon, as well as the country along its banks, and the large river by which we had travelled so far. This was undoubtedly but a small tributary, as its direction seen this day showed, being from the westward, while its waters, meandering in various narrow channels amongst plains, reminded us of some of the finest parts of the south. Which was the principal channel, and which to cross, which to travel by, was rather difficult to determine. The country was very fine. These water courses lay between finely rounded grassy slopes, with a few trees about the water's edge, marking their various courses at a distance. A considerable breadth of open grassy plain, intervened between this river and the woods back from it. At length, sloping stony bergs came near the river's bed, but there the smooth naked water-worn clay was the best ground we could have for wheels, and we thus hugged each bend of the river, passing close to the channel. I hoped thus to find plains on the next change of the river's course. And so it turned out for some way, but the receding bergs guided me, even when only seen at a considerable distance, in shaping my course. Keeping my eye on their yellow slopes, I travelled far along a grassy flat which brought me to a lake containing water like crystal, and fringed with white lotus flowers. Its western shore consisted of shelving rock. An immense number of ducks floated on its eastern extremity. From this lake, following a grassy flat to the N. W., we at length reached the river, or rather its bed, seared into numerous channels. The lake, and long flat connected with it, appeared to me more like the vestiges of a former channel, than as the mere outlet of surplus waters; nor did it seem that the water is now supplied from the floods of the river. I followed this a few miles further, and then encamped just beyond, where much gravel appeared in the banks. While the men were erecting the tents, I rode some miles to the westward, and found an open iron-bark forest covering it, with much luxuriant grass. This was rather peculiar, as compared with any other part passed through. It was also undulating; and, from a tree ascended by Yuranigh, it was ascertained we were approaching mountains, as he saw one which bore 77 deg., also a hill to the eastward, in which latter direction (or rather in that of 333 deg.), he saw also an open country. Thermometer, at sunrise, 47 deg.; at 4 P. M., 62 deg.; at 9 P. M 57 deg.; mean height above the sea, 694 feet.

3RD MAY.--Natives were heard near our camp during the night, and we perceived the smoke of their fires, in the bushes, behind in the morning. Yuranigh went up to them, accompanied by one of the party bearing a green branch, and he prevailed on three of their tribe to come to our tents. One stood amongst the carts and tents, apparently quite absorbed in observation. Intense curiosity in these men had evidently overcome all their fears of such strangers. They were entirely naked, and without any kind of ornament or weapon, offensive or defensive. With steady fixed looks, eyes wide open, and serious intelligent countenances, what passed in their minds was not disguised, as is usual with savages. On the contrary, there was a manly openness of countenance, and a look of good sense about them, which would have gained my full confidence, could we but have understood each other. They asked for nothing, nor did they show any covetousness, although surrounded by articles, the smallest of which might have been of use to them. There must be an original vein of mind in these aboriginal men of the land. O that philosophy or philanthropy could but find it out and work it! Yuranigh plied them with all my questions, but to little purpose; for although he could understand their language,

he complained that they did not answer him in it, but repeated, like parrots, whatever he said to them. In the same manner, they followed me with a very exact repetition of English words. He, however, gathered from them that the lake was called "Turanimga," this river "Cogoon," a hill to the eastward "Toolumba," etc. They had never before seen white men, and behaved as properly as it was possible for men in their situation to do. At length we set out on our journey, and in mounting my horse, which seemed very much to astonish them, I made signs that we were going to the mountains.

Travelling by the river bank was easy, over grassy forest land. The deep ponds were tolerably well filled, but the quantity of water was small, in comparison with that in the Balonne; which the natives seemed to say we had left to the right, and that this was "one of its brothers." Malga scrub crowned the bergs of the river, where they bounded one of these forest flats forming its margin, and the mere sight of that impervious sort of scrub was sufficient to banish all thoughts of making straighter cuts to the north-west. Our course, with the river, was, however, now rather to the west of north-west; and that this was but a tributary to the Balonne, was evident. That river line, as traced by us, pursued a tolerably straight direction between the parallels of 29 deg. and 27 deg., coming round from nearly north-east to about north. For these last three days we had travelled with this minor channel, to the westward of north-west; in which direction I had, therefore, good reason to expect that we should soon find mountains.

As soon as we arrived at an eligible spot for the camp, I proceeded, with Yuranigh, towards a height presenting a rocky face, which I saw through the trees, and seemed distant about two miles. From that crest, I perceived woody ridges on all sides, but all apparently sloping from the south-west; and a misty valley beyond the nearest of them in the northeast, like the line of the Balonne. But the most interesting sight to me then, was that of blue pics at a great distance to the north-west, the object of all my dreams of discovery for years. No white man had before seen these. There we might hope to find the DIVISA AQUARUM, still undiscovered; the pass to Carpentaria, still unexplored: I called this hill Mount First View, and descended, delighted with what I had seen from its rocky crest. The sides were covered with Malga scrub. The rock was felspathic, apparently allied to those already seen in the Balonne. Lat. 27 deg. 2' 57" S. Thermometer, at sunrise, 45 deg.; at 4 P. M., 68 deg.; at 9 P. M., 45 deg.;--with wet bulb, 43 deg..

4TH MAY.--An Australian morning is always charming,--amid these scenes of primaeval nature it seemed exquisitely so. The BARITA? or GYMNORHINA, the organ-magpie, was here represented by a much smaller bird, whose notes, resembling the softest breathings of a flute, were the only sounds that met the ear. What the stillness of even adds to such sounds in other climes, is felt more intensely in the stillness of morning in this. "The rapture of repose that's there" gratifies every sense; the perfume of the shrubs, of those even that have recently been burnt, and the tints and tones of the landscape, accord with the soft sounds. The light red tints of the ANTHISTIRIA, the brilliant green of the MIMOSA, the white stems of the EUCALYPTUS, and the deep grey shadows of early morning, still slumbering about the woods, are blended and contrasted in the most pleasing harmony. The forms in the soft landscape are equally fine, from the wild fantastic tufting of the Eucalyptus, and its delicate willow-like ever-drooping leaf, to the prostrate trunks of ancient trees, the mighty ruins of the vegetable world. Instead of autumnal tints, there is a perpetual blending of the richest hues of autumn with the most



brilliant verdure of spring; while the sun's welcome rays in a winter morning, and the cool breath of the woods in a summer morning, are equally grateful concomitants of such scenes. These attach even the savage to his woods, and might well reclaim the man of crime from thoughts likely to disturb the harmony of human existence.

Following up the little river with more confidence now, since I had seen whence it came, I proceeded more directly north-west. Thus I found myself on a small creek, or chain of ponds, from the west and southwest, so that I crossed it and made for some open ground, between ridges clothed with dense Malga scrub. We thus crossed a low ridge, and descended towards a fine open country, on which pigeons were numerous, and traces of natives. It was also sloping to the northward, and I had no doubt that we had passed into a valley which I had observed yesterday from Mount First View, and had supposed it contained a larger river. In the open ground, I found a small rocky knoll which I named Mount Minute. From its summit, I recognised Mount First-Sight, bearing 128 deg. 30'. We next passed through some scrub, and came to a hollow full of *Acacia pendula*. Following this down we arrived at a chain of ponds, and these led to an open grassy valley, in which we found our old friend, the river, still pursuing, steadily, a north-west course. Travelling along the bank, for a mile or two, we found that these now consisted of fine open forest flats; and at length encamped on the margin, after a journey of about twelve miles. Near our camp, I saw natives on the opposite bank, first standing in mute astonishment, then running away. I held up a green bough, but they seemed very wild; and, although occasionally seen during the afternoon, none of them would approach us. We found on the banks of this river, a purple-flowered *CALANDRINIA*, previously unknown.[\*] Lat. 26 deg. 57' 39" S. Thermometer, at sunrise, 25 deg.; at 4 P. M., 70 deg.; at 9, 37 deg.;--with wet bulb, 34 deg..

[\* *C. BALONENSIS* (Lindl. MS.); foliis angustis obovato-lanceolatis alternis oppositisque, racemis secundis multifloris caulibus multo longioribus, floribus (conspicuis) polyandris.]

5TH MAY.--The three last nights had been cold, each, in succession, colder than the former. This morning the thermometer stood at 19 deg. E., yet the water was not frozen, nor did our natives, sleeping in the open air, seem to feel it. Hence, it was obvious that, in a dry atmosphere, extreme cold can be more easily borne than in one that is moist. So, also, in the opposite extreme of heat and drought, we had been so accustomed to a higher temperature than 100 deg. F., that any degree under that felt refreshing. Our journey this day by the side of the little river was still very straight towards the N. W. We met with rocks at the westerly bends; from which side it was also joined by a small tributary, with ponds and hollows containing marks of flood, and beds of the *POLYGONUM ACRE*. Still, however, the main channel could be distinguished from these, and the open forest flats along its banks became more and more extensive and open as we ascended this channel,--leading so directly where we wished to go.

Hills were occasionally seen back from it, chiefly covered with scrub, but some were grassy and seemed fit for sheep. Others were clothed with callitris, and there the woods were open enough to be travelled through. I rode to the summit of one and recognized two of the points seen from Mount First Sight. At one sharp turn of the river rugged rocks had to be removed to make a way for the carts, but this was soon done. Beyond, there was a noble reach of water in a rocky bed, traversed by a dyke of felspathic rock, which exhibited a tendency to break into irregular

polygons, some of the faces of which were curved; its strike was E. and W. We encamped on open forest land in lat. 26 deg. 54' 16" S. It was only during the last two days that I could perceive in the barometer, any indication that we were rising to any higher level above the sea than that of the great basin, in which we had journeyed so long, and the difference was still but trifling, as indicated by not more than six or seven millimetres of the Syphon barometer; our actual height above the sea being 737 feet. Thermometer, at sunrise, 19 deg.; at 4 P. M., 67 deg..

6TH MAY.--The banks of the Cagoon became more open, and the slopes less abrupt as we advanced. They frequently consisted of a mixture of sand, at a height of twenty feet above its bed; where it occupied a section of considerable width, as much, perhaps, as 100 yards between bank and bank. On these rounded off banks or bergs of forest land, Youranigh drew my attention to large, old, waterworn, trunks of trees, which he showed me had been deposited there by floods. As they were of a growth and size quite disproportioned to other trees there, I was convinced that they were the debris of floods; and, consequently, that a vast body of water sometimes came down this channel. This native was taciturn and observant of such natural circumstances, to a degree that made his opinion of value in doubtful cases. Such, for instance, as which of two channels, that might come both in our way, might be the main one; thus my last resource, when almost "in a fix," was to "tomar el parecer," as they say in Spain, of this aboriginal, and he was seldom wrong. At length, the cheering expanse of an open country appeared before us, and a finely shaped hill, half-covered only, with bushes. On reaching an elevated clear part, I saw extensive downs before me. The river turned amongst woods to the eastward, and I continued on our route to the north, sure of meeting with it again, as some fine forest ridges hemmed in the valley to the eastward. Besides the hill already mentioned (which I named Mount Inviting), there was a curious red cone some miles to the westward, crowned with a bit of rock, on which I longed to plant my theodolite. After crossing the plain, we entered an open scrub of *Acacia pendula* which gradually changed to an open forest, within which I met with a chain of ponds, and encamped in lat. 26 deg. 46' S. I immediately set out, with a man carrying my theodolite, for Mount Red Cap, distant from our camp about six miles. This little red cone had a very singular appearance, as we approached it from the east. A dark tinted scrub of flat-topped trees enveloped its base, on the outside of which the light and graceful *Acacia pendula* also grew on the grassy plain. I found the red rock to be the common one of the country, in a state of decomposition. It was hollowed out by some burrowing animal, whose tracks had opened ways through the thick thorny scrub, enabling us to lead our horses to near the top. From the apex, I obtained an extensive view of the country then before us, in many parts clear of wood to the verge of the horizon, and finely studded with isolated hills of picturesque form, and patches of wood. Looking backward, or in the direction whence we had come, our valley appeared hemmed in by more continuous ridges; and, towards the extremity of them, I could just recognise Mount First View, this being one of the distant cones I had seen from it. I took as many angles as the descending sun permitted, and then retraced our horses' tracks to the camp. Thermometer, at sunrise, 20 deg.; at 9 P. M., 47 deg.. Height above the sea, 747 feet.

7TH MAY.--Pursuing a N. W. course, we crossed a fine tract of open forest, then a plain, beyond which we entered a scrub of *Acacia pendula*, in which pigeons and quail were very numerous. Turning northward, now anxious again to see the river, on approaching this open country, we found what we considered the highest branch of it, in a chain of ponds

skirting the wood bounding the plains. Halting the party, I continued my ride a mile and a half further northward, to the summit of a clear ridge. From thence I saw an open country to the northward, with some little wood. On my right, or to the eastward, a double topped hill sate in the centre of this fine open country, and from the abundance of good pasturage around it, I named it Mount Abundance. We continued still to follow the now attenuated channel upwards, and found it to come from the west, and even south-west, leaving the extreme corner of the open downs, and leading us into a scrub. There, it formed two branches, in neither of which could we find any water, and had consequently to return to the last of its ponds, situated exactly at the close of the open country towards the S. W. There, we encamped in latitude 26 deg. 42' 27" S., thankful that we had been enabled by its means to advance thus far, and to discover so fine a tract of country as that watered by it. Thermometer, at sunrise, 48 deg.; at 4 P. M., 68 deg.; at 9, 30 deg..

8TH MAY.--This morning Fahrenheit's thermometer stood at 21 deg. in my tent, a degree of cold I should never have expected to have seen indicated from my own sensations, or from the state of the pond, which was not frozen, neither was there any hoar frost. The sun rose in splendour; pigeons cooed, and birds were as merry as usual in the woods. The business of the day was most exciting; I was to ride over the fine open country to the westward of Mount Abundance, and there look still for a higher branch of the river, or A river; confident that so fine a region could not be deficient in water, but more confident from what I had seen of the range to which we had approached so near. Riding to the N. N. E. in about two hours we came upon the identical river we had so long followed up. It was accompanied, as usual, by the *Acacia pendula*; had its rounded bergs; reedy water holes; and an open strip along the left bank. Crossing it I rode over towards an elevated part of the open downs, in hopes to obtain a sight of what the country was beyond, but I found that to be impossible, as it seemed boundless. So, turning, I ascended an elevated north-eastern extremity of Mount Abundance, and from it beheld the finest country I had ever seen in a primaevial state. A champaign region, spotted with wood, stretching as far as human vision, or even the telescope, could reach. It was intersected by river lines from the north, distinguishable by columns of smoke. A noble mountain mass arose in the midst of that fine country, and was so elongated in a S. W. and N. E. direction, as to deserve the name of a range.

A three-topped hill appeared far to the north of the above, and to the S. E. of the first described, another mass, also isolated, overlooking that variegated land of wood and plain. To the S. E. of all these, the peaks of a very distant range were just visible. I determined to name the whole country Fitzroy Downs, and to identify it, I gave the name of the Grafton Range to the fine mass in the midst of it. In hopes of obtaining an elevated view over the country to the westward, I endeavoured to ascend the northern summit of Mount Abundance, but although the surface to near the top was tolerably smooth, and the bush open, I was met there by rugged rocks, and a scrub of thorny bushes so formidable as to tear leathern overalls, and even my nose. After various attempts, I found I was working round a rocky hollow, somewhat resembling a crater, although the rock did not appear to be volcanic. The trees and bushes there were different from others in the immediate vicinity, and, to me, seemed chiefly new. It is, indeed, rather a curious circumstance, but by no means uncommon, that the vegetation on such isolated summits in Australia, is peculiar and different from that of the country around them. Trees of a very droll form chiefly drew my attention here. The trunk bulged out in the middle like a barrel, to nearly twice the

diameter at the ground, or of that at the first springing of the branches above. These were small in proportion to their great girth, and the whole tree looked very odd. These trees were all so alike in general form that I was convinced this was their character, and not a *LUSUS NATUROE*. [A still more remarkable specimen of this tree was found by Mr. Kennedy in the apex of a basaltic peak, in the kind of gap of the range through which we passed on the 15th of May, and of which he made the accompanying drawing.]

These trees grew here only in that almost inaccessible, crater-like hollow, which had impeded me in my attempt to reach the summit. [\*] Leaving the horses, however, I scrambled through the briars and up the rocks to the summit, but found it, after all this trouble, too thickly covered with scrub to afford me the desired view to the westward, even after I had ascended a tree on the edge of the broad and level plateau, so thickly covered with bushes. On returning and descending eastward towards the open country, I found a much more practicable way down than that by which I had ascended. Returning to the valley of the Cogoon, I passed between the two summits, and found a good open passage to the westward between the brigalow. Thermometer, at sunrise, 20 deg.; at noon, 70 deg.; at 4 P. M., 68 deg.; at 9, 30 deg.. Height above the sea 1043 feet.

[\* This remarkable plant constitutes a new and very curious genus of Sterculiads. It agrees with *STERCULIA* in the position of the radicle with respect to the hilum, but it is, otherwise, a *BRACHYCHITON*, with which it more especially corresponds in the singular condition of the seeds. These are placed, six together, in the interior of long-stalked, ovate, mucronate, smooth, deep brown follicles, of a tough papery texture, and lined with a thin fur of stellate hairs. The seeds themselves are also closely covered with starry hairs, which are so entangled that they hold the seeds together firmly; these hairs, however, are absent from the upper half of the seed, whose thin brittle vascular primine is shining, smooth, and marked with a brown nipple, the remains of the foramen. Within the primine lies the bony crustaceous secundine, which is quite loose, and seems as if it were independent of the primine. Eventually the end of the thin brittle primine breaks like an eggshell and the secundine falls out. The seeds themselves, remaining attached to each other and to the follicle, resemble six deep cells, or may be rather compared to half a dozen brown eggshells, placed on the broad end, from which the young have escaped through the point.

Sir Thomas Mitchell has named the genus after Sir Henry T. De la Beche, as president of a Society which has greatly encouraged him in his Australian researches; and in honour of a science which has occasionally thrown some light on his dark and difficult path. It may be scientifically described as follows:--

*DELABECHEA*.

CHAR. GEN. CALYX 5-fidus, valvatus. ANTHEROE congestae. STYLI. ... STIGMATA. ... FOLLICULI coriaceo-papyracei, 6-spermi, longe stipitati, intus stellato-pubescentes. SEMINA albuminosa, albumine bipartibili cotyledonibus foliaceis parum adhaerente, pube stellari basi vestita, inter se et fundo folliculi cohaerentia; PRIMINA laxa, tenui, fragili, apice foramine incrassato notata, SECUNDINA crustacea, demum libera chalaza magna circulari notata. EMBRYONIS radicula hilo contraria.

*DELABECHEA RUPESTRIS*.

ARBOR grandis, trunco in dolii speciem tumescente. LIGNUM album, laxum, mucilagine repletum, vasis porosis (bothrenchymate) maximis faciem internam cujusque zonae occupantibus, radiis medullaribus tenuibus equidistantibus. FOLIA lineari-oblonga, acuminata, integerrima, in petiolum filiformem ipsis duplbreviorem insidentia, subtus pallida et quasi vernice quadam cinerea obducta. INFLORESCENTIA axillaris, trichotoma, tomentosa, foliis brevior. CALYX valvatus, utrinque tomentosus.

The wood of the tree has a remarkably loose texture: it is soft, and brittle, owing to the presence of an enormous quantity of very large tubes of pitted tissue, some of which measure a line and half across; they form the whole inner face of each woody zone. When boiling water is poured over shavings of this wood a clear jelly, resembling tragacanth, is formed and becomes a thick viscid mass; iodine stains it brown, but not a trace of starch is indicated in it. No doubt the nutritious quality of the tree is owing to the mucilage, which is apparently of the same nature as that of the nearly allied Tragacanth tree of Sierra Leone (STERCULIA TRAGACANTHA).

It is not a little remarkable that the barrel-like form of the trunk should be almost exactly paralleled by another Sterculiad, the CHORISIA VENTRICOSA of Nees, called by the Brazilian Portuguese PAO BARRIGUDO. It seems, however, that a tendency to a short lumpish mode of growth is common among the order, as is indicated by the Baobab of Senegal, which is almost as broad as it is long, and the great buttress trees, or Silk-Cottons of tropical America.--J. L.]

9TH MAY.--The thermometer stood at 19 deg. in my tent this morning, yet no ice appeared on the adjacent pool; for this reason, we named that branch of the river Frosty Creek. In order to leave a more direct track for Mr. Kennedy to follow with the drays, I made the carts return about two miles to the spot where we first made these ponds. There I had a trench cut across the track to the camp we had quitted, and also buried a letter for Mr. Kennedy, in which I instructed him to avoid that detour which might have otherwise led him into scrubs. We then prolonged our track from the south, northward across the open downs. I travelled in the direction of the meridian, and most of our route, this morning, marked a due north line. We came, at length, upon a watercourse which I took for our river, as the banks were finely rounded, the ponds full of water, and the woods quite open. The scenery was parklike and most inviting. The watercourse, soon, however, dwindled into a mere chain of ponds, and these at last were found to contain no water, when we had completed our day's journey. Open downs surrounded us, and fortunately I could still distinguish my rocky position of yesterday, where I had noted that the general direction of the river channel we had now again left, bore N. W. We were still much to the southward of the line so observed, apprehending, as I did think then, that some tempting plains might take us too far along some western tributary. Riding in search of water, I perceived a column of smoke to the northward; and, taking the party in that direction, we found, in the first valley we fell in with, a chain of ponds, and in one of these water enough for our use, whereupon I gladly encamped. This day we discovered a new EUCALYPTUS which casts its bark in small angular pieces.[\*] Latitude, 26 deg. 33' 34" S. Thermometer, at 4 P. M., 74 deg.; at sunset, 63 deg.. Height above the sea, 1299 feet.

[\* E. VIMINALIS (Hook. MS.); foliis alternis glaucis lineari-lanceolatis breviter tenuiter petiolatis subfalcatis utrinque acuminatis reticulatovenosis, nervis lateralibus marginem prope, racemis paucifloris

axillaribus, calyce turbinato in pedicellum brevem attenuato.]

10TH MAY.--Continued nearly northwards, over fine open forest land. The sprinkling of mountains of peculiar forms here and there, and the open country, which showed a bluey distance, were new features in the scenery, and most pleasing to us, so long accustomed to travel through a level woody country. The visible possibility of overlooking the country from any eminence, is refreshing at all times, but to an explorer it is every thing; besides he is not half so much in danger of wanting water, when in the neighbourhood of mountains: with these sentiments I went forward this morning, even although rather despairing of seeing more of our friendly river. We crossed two chains of dry ponds, apparently some of its highest sources. Still I travelled steadily towards a fine mountain before us, over open downs, but with scrubs on either side. Reaching a dry bushy hill S. E. of the mountains, about the time we should have encamped, I perceived that the country sloped most to the eastern side of it, which was rather out of my course; for the sake of finding water more readily I got into a water-course falling that way, and followed it down. This, opening soon into grassy flats, enabled us to avoid the scrubs. The welcome white-trunked Eucalyptus next over-hung the holes of the water-course, and the valleys spread into beautiful open plains, gracefully fringed with *Acacia pendula*. Still, the ponds were dry. I crossed a bare grassy eminence, and, where several channels met, I saw luxuriant white trunks; heard and saw many cockatoos of the same colour (*PSITTACUS GALERITUS*); and found there an abundant pond of water, beside which we encamped. On some of the Eucalyptus trees grew a beautiful *Loranthus*, which was new to us; it proved to be one formerly discovered by the indefatigable Allan Cunningham, but only now described by Sir William Hooker.[\*] Thermometer, at sunrise, 28 deg.; at 4 P. M., 76 deg.; at 9, 38 deg.;-- with wet bulb, 34 deg..

[\* *L. NUTANS* (All. Cunn. in Hook. Herb.) totus incano-glaucescens, foliis oblongis ellipticis sublanceolatis obtusis coriaceis obscure trinerviis tenui-rubro-marginatis basi in petiolum mediocrem attenuatis, pedunculis axillaribus longitudine petiolorum racemosis compositis, floribus ternis nutantibus, calycibus globoso-campanulatis ore contracto, petalis linearibus.--Two varieties, a narrow-leaved and a broad-leaved, were subsequently discovered; that now described was the narrow-leaved form.]

11TH MAY.--I ascended the mountain accompanied by two men with axes, and one carrying my theodolite. The summit was covered with thick scrub interlaced with vines, but my horse could push his way almost any where. I fortunately found a rock near the summit, and, on throwing down a few of the trees about it, obtained an extensive view over the country to the northward. Open downs surrounded the mountain. Beyond these, valleys, also clear of trees, or thinly wooded, fell on one side to the S. E., on another side, other valleys fell to the N. W., leaving a rather elevated tract between; which appeared to connect this mountain with a range just dimly visible, bearing nearly north. The valley descending towards the N. W., seemed to me to be the head of a river likely to pass through a remarkable gap in a flat range, beyond which the view did not extend. To the westward a woody, and rather level country appeared, from which I thought I saw ridges, with plains or downs between them, descending towards the N. W. river.

Anxious to discover the division of the waters, I carefully levelled my theodolite and swept the northern horizon, but found, to my surprise, that the country to the westward was lower than the hill on which I stood, and that the ridge northward with the gap in it, was lower still,

the only greater elevation visible being the lofty mass bearing about due north. Could this be all the obstruction I was prepared to open a pass through? Could the hidden mystery of the division between the northern and southern waters be here? Far in the east, a river line was evident from columns of smoke, as well as from the termination of various lateral ranges, between my position and the great mountain to the northward. That was, probably, still the Balonne falling southward. Here I had found an interior river that would, at all events, lead north-west, and this I resolved to follow. On this mountain there grew, in several spots, the remarkable trees I had first seen on Mount Abundance; some of them much resembling bottles, but tapering near the root. On descending and returning to the camp, which was about five miles from the hill, I found eight natives, who had come frankly forward to the party during my absence. I was very glad to see them, and gave to an old man, a tomahawk to express my sentiments, and welcome the strangers, for little could be understood by our native, of their speech, or by them, of his. We did, however, make out from them, that the hill I had just returned from, was "Bindango;" its lesser brother to the westward of it, Bindyego; and the ponds or creek beside which we were then encamped, "Tagando;" all very good sonorous names, which I was glad to adopt at once in my notes and map. These natives were coloured with iron-ochre, and had a few feathers of the white cockatoo, in the black hair of their foreheads and beards. These simple decorations gave them a splendid holiday appearance, as savages. The trio who had visited us some days before, were all thoughtful observation; these were merry as larks, and their white teeth, constantly visible, shone whiter than even the cockatoo's feathers on their brows and chins. Contrasted with our woollen-jacketted, straw-hatted, great-coated race, full of work and care, it seemed as if nature was pleased to join in the laugh, at the expense of the sons of art. Sun never shone upon a merrier group of mortals than these children of nature appeared to be. One amongst them was a fine powerful fellow, whose voice sounded so strongly, that it seemed as if his very whisper might be heard half a mile off. The old man remained by our fire all night; the others who, as I understood, were all his sons, had departed about 11 P. M., having left their gins in the vicinity. Thermometer, at sunrise, 22 deg.; at noon, 76 deg.; at 4 P. M., 59 deg.; at 9, 35 deg..

12TH MAY.--I took a ride in the direction where I hoped to find a river flowing towards the interior, according to my observations at Mount Bindango. I rode over an open plain, or open forest country, soon found the dells marked by water-courses, and, at length, the channel of a river, with the Yarra trees. Following this new channel downwards a short way, I found the beds of the ponds moist, and seven emus, running from one a-head of me, first indicated the situation of a large pond; from which three wood-ducks also waddled away as I approached it. This water was only fifteen miles from where I had left the party encamped, to which I hastened back with the tidings of a discovery that was likely to expedite so much our momentous journey. Thermometer, at sunrise, 30 deg.; at noon, 81 deg.; at 4 P. M., 59 deg.; at 9, 52 deg.;--with wet bulb, 51 deg.. Height above the sea, 1168 feet.

13TH MAY.--I buried a letter here for Mr. Kennedy. This day the party crossed the dividing ground, which I found to be elevated only 1563 feet above the sea, and consisting, as already stated, of fine open grassy downs, sprinkled with *Acacia pendula* and other shrubs. One or two knolls projected, however, and resembled islands in a sea of grass. I rode to one and found it consisted wholly of trap-rock in nodules. This was the first trap I had seen during the journey beyond the Barwan, and from their aspect I thought that other minor features of the mountains

Bindango and Bindyego, which I had not leisure to examine then, also consisted of this rock. The little knoll I did visit, was about one hundred yards in diameter at its base on the plains, and was covered with trees wholly different from those in the adjacent forest, namely, CALLITRIS PYRAMIDALIS, EUCALYPTUS (Iron-bark species), etc. We next descended to a separate system of drainage, apparently falling to the north-west. Instead of following rivers upwards, as we had hitherto been doing, and finding them grow less, or taking a tributary for a main channel, we were now to follow one downwards, with the prospect of finding it to increase as we proceeded. The relief from the constant apprehension of not falling in with water was great, as each day's journey was likely to show additional tributaries to our new found river, and, of cou



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