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J.W. Lewin, del.

CAMPBELL'S RIVER, NEW SOUTH WALES.

Published April 1825, by John Murray London.

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GEOGRAPHICAL MEMOIRS

ON

NEW SOUTH WALES;

BY VARIOUS HANDS:

CONTAINING

AN ACCOUNT OF THE SURVEYOR GENERAL'S LATE EXPEDITION TO TWO NEW PORTS; THE DISCOVERY OF MORETON BAY RIVER, WITH THE ADVENTURES FOR SEVEN MONTHS THERE OF TWO SHIPWRECKED MEN; A ROUTE FROM BATHURST TO LIVERPOOL PLAINS;

TOGETHER WITH

OTHER PAPERS

ON THE

ABORIGINES, THE GEOLOGY, THE BOTANY, THE TIMBER, THE ASTRONOMY, AND THE METEOROLOGY

OF

NEW SOUTH WALES

AND

VAN DIEMEN'S LAND.

EDITED BY

BARRON FIELD, ESQ. F.L.S.

LATE JUDGE OF THE SUPREME COURT OF NEW SOUTH WALES AND ITS DEPENDENCIES.

"Give me a blessing; for thou hast given me a south land; give me also springs of water."—*Josh.* xv. 19. *Judg.* i. 15.

LONDON:

JOHN MURRAY, ALBEMARLE-STREET.

MDCCCXXV.

LONDON:
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TO THE

EARL BATHURST, K.G.

ETC. ETC. ETC.

ONE OF HIS MAJESTY'S PRINCIPAL SECRETARIES OF STATE,

THE FOLLOWING WORK

IS,

WITH HIS LORDSHIP'S PERMISSION,

MOST RESPECTFULLY AND GRATEFULLY INSCRIBED,

BY HIS OBLIGED AND OBEDIENT

HUMBLE SERVANT,

THE EDITOR.

PREFACE.

Such of the following papers and maps as are official documents, are made public by the liberal permission of the Noble Secretary of State for the Colonial Department, and of the Honourable Commissioners of His Majesty's Navy. Such of them as are part of the Transactions of the Philosophical Society of Australia are printed by the permission of their respective authors; for I am sorry to add, that that infant society soon expired in the baneful atmosphere of distracted politics, which unhappily clouded the short administration of its President, the present Governor of New South Wales. Let me hope that it is only a case of suspended animation, and that our little

society will be resuscitated by the new colonial government; for much every way is expected from the gubernatorial experience and decision of mind of the Governor-elect, the wisdom and learning of the Archdeacon, and the natural science and business-talent of the Colonial Secretary, whom the Linnæan Society will miss as *its* Secretary. (The present legal officers of the colonial government I had not the good fortune to meet; but I hear from all quarters of the sound judgment of the Chief Justice, and the professional knowledge of the Attorney General.) Let me hope that the progress of Australian discovery will still be stimulated by association, and fostered by power. In maritime geography, our Government may again avail itself of the able services of Captain King, who is anxious to complete his survey of the Australian coasts; and in interior geography, Mr. Oxley would engage, in the winters of three years, to fill

up the map of New South Wales, from Cape Moreton to Cape Howe—and that without prejudice to the duties of his office as Surveyor General. Such indeed is his ardour to finish what he has so successfully begun and continued, that he would sooner resign that valuable and important office than suffer another to bear away from him the honours of New Holland Interior Discovery. Of wood like all this, surely the Mercury of a scientific body might be made.

The zoology of New Holland is a still more untrodden field than the geography and the geology. The little glossary of its animal kingdom at the end of this volume is all that I have been able, with the assistance of the museum and my friends of the Linnæan Society, to compile. Some valuable papers upon the ornithology of Australia have recently appeared in the "Zoological Journal," and one still more compre-

hensive is now in preparation for the Linnæan Society; but this science is no longer the study of dried birds: dead animals tell few tales: Australia is the land of contrarieties, where the laws of nature seem reversed: her zoology can only be studied and unravelled on the spot, and that too only by a profound philosopher. Such an one is among us; and every circumstance now seems to point him out to a government, which is taking advantage of the peace of the world to turn its attention to national collections of science and art, as the public zoologist of our colonies in Australia. There is no delicacy in naming a man, who will rank with Cuvier and Lamarck,—I mean the author of "Horæ Entomologicæ." Ever since the establishment of these colonies, our government has employed a botanist in New Holland; and it is to such public munificence that we owe the masterly labours of Brown. England has always en-

couraged professors of botany at home, and employed botanical collectors in her colonies; but in zoology, no public instruction can be obtained in this country, and many of the private specimens, that are introduced into it, are suffered to be purchased from us by foreign public museums. It is surely a national disgrace that *we* should conquer and acquire colonies, and that *other nations* should reap the honour of their zoological history. At this moment, the interior provinces of India, the spicy groves of its islands, and the terra incognita of Borneo, are traversed in all directions by foreign naturalists, employed by different European powers, to gather that scientific harvest, which the valour or policy of England has rendered accessible. To show that I have only expressed the general feeling upon this subject among men of science, I will refer to a note in the "Horæ Entomologicæ," p. 457, and to the "Zoological Journal," No. 3, p. 309, and No. 4, p. 463.

The most important discovery, which the following pages record, is certainly that of the navigable river in Moreton Bay, four hundred miles to the northward of Port Jackson, since this is the direction in which it is desirable to extend the colony of New South Wales. The honour of this discovery has fortunately fallen to the lot of Mr. Oxley, to indemnify him for his double disappointment in the termination of the rivers Lachlan and Macquarie. The wonder is, not that he has discovered it, but that this adventure should have been reserved for him; for the master of one of the vessels belonging to the colonial government had been to Moreton Bay only a few months before Mr. Oxley, for the very purpose of survey; and Captain Cook, as long ago as the year 1770, suggested, that "some on board having, in addition to a small space where no land was visible, also observed that the sea looked paler than usual, were of opinion that the bottom of Moreton Bay

opened into a river:" and Captain Flinders, in the year 1799, in an expedition from Port Jackson for the express purpose of exploring this bay, says, that in Glasshouse Bay, the bay within Moreton Bay, "above the sixth island, the east and west shores, from being nine or ten miles apart, approach each other within two miles, and the space between them takes the form of a river; but the entrance was too full of shoals to leave a hope of penetrating by it far into the interior, or that it could be of importance to navigation; under which discouragement, and that of a foul wind, all further research at the head of Glasshouse Bay was given up:" but he adds, that "he judged favourably of the country on the borders of what seemed to be a river falling into the head of the bay, both from its thick covering of wood, and from the good soil of the sixth island, which lies at the entrance." It was in neither of these openings that the

Brisbane was at last discovered, but at the first islands; but these inflammatory descriptions were enough to provoke perpetual curiosity in the whole of Moreton Bay. This part of the coast did not lie within Captain King's instructions from the Admiralty. When such a river as the Brisbane has been discovered, after the skilful and investigating Flinders has pronounced it "an ascertained fact that no river of importance intersected the east coast of New Holland between the 24th and 39th degrees of south latitude," it seems advisable for the colonial government actually to enter by boats every inlet of its neighbouring coasts; and encouragement is held out even to private adventurers, like Mr. Berry, to take nothing upon trust, but to explore with their own eyes every creek and cranny of the coast, that may lie in the way of their little vessels. The increase of the colonial coasting trade, to the northward, in coals

and timber, and to the southward an opening of the spermaceti whale fishery to small colonial craft, by repealing that port-regulation which says that no ship, having made sail, shall again come to anchor within the heads or harbours of Port Jackson and the Derwent, which repeal can only be made when fewer of the convicts are kept at or near Sydney and Hobart-town, would be highly favourable to the discovery of rivers, the want of which is the only defect in the colonies of New South Wales and Van Diemen's Land. "Thou hast given me a south land; give me also springs of water."

BARRON FIELD.

London, Feb. 28, 1825.

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Map of the River Boyne.
Map of the Country between Bathurst and Liverpool Plains.
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Two Botanical Plates.

ERRATA.

Page 41, line 7, *for* bonitas, *read* bonitoes.
Pages 143, line 11, and 160, line 5, *for* angophera, *read* angophora.
Page 316, line 15, *dele* " or obliqua of L'Heritier."
Page 333, line 14, *for* 20, *read* 22.
Page 344, line 16, *for* costæ, *read* costa.
Page 405, line 8, *for* holuthuria, *read* holothuria.
Page 429, line 10, *for* on, *read* of.

REPORT

OF

AN EXPEDITION

TO SURVEY

PORT CURTIS, MORETON BAY, AND PORT BOWEN,

WITH A VIEW TO FORM

CONVICT PENAL ESTABLISHMENTS THERE,

IN PURSUANCE OF THE RECOMMENDATION OF THE COMMISSIONER OF INQUIRY INTO THE COLONY OF NEW SOUTH WALES.

By JOHN OXLEY, Esq.

SURVEYOR-GENERAL OF THE TERRITORY.

REPORT,

&c.

Surveyor-General's Office,
Sydney, 10th Jan. 1824.

SIR,

I HAVE the honour to report to you, for the information of his Excellency Sir Thomas Brisbane, my proceedings, in the execution of the instructions contained in your letter of the 19th September last.

I sailed from this port in his Majesty's cutter Mermaid on the 23d October, and on the 5th November following I anchored in Port Curtis, after a tedious passage, occasioned by adverse north-easterly winds and strong southerly currents.

From the description of the islands forming the N.E. side of this port, by Captain Flinders, I considered that the purpose of my mission would be best answered by commencing the examination of the country on the S.W. side, or mainland, and

I now respectfully submit, for his Excellency's consideration, the result of a minute examination of the S.W. coast of this port, extending from the north head of Bustard Bay to Mount Larcom, and in which I was occupied sixteen days.

Port Curtis is a very difficult harbour for shipping to enter. Numerous sand shoals extend off from the mainland nearly to Facing Island, and these are not distinguishable until nearly low water, the rapidity of the tides causing the water to assume the same turbid appearance in the deep channels as on the banks. The best and most marked channel for large ships is the one close to Facing Island, which must not be approached nearer than five fathoms. From that depth the water shoals suddenly to the bank or reef which surrounds the island, and which does not show itself except at low water. When Gatcombe Head bears north, the channel widens considerably, and ships may anchor in security. A S.E. wind and ebb tide however cause a considerable sea, and there being no coves in which small vessels can lie out of the set of the tides, it cannot be considered as a good harbour for vessels of small burthen.

The coast of the mainland is covered with mangroves, extending in some places more than half a mile back, and the shore at low water is rendered almost inaccessible by extensive mud-flats. South-shore Head is the only point where a landing could be effected at any time of tide. The country between South Trees Point and Mount Larcom is broken into low stony ridges: in the valleys the soil is a poor sand; and in a space of eight miles by about four I did not see two hundred acres of even tolerable land. The stony ridges terminate in mangrove swamps on the harbour, and the whole of this range is bounded in by steep rocky hills, covered with quartz and coarse sandstone. Near to South Trees Point, the hills appear at a distance somewhat better, as they are thinly timbered, and thickly covered with grass: the principal rocks are of slate, and the whole surface is spread with small pieces of quartz, granite, and a sort of shale.

On the west side of South Shore Head, a small rill discharges itself into a salt-water creek, accessible in boats at high water, when the stream can be approached within a quarter of a mile; and

nearly four miles west from this, is another smaller one, but it is lost among the mangroves.

On the banks of the first stream a few acres of the best land I saw are to be found; and a low range communicates with the harbour at South Shore Head.

Both the streams I have mentioned derive their source in the rocky hills to the S.W. Their course is very short; but insignificant as they are, they appear from the flood-marks to be, in the rainy season, the channels of considerable torrents. With the exception of these rivulets, I saw no other fresh water, and as the country was strictly examined between the head of the inlet round South Trees Point (which proved to be an island half covered at high water) and Mount Larcom, I feel satisfied no other waters exist in that tract, except during the rainy season, when a few ponds (dry when I saw them) in some of the valleys will necessarily be filled.

The timber in the tract of country above described consists entirely of a diminutive species of eucalyptus, quite useless for any domestic purpose, and fit only for firewood. Neither did the

view obtained of the more distant country warrant the probability of any timber of a better description being found, as I saw nothing but rocky hills, on which it was impossible for any thing like timber to grow.

South from Gatcombe Head we discovered a rapid mountain stream, which received the name of the Boyne. The entrance is nearly blocked up by sand-banks. At high water there may be from ten to twelve feet in the channel. About three miles from the entrance the rapids begin. It is however navigable at high water for large boats about four miles further, when the river becoming fresh, navigation is stopped. Between this point (marked A on the map) and the entrance, I did not see any fresh water. The country was, alternately on either shore, low forest hills of a better description than before seen, but so stony as to be almost incapable of cultivation. The intermediate flats were composed of a good light sandy soil, apparently much flooded, since between this point and the entrance flood-marks were observed twenty-five feet above the usual level. From the hill marked A, the anchorage under Facing Island was seen,

and signals from Gatcombe Head might be distinguished. A flat of good land extends a short distance to the N.W. from this hill, and is bounded by other broken ranges of stony hills, affording very good pasturage. To the south the country rises into lofty rocky ranges; but to the S.W., though considerably elevated and broken, it seemed as if capable of affording good pasturage.

From point A the river was examined twelve or fourteen miles further, the whale-boat being dragged over a succession of rapids, separating deep and picturesque reaches of the river. Much rich alluvial land was seen, and the hills, though very stony, were covered with grass. The floods appeared to rise between forty and fifty feet, and all the flats bore marks of being deeply flooded. No fresh water was found except in the river, which, when confined within its natural banks, is in some places an eighth of a mile wide, the outer banks much wider, but both insufficient to afford a channel to the great accumulation of waters, which, according to every appearance, is periodically discharged by this river from the mountains in the vicinity. The hills rest on a

granite base, though in two or three places, where the banks had been washed away by the torrents, large masses of blue slate rock were discovered. The timber was universally small and useless. A few large trees growing on the flooded lands can scarcely be called an exception, as they consisted of an inferior species of eucalyptus; and a few acres on two or three spots on the bends of the river were covered with vines and brush, among which the light timber trees common to Port Hunter were seen, as were also some coarse cedar trees, of little value or utility.

The flat flooded lands on the banks of the river are of no great extent: the soil is a deep rich sand, and capable of producing any crops suitable to the climate. Many of the hills, though very stony, did not seem unfit to be applied to the cultivation of coffee, while the general openness and grassy nature of the country would seem well adapted for grazing, if the apparent scarcity of water, away from the river, did not greatly diminish the chance of its profitable application to that purpose.

Facing Island, which protects Port Curtis from the sea, is so scantily supplied with good water,

at least at this season (November), that, independently of its being generally unfertile and destitute of useful timber, it did not appear to be capable of affording a subsistence for more than half a dozen families. There were many indications of mineral substances found on the island; and some trifling specimens were procured which seemed to contain copper and tin.

Having viewed and examined, with the most anxious attention, every point that afforded the least promise of being eligible for the site of a settlement, I respectfully submit it as my opinion, that Port Curtis and its vicinity do not afford such a site; and I do not think that any convict establishment could be formed there that would return, either from the natural productions of the country, or as arising from agricultural labour, any portion of the great expense which would necessarily attend its first formation. In short, it did not appear to me that the country, taking it in an extended sense, could either afford subsistence, or supply the means of profitable labour, for a large establishment; and even in one on the smallest scale, the greatest difficulties would arise

from the scarcity of timber for building, and of bark and shingles for covering. The station the best watered, and of easiest access, is the inlet to the west of South Shore Head; and for agricultural purposes, the station marked A on the map of the River Boyne.

The coast between the Boyne River and the north head of Bustard Bay affords two other inlets, the easternmost of which, called Rodd's Bay by Captain King, is of considerable extent, with good anchorage and shelter for vessels of all descriptions. The country was examined in the vicinity of this last, but no permanent fresh water being found, nor any timber fit for building, and the general character of the country being precisely similar to that surrounding Port Curtis, it will be needless to enter into a detailed description of it. It was equally destitute of any inducement to form a settlement on its shores.

The length of time consumed in the examination of Port Curtis, the winds prevailing almost constantly from the N.E., the approaching rainy season, and the excessive heat of the weather, induced me to defer the examination of Port

Bowen to a more favourable season, when greater time could be devoted to it. I therefore returned to the southward, and entered Moreton Bay on the 29th November, anchoring the vessel close to Point Skirmish, at the entrance of Pumice-stone River.

Pumice-stone River had been so thoroughly examined and well described by Captain Flinders, that I conceived it would answer no useful purpose to go over the same ground; but considering the west shore of Moreton Bay as only cursorily examined, I determined to trace it entirely round, in the hope to find, in such an extensive inlet, some opening which would render an apparently fine country of more utility and value than it could be expected to be, if the accounts of the scarcity of fresh water here were correct.

Our first day's survey terminated a little above Red Cliff Point. The shores are in general low and covered with mangroves, off which extend considerable mud-flats, dry at low water; but to this remark the shores in the vicinity of Red Cliff Point are an exception. The water is here deep within a short distance of the shore, and the

country about it is open forest, of an indifferent quality of clay land, with an admixture of sand. A few miles behind Red Cliff Point, to the west, the country again becomes low, and is apparently wet, but soon rises into open forest-hills. There was no want of permanent fresh water, though not in streams; and in an inlet marked B is abundance of good timber of the eucalyptus and pine species.

Early on the second day (December 2d), in pursuing our examination, we had the satisfaction to find the tide sweeping us up a considerable opening between the First Islands and the mainland. The muddiness of the water, and the abundance of fresh-water mollusca, convinced us we were entering a large river; and a few hours ended our anxiety on that point, by the water becoming perfectly fresh, while no diminution had taken place in the size of the river, after passing what I have called Sea Reach. Our progress up the river was necessarily retarded by the obligation of making a running survey during our passage. At sunset we had proceeded up the river about twenty miles. The scenery was peculiarly beautiful—the country

on the banks alternately hilly and level, but not flooded—the soil of the finest description of brush land, on which grew timber of great magnitude, of various species, some of which were unknown to us. Among others a magnificent species of pine was in great abundance. The timber on the hills was also good; and to the south-east, a little distant from the river, were several brushes or forests of the common Australian cypress-tree (Callitris Australis) of large size. Up to this point the river was navigable for vessels of considerable burthen, if not drawing more than sixteen feet water. The tide rose about five feet, being the same as at the entrance.

The next day the examination of the river was resumed; and, with increased satisfaction, we proceeded about thirty miles further, no diminution having taken place either in the breadth or the depth of it, except that in one place, to the extent of about thirty yards, a ridge of detached rocks stretched across, having not more than twelve feet at high water. From this point to Termination Hill, the river continued of nearly uniform size; the country being of a very superior description,

and equally well adapted for cultivation and for grazing; the timber abundant, and fit for all the purposes of domestic use or exportation, while the pine-trees, if they should prove of good quality, were of a scantling sufficient for the topmasts of large ships. Some were measured upwards of thirty inches in diameter, and from fifty to eighty feet without a branch.

The boat's crew were so exhausted by their constant exertions under a vertical sun, that I was most reluctantly compelled to relinquish my intention of proceeding to the termination of tide-water. At this place the tide rose about four feet six inches, the force of the ebb-tide and current united being little greater than the flood-tide—a proof of its flowing through a very level country. Nothing, however, indicated that I should speedily arrive at that termination; and being upwards of seventy miles from the vessel, with not more than another day's provisions (not having expected to make such a discovery), I landed on the south shore for the purpose of examining the surrounding country. On ascending a low hill rising about 250 feet above the level of the river, which I called Ter-

mination Hill, I obtained a view of its apparent course for thirty or forty miles, and saw a distant mountain (which I conjectured to be the "High Peak" marked on Captain Flinders's chart) bearing S. $1\frac{1}{2}^{\circ}$ E. distant from twenty-five to thirty miles*. Round from this point to the N.W., the country declined considerably in elevation, and had much the appearance of an extended plain, formed of low undulating hills and vales, well, but not heavily, wooded. The only elevations of magnitude were some hills seven or eight hundred feet high, which we had passed to the northward. The appearance of the country, the slowness of the current even at ebb-tide, and the depth of water, induced me to conclude that the river will be found navigable for vessels of burthen to a much greater distance, probably not less than fifty miles. There was no appearance of its being flooded, no mark being found higher than seven feet above the level, which is little more than would be caused by the flood-tide

* This cannot be the case, because Mr. Oxley places Termination Hill within six miles of the position that Captain Flinders has assigned to his "High Peak." The mountain must therefore be some part of the range to the north-west of Mount Warning.—P. P. KING.

at high water forcing back any unusual accumulation of waters in rainy seasons.

The nature of the country, and a consideration of all the circumstances connected with the appearance of the river, justify me in entertaining a strong belief that the sources of the river will not be found in a mountainous country, but rather that it flows from some lake, which will prove to be the receptacle of those interior streams crossed by me during an expedition of discovery in 1818; but whatever may be its origin, it is by far the largest fresh-water river in New South Wales, and promises to be of the utmost importance to the colony, as it affords communication with the sea to a vast extent of country, a great portion of which appeared to me capable of raising the richest productions of the tropics.

Proceeding S.E. from the river, we found a gently undulating country of good soil, declining in elevation towards the south, the peak beforementioned being the only high land in the direction from N.E. to south.

As the position of the entrance of the river was to be fixed, and the channels examined, I lost no

time in returning down the river with the ebb-tide, and at sunset stopped at the foot of a hill about ten miles down it. This was ascended in the morning, and the view from it was more extensive than I had anticipated. The high mountain-range, of which Mount Warning is the nucleus, appeared gradually to lose itself to the westward; and with the exception of the peak before-mentioned, which is the termination of the north end of the Mount Warning range, there was scarcely an elevation above the low undulating level. If any range of hills of ordinary magnitude had had place within fifty or sixty miles, it must have been seen.

So much time was spent in examining the country about "Sea Reach," that it was dark when we got to the entrance of the river, which from respect to His Excellency the Governor, under whose orders the bay was examined, was honoured with the name of the Brisbane River. The whole of the next day was spent in sounding the entrance and traversing the country in the vicinity of Red Cliff Point, and we did not reach the vessel until late in the night of the 5th December, amply

gratified by the discovery of this important river, as it afforded every reasonable ground for expecting that the most beneficial consequences would result to the colony by the formation of a settlement on its banks.

I feel it impossible to enter into a nautical description of so extensive an inlet as Moreton Bay. The draught given of it by Captain Flinders, so far as it comprehends the track passed over by him, is extremely correct, but the whole extent of the bay is no by means included in his map. There are numerous sand-banks in the bay, divided and separated by deep-water channels of various depth and magnitude. It would require many months to make a complete marine survey of it, and this would prove of little service unless the channels were buoyed. I do not think, however, that there would be any difficulty in taking a ship, whose draught of water does not exceed eighteen feet, as high as Red Cliff Point, being about twelve miles above Mount Skirmish, which is the N.W. point of the bay. Above Red Cliff Point to the entrance of the river, the channels would require to be well ascertained before vessels of large size could proceed

up the river. There is, however, no great danger, as the shoals are of soft mud, and the water quite smooth. A narrow sand-bank appeared to me to extend across from Cape Moreton, at the entrance of the bay, to the mainland. On this bank I did not find more than three fathoms at low water; but as the distance across is full twelve miles, many deeper channels may have escaped my observation.

Pumice-stone River affords good anchorage for vessels not drawing more than twelve feet water. The best channel is close to the mainland. There is plenty of fresh water in the vicinity of Point Skirmish; and though the soil is poor and sandy, the country is covered with good timber. Among other species, the *Callitris Australis* is most abundant. It grows close to the shore, and can be procured of considerable size, adapted to most of the purposes requisite in buildings.

Should a settlement be formed in Moreton Bay, the country in the vicinity of Red Cliff Point offers the best site for an establishment in the first instance. It has an easy communication with the sea, there is not that difficulty experienced

in effecting a landing which other situations in the bay present, and the country to the west of the point will communicate with the interior. It is about ten miles to the north of the entrance into Brisbane River, and must be passed by all vessels intending to enter it. Red Cliff Point must, however, be viewed more in the light of a naval post or depôt for stores than as being well adapted for a principal settlement. The Brisbane River presents so many superior situations, that although a post at Red Cliff Point may, in the first instance, be indispensable, yet the country on the west side of the river, at the termination of the Sea Reach, appears to me a much better site for a permanent establishment. The river is not fresh there, but there is plenty of fresh water: the country is open, and no obstacles exist from swamps or hills to prevent a ready communication with the interior, either by the banks of the river, or at a distance from it. The water is deep close to the shore, and vessels of considerable burthen could load or unload close to the bank. From a hill near this last station, the entrance of the bay can be seen; and by clearing a few trees, com-

munication by signal may be held with Red Cliff Point. The ground is dry and of moderate elevation, and it receives the full force of the sea breeze.

The bay abounds with what are called in the colony mullet, whiting, king-fish, and flat-fish. The natives, in the intercourse we had with them, appeared to possess a most friendly disposition. They are very numerous, and are, to a certain extent, superior in their domestic habits to the savages inhabiting the more southern coasts. For a more detailed description of these people, I beg to refer you to the information obtained by Mr. Uniacke during my absence from the vessel, and which is appended to the accompanying Journal.

There are several islands in the upper part of Moreton Bay, to the southward of the entrance into Brisbane River, two of which are formed of dry good land, with water on them: the others are mere mangrove swamps.

We had little opportunity of making any nautical corrections of the present excellent charts of Captain Flinders. We, however, discovered that the land of Point Lookout is an island, and that Moreton

Bay extends as far south as 28°, where it communicates with the sea by a shoal channel through a sandy beach navigable for boats.

We had also the satisfaction to discover that the high lands of Mount Warning discharged their waters into the sea, by means of a considerable stream, which empties itself close to Point Danger. Across the entrance there is a bar, having twelve feet water on it at half-tide: there may probably be fourteen feet at high-water. I had not time to proceed up it beyond a few miles; but this was sufficiently far to perceive that the river had its source to the west of Mount Warning. The country appeared good, and abounded with fine timber.

I derived an additional source of satisfaction in the discovery of this river, since it established the point that the Brisbane River did not receive its waters from the lofty ranges of the sea-coast, and that as its course had passed the N.W. extremity of the coast-ranges, it must derive its waters from some part of the S.W. interior.

From the observations of others, added to my own limited knowledge of the winds and weather

on this coast, I think that considerable difficulty will be experienced by vessels bound to the northward from October to February; and this difficulty increases after passing Break-sea Spit, when the N.E. trade-wind, varying occasionally to the S.E., undoubtedly prevails, at this season blowing with great strength. To the southward of Break-sea Spit the winds are more variable, being much influenced by the direction of the coast, which to that point is nearly north and south. The currents to the south of Break-sea Spit, at a distance of fifteen or twenty miles from the shore, set strong to the south. Near the shore there is little current, and I have there found it setting to the north. In order to make a good passage during the summer season, I would recommend vessels to keep the land close on board. There are no hidden dangers, and, besides being out of the strength of the current, considerable advantage is obtained by being within the influence of the land-winds, which commonly blow off it during the night. As a proof of the general tendency and set of the currents, a log of cedar with a staple in it was found on the seashore on Moreton Island, which must have come

from Port Macquarie, being set along shore by a current from the southward; and close to it a cask and New Zealand canoe, which were recognised as belonging to the Echo whaler, which was shipwrecked on Wreck Reef about three years ago. On my return from Moreton Bay, at a distance of twelve or fourteen miles from the coast, the vessel was set fifty-eight miles to the south in twenty-two hours, and a current of nearly equal strength accelerated our return from Port Macquarie to Sydney. The existence of this southerly current at this season, and the situation of its greatest strength with respect to the coast, are points well known to the masters of vessels sailing out of this port.

I have the honour to transmit herewith a Journal of my proceedings, together with a corrected map of Moreton Bay, including Brisbane River; and also some alterations in the coast-line about Point Danger. The alterations and additions are coloured red. Detached draughts of the inlets in the vicinity of Port Curtis also accompany this Report.

From Lieutenant Stirling, of the Buffs, who accompanied me by direction of His Excellency, I

derived the greatest assistance; and it is principally owing to his skill, in the rapid and accurate delineation of the face of the portion of country we examined, that we were enabled to effect so much in so short a space of time.

I have the honour to be,

Sir,

Your obedient humble servant,

J. OXLEY.

To
Frederick Goulburn, Esq.
Colonial Secretary.

NARRATIVE

OF

MR. OXLEY'S EXPEDITION

TO SURVEY

PORT CURTIS AND MORETON BAY,

WITH A VIEW TO FORM

CONVICT ESTABLISHMENTS THERE,

IN PURSUANCE OF THE RECOMMENDATION OF THE COMMISSIONER OF INQUIRY.

By JOHN UNIACKE, Esq.

NARRATIVE,

&c.

On Tuesday October 21st, 1823, Mr. Oxley, Lieutenant Stirling of the Buffs, and I, embarked on board the colonial cutter Mermaid (Charles Penson, master), about noon, and proceeded down the harbour; but the wind proving unfavourable, we came to under Point Piper, where we remained till the next day at midnight, when a moderate breeze springing up we got under way and ran out of the harbour. Early on the morning of the 25th we came to an anchor off Port Macquarie, distant north from Sydney 175 miles. This place had been settled about two years before, as a penal establishment; but the excellence of the soil, the fineness of the climate, and its convenient distance from Sydney, made Government anxious to throw it open to free settlers, in case we should be successful in the object of our expedition.

Messrs. Oxley, Stirling, and myself, immediately went ashore, the sickness endured by the two former making them very anxious to leave the vessel. The line of coast before us was very beautiful, consisting of a succession of small headlands richly clothed with wood; while the darkness of the foliage was pleasingly relieved by the verdure of the grass, which here and there appeared in small open patches.

About a mile to the north lay the entrance of the river Hastings, beyond which was a long sandy beach extending six or seven miles, and terminated by a bold headland called Point Plomer. Across the entrance of the river is a sandy bar with about eleven feet at low water. With the wind at S.E. there are heavy rollers on it, making the approach to the town difficult and dangerous. We landed on the rocks to the south of the entrance, and found Captain Allman, the commandant, awaiting our arrival, with Lieutenants Wilson and Roberts, and Assistant-surgeon Fenton, all of the 48th regiment. They conducted us to Government House, where we breakfasted, and then walked out to see the place, accompanied by Captain Allman.

Considering that the site on which the town now stands was two years ago covered with immense forest trees, and thick brush-wood, it is quite incredible to what a state of perfection the place has been brought by the indefatigable activity of the commandant.

The Government House stands nearly in the centre of the town, on a handsome esplanade, open to the sea. To the northward, on a rising ground, which commands the whole town, are the military barracks, calculated to hold 150 men, each of the married men having a small cottage and garden. On the right of the hill are two handsome cottages, which are used as officers' quarters. The remainder of the town, which is extremely clean, is entirely occupied by the prisoners, who are kept as distinct as possible from the military, and who have each a small but neat hut, constructed of split-wood, lathed, plastered and white-washed, with a garden attached. The sites of the streets, intended to be built as the population of the town increases, are regularly laid out and fenced: the spaces between them are at present occupied as gardens and planta-

tions of maize, sugar-cane, &c. the latter of which appears to thrive remarkably well, and will (I doubt not) at some future period form a lucrative article of export from this establishment. We dined at the Government House, and a few of us walking down to the beach after dinner, were highly amused by a dance among the natives. These people are a much finer race than those in the neighbourhood of Sydney, many of them being upwards of six feet high. Their features are also more expressive of intellect, and their limbs better formed than any I had before seen. Some of the more civilized are victualled from the king's store of the settlement, and, in return, perform some of the duties of constable, in a more efficient manner than any European possibly could. Whenever (as frequently happens) any of the prisoners attempt to escape into the woods, they are instantly pursued by some of this black police, who possess a wonderful facility in tracing them; and being furnished with fire-arms, they seldom fail to bring them back alive or dead, for which they are rewarded with blankets, spirits, &c.—but should the

runaways even escape the black police, they are almost sure to perish by hunger or the hostility of the other Indians.

Having spent another day very pleasantly with Captain Allman and his officers, we left Port Macquarie with much regret, having been entertained there in a style which was far superior to any thing we could have expected in so recent an establishment, and which could only be exceeded by the extreme kindness and polite hospitality of every officer connected with the settlement.

We met the boat at the rocks where we had landed, and with some little difficulty, on account of the surf, reached the cutter at two o'clock on Monday, 27th October. The wind being fair, we immediately got under way, and continued our course to the northward till Friday afternoon, when it shifted, and came on to blow so hard, that we determined to run in shore and look out for anchorage; this we found under the lee of a small island off Point Danger (so named by Captain Cook), about a mile from the land. While running down for this place, we perceived the mouth of a large river about a mile and a half to the northward;

and next morning at daylight the master was despatched in the whale-boat to ascertain the possibility of taking the vessel into it. Shortly afterwards, Mr. Stirling and I landed on the island with our guns. The rock which formed the base was evidently of volcanic origin: it was of a dark colour, full of small holes and extremely hard, while on the western side were many regular circular cavities, some of which were about four or five yards in diameter at top, and tapered down gradually towards the bottom, which was usually filled with round stones. One of these holes, in particular, had a communication underneath with the sea, and at every returning surf threw up considerable quantities of water with a loud noise. The superincumbent rocks were basaltic, and those of a small rock to the N.W. of the island, as well as those of a bluff headland, immediately opposite on the main, were inferior only in extent to the Giant's Causeway in the north of Ireland. In ascending to the top of the island, we sank nearly knee-deep at every step in the bird-holes that undermined the surface. The inhabitants of these subterraneous dwellings were sooty peterels, mut-

ton-birds and red-bills, the last very good eating. We shot many of them, as the young ones were full fledged and got up in numbers round us, when disturbed by our falling into their holes. On the top of the island we were surprised to see some hundred pelicans seated quietly near their young, who, with the eggs, covered a considerable space. They did not appear at all intimidated, although they must have heard the reports of our guns several times. However, on our giving them a volley, which they did not seem to care more for than if it came from pop-guns, they slowly took flight, screaming frightfully. These birds were at least five feet high, and from the peculiar formation of the bill, the effect of such a multitude, drawn up as if in regular order, was very singular. Having taken a few of the young ones and eggs, we were proceeding to the place where we landed, when we observed what appeared to be part of a wreck on the N.W. point of the island. We immediately proceeded towards it, not without expressing a hope that it might prove the vessel of that unfortunate and universally lamented navigator, La Perouse, who is generally supposed to have per-

ished somewhere in these latitudes, having never been heard of since he left Port Jackson in the year 1789. It appeared to be the larboard quarter, with part of the stern and quarter-deck of a vessel of at least three hundred tons. The plank, which was of oak, was not yet totally destroyed. Though we formed a variety of ingenious conjectures on the subject, we could find nothing about the wreck by which we could at all determine what she had been. We then returned on board, where we found the master had arrived before us: he reported that he had examined the entrance and found two fathoms on the bar at low water, with deep water and secure anchorage further in. As the river appeared to run from the southward, and parallel with the shore for some distance, it was agreed that the mate should go after breakfast with a boat into the river, until opposite to where the vessel lay, when we were to join him by land and proceed to the examination of the upper part of the river. In the mean time Mr. Oxley and I landed again on the island, to take an observation and examine the wreck more closely; but nothing further was discovered by which we could in any

way identify her. We however picked up a piece of slate with part of a name deeply scratched on it, and also part of a case of mathematical instruments. Mr. Oxley then ascended the hill, while I walked towards the S.E. end of the island, accompanied by a native black of the name of Bowen, whom we had brought from Sydney. After spending some time in sauntering about, during which I found a quantity of fine sponge, and a large patch of excellent rock spinach, of which I took a great bundle on board, on approaching a small reef at the S.E. end of the island, I observed, to my great satisfaction, upwards of a dozen large turtles lying asleep on a small beach: I instantly despatched Bowen for assistance, and on Mr. Penson, the master's coming up, we were fortunate enough to secure seven, some of which were very large, two of them weighing above four cwt. The largest was so very unwieldy that we were obliged to cut its throat on the spot, otherwise we should not have been able to have brought it on board at all. Mr. Oxley and I then returned to the ship, and, after taking some refreshment, landed on the main, to proceed with the examination of the river: the

part of it where we found the boat extended over a large flat, being in many places above a mile broad, interspersed with numerous low mangrove islands, and very shallow, except in the channel, where we found from nine to two fathoms water.

The country on either side was very hilly, and richly wooded, and the view altogether beautiful beyond description. Having wandered out of the channel, we with some difficulty proceeded about four miles, when the river assumed a different appearance, being contracted to a quarter of a mile in width, with five fathoms water all across: the banks also wore a different aspect, being free from mangroves: the soil seemed rich, and the timber evidently improved in size and quality. The scenery here exceeded any thing I had previously seen in Australia—extending for miles along a deep rich valley, clothed with magnificent trees, the beautiful uniformity of which was only interrupted by the turns and windings of the river, which here and there appeared like small lakes, while in the back ground, Mount Warning (the highest land in New South Wales) reared its barren and singularly shaped peak, forming a striking

contrast with the richness of the intermediate country.

On the right bank of the river were standing one man and several women and children, all perfectly naked. They did not appear so timid as the Indians usually are, but remained quietly while we landed to search for fresh water, the river being still brackish. The man was curiously scarified all over the body, the flesh being raised as thick as my finger all over his breasts. He talked very loudly for some time, using much gesticulation, and frequently pointing to the other side of the river, where we had observed a number of native huts. We could not however obtain from him any information with regard to the object of our search; so after giving him some biscuit, which he tasted and instantly spat out again, we left him, and as it was now late, proceeded towards the vessel, resolving the next day to return and follow the river as far as circumstances would allow. We saw no weapons of any description among these people, with the exception of a stone hatchet hanging at the back of one of the women, which was of wretchedly rude formation. It was now agreed that the

mate and crew should remain with the boat in the river, where we had joined them, all night, and that Mr. Oxley and I should return on board to sleep, and come back with Mr. Stirling at daylight. However, just as we were preparing to land, the wind suddenly shifted to the S.W.; and as it seemed likely to continue steady in that point, Mr. Oxley thought it imprudent to lose the advantage of it, and therefore deferred exploring the river further till our return. The signal was accordingly made for the boat to return on board, and all hands were employed in getting the vessel under way. In the mean time a number of natives, amounting to about 200, collected on the shore opposite the vessel, and we could perceive with the glass that they had all spears. They continued quietly watching us till they saw the square-sail hoisted and the vessel under way, when they set up a loud shout, and continued dancing and shouting while we were within hearing. The little island under which we lay received the name of Turtle Island, in gratitude for the abundant supply of that fish which we procured from it. We also gave the name of the "Tweed" to the river. The

latitude of our anchorage is 28° 8′ S. and its longitude 153° 31′ 30″ E.

The night we left Turtle Island we experienced a very severe gale, but as it was in our favour, it did not much annoy us; and when it ceased, the next day, it fell quite calm, and the sea appeared perfectly alive with fish. The bonitas, skip-jacks, and other fish, were leaping in every direction as far as the eye could reach, while immediately round the vessel were several large sharks, but we were not fortunate enough to catch any.

The next day, Thursday, November 6th, at noon, we came to an anchor in Port Curtis, inside Gatcombe Head. Mr. Oxley immediately went away with the master in the long boat to sound, while Mr. Stirling and I went ashore at Facing Island in search of fresh water, from the want of which we had suffered severely during the last week, as all our water casks were old rum and wine casks, which, not having been properly washed out, had tainted all the water, so as to make it totally unfit for use: we found water in small quantities in a little glen, opposite the vessel, but unfortunately it was not well tasted; however, as no other could

be procured, the casks were sent ashore to be filled with it.

As the weather was intensely hot (the thermometer standing night and day at between 85° and 95° in the cabin), we ventured to bathe in defiance of sharks, and then returned on board to an early dinner, after which, at three o'clock, Mr. Oxley, Mr. Stirling, and myself, quitted the vessel with two boats, taking with us three days' provisions. Captain Flinders had visited this port in 1801, but was not able, from want of time, to examine it closely, which was the reason of our present visit to it. We directed our course to South Shore Point*, about six miles from the vessel, but found the mangroves so thick as to render our landing extremely difficult: we therefore steered for a sandy beach about two miles farther on, where, as it was low water, we landed at about six o'clock with some difficulty, and immediately pitched our tent and kindled a fire, the men making a comfortable little hut for themselves with the boat-sails, &c.

At daybreak next morning we were all stirring,

* Qu. Head?—P. P. King.

having been persecuted all night by musquitoes and sand-flies; and, after breakfast, at about six o'clock, we started across the country, leaving a corporal and three men in charge of the tents. The direction we took was about S.S.E. by compass, and the country we passed over the most unpromising I ever saw, being a succession of very steep hills, barren, and covered with sharp loose quartz stones; the only vegetable production being coarse grass and stunted gum-trees (eucalyptus).

We saw a few kangaroos, but could not get near enough to shoot them; and, after a most fatiguing march of about six hours, in which time we had hardly advanced twelve miles in a direct line, we stopped on the bank of a small rivulet, which, with another hardly equal to it in size, constituted all the fresh water we met with. In the course of our walk, we did not see a single native, nor were there any marks of their having lately been there. Near the river we found a grave at the foot of a large tree, the bark of which had been stripped off about six feet in height all round, and the wood deeply engraven with a variety of rude symbols, among which we could distinguish some resembling the

print left on soft ground by the foot of the kangaroo, the emu, and other animals. This was doubtless the grave of some great hunter.

After resting about an hour, we returned by the same track, one of the men having marked the trees with an axe as we proceeded; and at half-past five o'clock we reached the tents, the whole party completely exhausted. Indeed, the extreme heat of the weather and the ruggedness of our road made it certainly as bad as a walk of forty miles in England.

The next day about ten o'clock we started in the boat to discover the mouths of the rivulets we had passed the day before, and after rowing about two miles, we came to the mouth of a creek, up which we proceeded about six miles, when we found fresh water, but in so small a quantity as to be totally useless for the purposes of colonization. We then returned to our tent, where we spent another uncomfortable night, and next day struck our encampment and returned to the ship.

On our arrival on board, the master reported that he had discovered a fine fresh water river, emptying itself by an outlet, which was visible astern of

the vessel to the southward. From his account, Mr. Oxley was induced to defer our departure to Port Bowen another day, in order to have an opportunity of viewing it himself. Accordingly Mr. Stirling and he started early the next day, while I remained behind to collect specimens of minerals on Facing Island for the governor. Late in the evening they returned, having proceeded up the river to above where the tide reached; and Mr. Oxley deemed it of sufficient consequence to remain three or four days more, in order to examine the country more minutely. Accordingly, the next morning early we again left the vessel, taking three days' provision, and proceeded with one boat about twelve miles up the river, when we pitched our tent on a bank about forty feet above the level of the water. The soil here was of the richest description, and calculated to grow cotton, sugar, indigo, and all other Indian productions. There were however marks of the flood having reached at least 15 feet higher than the level of our encampment, owing to which the whole surface was covered about two inches deep with drift sand. Indeed the floods here, in the rainy season, must be

tremendous, as we observed in many of the trees, at least sixty feet above the level of the water, the wrack which had been deposited by successive inundations. On the banks we saw three or four different kinds of timber; but the small quantity rendered them unimportant. The river was covered with multitudes of teals, widgeons, and wild ducks; and on the banks I shot two swamp pheasants (a pretty black bird not unlike the English pheasant in shape*), a very beautiful species of small dove, not known at Sydney, and a kind of owl that none of us had seen before. Shortly after dinner we prepared to go to rest, with an intention of proceeding further up the river at a very early hour the next morning. But unfortunately rest was entirely out of the question. Soon after dark our tent was filled with musquitoes of a larger size than we had before seen: their noise alone would have been sufficient to banish sleep, but their sting was intolerable. In spite of all the precautions we could take, by covering ourselves completely with our cloaks, and every thing else we could lay hold of, although the thermometer stood at 94° all night

* *Qu.* Cuculus phasianus?—EDITOR.

in the tent, these little tormentors continued to persecute us in the most unrelenting manner till morning. We turned out the moment it was light, and went down to the river to bathe. Here we found the sandflies to the full as troublesome as the musquitoes; and seeing that our only remedy was to leave the place as soon as possible, we despatched our breakfast, and getting into the boat, proceeded about six miles further up the river. Not having seen any natives since our first entrance into Port Curtis, we did not think it necessary to place a guard over the tents, which we left standing, intending to return and pass another night in the same place. The country through which we passed this day was similar to what we had seen the day before. The timber was however becoming larger and more plentiful. In many places, the right bank of the river was composed of a remarkably fine slate, while the left was a hard close-grained gray granite, and the soil every where rich and fertile. Before we returned we ascended a high hill on the left, from which we had a beautiful and extensive view of the river for many miles, through a rich brush country, the banks in many

parts well clothed with timber. A very lofty range of hills formed a fine termination to the scene. On our return we were fortunate enough to shoot a brace of wild ducks, and catch a good dish of perch, with which, and many other descriptions of fish, this beautiful river abounds. We also saw several fresh-water tortoises.

It had originally been our intention to remain another day in this neighbourhood, for the purpose of examining the country at a little distance on either side of the river; but the torment we suffered from the musquitoes was such, that we resolved to return to the vessel the next morning. Accordingly, after spending another most wretched night, we struck our tent, and proceeded down the stream.

On arriving at the mouth of the river, we found it wanted about an hour and a half to low water; and as Mr. Oxley wished to see the bar at the entrance at that time, we landed and kindled a fire for the purpose of dressing our dinner; after which we once more embarked, and reached the vessel at about half-past four o'clock.

As we had intimated our intention to leave Port

Curtis as soon as we returned from the examination of the river, Mr. Penson sent the mate that morning to sound the channel at the entrance; and his not returning at night caused a considerable degree of anxiety on board, especially as there was a dangerous reef to the northward, about a mile and a half distant, among the breakers of which we feared he might have gotten. However, about half-past three o'clock on the following afternoon, he made his appearance, having been down the coast about twelve miles to the S.E., where he had discovered a large harbour, of which he gave such an account, as determined Mr. Oxley to abandon altogether the idea of going to Port Bowen, which, on account of the prevalence of northerly winds in this quarter, would have consumed more time than we could well spare; besides which, the increasing heat of the weather made us gladly avail ourselves of an excuse for not proceeding any farther to the northward.

To the river which we discovered here Mr. Oxley gave the name of the Boyne; but from the excessive floods to which it is subject, I fear it can

never be turned to account for the purposes of colonization.

The next morning (Saturday, Nov. 15th) we got under way, and stood out of Port Curtis. We found considerable difficulty in getting out, from the number of sand-shoals which lie across its entrance, and which have never been properly surveyed. They are apparently formed by the tremendous torrents which periodically descend down the Boyne river, from the range of mountains at the foot of which it flows. However, we at length found the channel, which, though narrow, will be sufficient for all the purposes of navigation, when thoroughly known and buoyed. It carries from five to seven fathoms all the way in.

We now stood away to the S.E. for the port above-mentioned as having been seen by the mate; and having entered it by a channel about half a mile wide lying between two sand-shoals, we came to an anchor at four o'clock P.M. in five fathoms water, in a place perfectly land-locked, and sheltered from every wind. The next morning Messrs. Oxley and Stirling went in a whale-boat to the

entrance of the port, to take angles for the purpose of laying down a chart; while I set off, accompanied by Mr. Penson, to discover, if possible, whether any fresh water fell into the harbour. We were not, however, successful; and after spending four hours in examining the different creeks, all of which ended in mangrove swamps, we returned to the vessel without having been able to procure a drink of fresh water. In all parts of the harbour, we saw a great many green and black snakes playing about in the water, while the number and boldness of the sharks exceeded credibility. They were continually striking at the oars, and one large one very nearly pulled the steer-oar out of Mr. Penson's hand.

In the course of the day I shot a very beautiful and uncommon kind of duck, which some of our crew had before seen in New Zealand, where it has the name of the Paradise Duck. The head and neck were white, the bill red, the back a glossy dark green, and the wings regularly striped with blue, yellow, green, and white. Its flesh, however, was dry, and very fishy.

On our return, the mate had discovered a large

pond of fresh water, about half a mile below where the vessel was lying: and as all the water we had on board was quite unfit for use, we resolved to start it, and fill the casks at the above-mentioned pond.

The following day was spent in watering, while the master went in the small whale-boat to sound the passage, and the next morning, the water being completed, we got under way at high tide, and stood out of the harbour. At ten o'clock we anchored in the road on the edge of the S.E. bank in three and a half fathoms water: the boats were immediately sent away to sound. Messrs. Oxley and Stirling went on shore to take observations, while I went out shooting, but without success, the only birds I saw being crows. The next day it blew very fresh, and the people were employed getting firewood, while the sounding went on as before. The latitude of this harbour, by observation, is 23° 59¾′ S., and its longitude by chronometer 151° 34′ 45″ E. It had been called Rodd's Bay by Captain King.

The next morning (Friday, Nov. 21st) we weighed anchor at eight o'clock A.M., and ran

out of the road with a moderate breeze at S.S.E., and continued working to the eastward till the Sunday afternoon, when at six P.M., the water suddenly shoaling to four fathoms and a half, we came to an anchor for the night. Next morning at six o'clock we weighed and stood to the N.E., and at half past nine the water had the appearance of being shoal a-head, and all round; we therefore hove to, and sent the boat to sound. It proved to be a reef of rocks of considerable extent, running out from Break Sea Spit, to the N. by W. The least water found on it by the boat was two feet and a half. We then bore away N. by W., and crossed the reef in five fathoms and a quarter. Towards evening it commenced raining and blowing extremely hard from S. by W. We treble-reefed the mainsail, which was notwithstanding shortly afterwards split, and nearly blown to pieces before we could furl it. We then set the trysail and spit-fire jib, and lay to till Saturday morning (Nov. 29th), the sea running tremendously high, and the cutter labouring very much, and making so much water, that we were obliged to pump her every hour. After continuing to blow thus for six

days, the wind fell, and on the Saturday at noon, having gotten an observation, we found that the current, which here sets to the south, had, notwithstanding the storm, drifted us nearly twenty miles per day to windward, so that at six o'clock P.M. we came to an anchor in Pumice-stone River, Moreton Bay, within 150 yards of the shore, in the very place where Captain Flinders had anchored twenty-two years before, on discovering the harbour, which, I believe, has not been since visited by Europeans. Scarcely was the anchor let go, when we perceived a number of natives, at the distance of about a mile, advancing rapidly towards the vessel; and on looking at them with the glass from the mast-head, I observed one who appeared much larger than the rest, and of a lighter colour, being a light copper, while all the others were black. This I pointed out to Mr. Stirling, so that we were all on the look-out when they approached; and to our surprise and satisfaction, when opposite the vessel, the man hailed us in English. The boat was immediately launched, and Messrs. Oxley, Stirling, and I, went ashore in her. While approaching the beach, the natives showed many

signs of joy, dancing and embracing the white man, who was nearly as wild as they. He was perfectly naked, and covered all over with white and red paint, which the natives make use of. His name, it appeared, was Thomas Pamphlet. He had left Sydney on the 21st March last, in an open boat, to bring cedar from the Five Islands, about fifty miles to the S. of Port Jackson. There were three others with him, but the boat being driven out to sea by a gale of wind, they had suffered inconceivable hardships, being twenty-one days without water, during which time one of them died of thirst; and they had at length been wrecked on Moreton Island, which forms one side of Moreton Bay, in the upper part of which we were now lying. He was so bewildered with joy that we could make very little out of his story that night; so having distributed a few knives, handkerchiefs, &c. among the friendly blacks, we returned on board, taking him with us. He now informed us that his two surviving companions, Richard Parsons and John Finnegan, after having travelled in company with him to the place where we found him, had, about six weeks before, re-

solved to prosecute their way towards Sydney; that he had accompanied them about fifty miles, but his feet becoming so sore that he was unable to travel further, he had resolved to return to the blacks, with whom we found him, and who had before treated him with great kindness; that a few days after they parted, Parsons and Finnegan having quarrelled, the latter also returned, and had since remained with him, but had been absent the last fortnight with the chief of the tribe on a hunting expedition; and that Parsons had not been heard of since his departure. Mr. Oxley, on hearing that Finnegan was gone towards the south end of the bay, resolved to seek him on Monday morning, and hoped by keeping along the shore, and occasionally firing a musket, to be able to find him also. But on Sunday afternoon, at low water, a man was observed walking out on a sand-bank from the opposite shore towards us, and holding in his hand a long stick with a skin on it; upon which I took the whale-boat and pulled towards him, when it proved to be Finnegan. Both he and Pamphlet concurring in a story they told us of a large river, which they had crossed, falling

into the south end of the bay, Messrs. Oxley and Stirling started next morning in the whale-boat, taking Finnegan with them, and four days' provisions, in order to explore it. I remained behind to shoot rare birds; and this gave me an opportunity of becoming acquainted with the natives, who are both in their dispositions and manners far superior to those in the neighbourhood of Sydney, and indeed to any that I had yet seen.

The principal station of the tribe, with whom we found these poor men, was about two miles higher up the Pumice-stone River (so called by Captain Flinders, from the immense quantities of that substance found on its banks) than where the vessel lay; but as they depend principally on fish for their support, they have several huts, at a distance of three or four miles from each other, to which they migrate from time to time as the fish become scarce. Their huts are built of long slender wattles, both ends of which are stuck into the ground, so as to form an arch about three feet and a half or four feet high. These are strongly interwoven with rude wicker-work, and the whole is covered with tea-tree (melaleuca armillaris) bark,

in such a manner as to be quite impervious to the rain: thus forming a spacious and commodious hut, capable of containing from ten to twelve people. In their journeys the women are obliged to carry heavy burthens, consisting of whatever rude utensils they may possess, together with a large quantity of fern-root, which forms a part of their daily food, and not unfrequently two or three children besides. The men carry nothing but a spear, and perhaps a fire-stick; and their only employment consists in catching fish; this they do very expertly with a kind of hoop-net, which they use in the following manner: They go out in equal parties of four, six, or eight, each man having two nets. They then walk along the beach till they perceive the fish near the shore, which (from constant practice) they are enabled to do at a depth of four or five feet. As soon as this takes place, a little boy, who accompanies each party, creeps towards the water on his hands and knees; the party then divide, forming two lines, one on each side of the boy, at a distance of two or three yards, and as soon as the fish are sufficiently near, the boy throws among them a handful of sand, so as to

distract their attention, when the men instantly rush into the water, forming a semicircle round the fish, each man standing between his two nets, which he then draws close together. In this manner they are seldom unsuccessful, and frequently catch more than they can consume. As they never travel without fire, the moment the fish are out of the water, they commence roasting and eating them, which they do without cleaning or any other preparation; and when they have satisfied themselves, should any remain, they carry them home for their women and children, who have been employed during the day in procuring fern-root, which they call *dingowa*, and a part of which they give the men in exchange for fish. When Pamphlet arrived among them, they had no more idea that water could be made hot than that it could be made solid; and on his heating some in a tin pot which he had saved when wrecked, the whole tribe gathered round them and watched the pot till it began to boil, when they all took to their heels, shouting and screaming; nor could they be persuaded to return till they saw him pour the water out and clean the pot, when they

slowly ventured back, and carefully covered the place where the water was spilt with sand. During the whole of our countrymen's stay among them, they were never reconciled to this operation of boiling.

The women weave a strong neat kind of net with rushes; with one or two of these each native is furnished to carry fish, dingowa, or any thing else they may pick up. The nets used for fishing are made by the men from the bark of the kurrajong (hibiscus heterophyllus), a shrub which is very common in the swamps. It is difficult at first sight to distinguish them from nets made of hemp. They have also nets of a much larger size, which they use in taking the kangaroo.

Both sexes go perfectly naked; nor are the females at all abashed at appearing in that state before a stranger. They do not seem to have any ornaments, though they were much gratified with strips of red cloth and bunting, with which we decorated their heads; and some of the scarlet tail-feathers of a black cockatoo, which I gave them, had nearly produced a quarrel among them. Several articles of clothing were also given them, but

they were invariably taken off and hidden as soon as they arrived at their camp; nor did we see ever any article again after they once became possessed of it.

Each individual of this tribe above the age of six years had the cartilage of the nose perforated, and many of them (especially the children) wore large pieces of stick or bone thrust through it, in such a manner as completely to stop the nostrils. This operation is always performed by the same person, whose office is hereditary, and confers some privileges, such as receiving fish, &c. from the others. It was held in this tribe by a fine intelligent young man, who was called the Doctor by our men. His father held a similar situation in another tribe on the south side of the river.

These tribes are distinguished from each other by the different colours they use in painting their bodies. Those on the north side blacken themselves all over with charcoal and bees' wax, which, with wild honey, they procure in abundance; and those on the south side paint themselves with a sort of red jaspar, which they burn and reduce to a powder. Other tribes make use of a white pigment, with

which (having previously blackened themselves) they daub various parts of their body. Their chief appeared to possess an unlimited authority over them; he was a tall, middle-aged man, with an intelligent countenance. He had two wives, which (though it sometimes occurs) does not seem to be common among them. However, only one of them lived with him as a wife; the other was employed, while he ate or slept, in going among the other huts and collecting from their inhabitants fish, fern-root, &c.—a tribute which was daily paid to him without murmuring, although the rest of the tribe in consequence occasionally fell short themselves. The chief possesses nets both for fish and kangaroo, but seldom uses them except for his amusement. Neither does his head wife ever go out to gather fern-root with the rest of the women. The same practice of scarifying themselves with sharp shells prevails here, as at Sydney; but most of these Indians were cut more deeply, and all with great regularity. The women here, as at Sydney, all lose the first two joints of the little finger of the left hand; but the men do not extract a front tooth on their approach to puberty,

as is invariably the case in the vicinity of Port Jackson. The amputation of the finger is performed by the same person who bores the noses.

Pamphlet and Finnegan, while among the Indians, were regularly painted twice a day, and were frequently importuned to allow themselves to be further ornamented by scarifying the body and boring the nose; but on their signifying that they did not wish it, the natives always desisted; nor was any violence used against them during their whole residence.

On only one occasion, during our stay, did the Indians show the least inclination towards pilfering, although they were constantly begging for every thing they saw. Our men had been employed on shore all day cutting timber, and several natives had been with them in the afternoon. Upon returning in the evening, it was found that somebody had stolen the best falling axe we had: this, as we had originally but two, we could ill spare; and, on Mr. Penson's informing me of the circumstance, I resolved to recover it if possible. I accordingly took the jolly-boat, and, with Mr. Penson and Bowen, pulled up to their encamp-

ment. On landing, several of them came out to meet us, and to them I endeavoured to make known our loss by signs. They soon seemed to understand me, and signified that they would accompany me to the place where it was hidden, which several of them accordingly prepared to do. However, I observed that they dropped back one by one, so that by the time I had advanced half a mile, there were only one old man and one young man left with me; one of these I was determined to secure till the axe was restored. I had some difficulty in making them keep up with me, as they were continually framing pretences to get into the bush; but I at length succeeded in bringing them opposite the vessel. Here the old man made signs that he and I should stop till the young man brought the axe, and we accordingly halted, while the other was soon out of sight in the wood. I then happened to take my eye a moment off my companion, when he darted into the bush with amazing celerity, and was out of sight in an instant. We now supposed that our friendly intercourse with them was at an end, and that we should not again see the axe; but at eight o'clock next

morning we found a number of them on the beach, abreast of the vessel, shouting and elevating the axe, which, on my going on shore, was delivered to me by the old man who had shown such speed the evening before. So this incident, instead of interrupting our good understanding, rendered our mutual confidence more strong; for several of the natives ventured on board that day for the first time, whereas they had always before refused to do so with signs of fear. From this time forward not a single day passed, on which we had not ten or twelve of them on board at a time. They seemed very curious, inquiring the use of every thing they saw, but it was longer before we could persuade them to eat any thing with us. However, when they once began, it was by no means an easy matter to satisfy them. Our cats and goats struck them with particular astonishment. We could not prevail on them to approach the latter, of whose horns they seemed to have a great awe. They were, however, continually caressing the cats, and holding them up for the admiration of their companions on shore.

I could not ascertain that these people had any

idea whatever of religion. They do not stand in awe of either good or evil spirits; nor did the Englishmen we found with them ever observe any thing like religious ceremony or prayer among them, during all the time of their residence.

The women are far more fortunate than those in the neighbourhood of Sydney, where they are abused in the most cruel way by the men; and where the marriage ceremony consists of seizing the bride and beating her till she is senseless. Pamphlet assured me that, during his residence among these natives (nearly seven months), he never saw a woman struck or ill-treated except by one of her own sex. Indeed, save among the women, he never saw a quarrel in that or any other tribe he was with. The women that I saw were far superior in personal beauty to the men, or indeed to any natives of this country whom I have yet seen. Many of them are tall, straight, and well formed; and there were two, in particular, whose shape and features were such as no white woman need have been ashamed of.

This tribe amounted in number to about thirty men, sixteen or seventeen women, and about twenty

children. Their quarrels with neighbouring tribes are frequent, and often end fatally. As some of them were witnessed by Pamphlet and his companion, it may not be uninteresting to insert here the description which they gave me of two, at which they were present, and which I took down at the moment. That which Finnegan describes may be considered as the most faithful, as he witnessed it only two days before we found him, and the particulars were then strongly impressed on his mind. I give it nearly in his own words.

ACCOUNT OF A FIGHT AMONG THE NATIVES OF MORETON BAY, WITNESSED BY JOHN FINNEGAN.

"The natives at Pumice-stone River having a quarrel with another tribe, at the distance of five-and-twenty miles to the S.W., they were about to set off for the latter place in order to decide it; and as I was then living with the chief of the Pumice-stone River tribe, he insisted on taking me with him. We accordingly set out early one morning, travelling from ten to fifteen miles daily. Our

party consisted of ten men, eight or nine women, and fourteen children, the king, his son, and myself. The men carried the nets, and the women were loaded with fern-root, &c.; all parties, men and women, being armed with spears. On the third day we halted, and all the men went out fishing. After eating a hearty meal, they commenced painting and decorating themselves with feathers. The king himself covered me all over with charcoal and bees' wax; and, when all were dressed, we again went forward, and in a short time arrived at a number of huts, which had been erected for the occasion. They were so numerous that I could hardly count them; and each tribe (for there were many tribes assembled to see the fight) appeared to have their huts distinct from the other. On our arriving within a small distance of the encampment, we all sat down; and as soon as we were perceived, the assembled multitude began to shout, and immediately my companions were visited by several of their friends, and all began to weep piteously. Shortly afterwards the chief of the tribe on whose ground we were came to us, and having conversed for some time with our chief, he pointed

out a place on which we might build huts for ourselves. The women of our party then immediately commenced building, and in less than two hours had finished five or six commodious huts, in which we all rested that night. The next morning a large party, including our chief and several of his men, went out kangaroo hunting. They were not, however, very successful, having only caught one large kangaroo. They, however, gave me a great piece of the hind quarter, of which they made me eat very heartily; and here I will observe, that at all times, whether they had much or little, fish or kangaroo, or any thing else, they always gave me as much as I could eat. The same evening at sunset, the whole party, carrying fire-sticks, went away about a mile and a half to where the battle took place the next day, the chief leaving me with his wife and two children in the hut. He however returned some time in the night, for I found him at my back when I woke in the morning. The next day, after breakfast, the ceremony of painting was gone through afresh, and we marched in regular line, our tribe having been joined by several strangers, all of whom seemed much rejoiced at my accom-

panying them. We shortly arrived at a level piece of ground, in which had been dug a circular pit about forty feet in diameter. I was now left in care of the chief's wife at a short distance from this pit; but being anxious to view the fight, in spite of her endeavours, I went up towards it. She, however, followed me, calling out and weeping; upon which one of the men of our tribe came to me, and, taking my hand, led me up to the pit. I there saw a woman of my tribe, and one of another, fighting desperately with sticks. The battle did not, however, last long, as they appeared to be quite in earnest; and in five minutes their heads, arms, &c. being dreadfully cut and swelled, our woman was declared the conqueror, the other not being able any longer to oppose her. The victory was announced by a loud shout from all parties, and the amazonian combatants were immediately carried away by their respective friends. The man who had brought me to the pit still continued to hold my hand, and I observed his whole body tremble like an aspen leaf. The chief's wife now came again to me, and endeavoured by every means in her power to force me away; but

finding I still refused, she went for her husband, who immediately came, and taking away my spear, forced me out of the crowd. He then called several other chiefs around me, and showed me to them. This caused great talking and laughing among them, from surprise at my colour and appearance. The king then addressed them at some length, apparently asking them not to hurt me, which they gave me to understand by signs that they would not. I was then delivered up to our chief's wife once more, who led me back to the place where we were left before. I had however a good view of the pit, round which the whole crowd still remained. I now found that, while I had been engaged with the chiefs, another fight had taken place in the pit, for I presently saw a man carried out by his friends, who were of our tribe, bleeding profusely at the side from a spear-wound. He was brought down to where I was, and placed on two men's knees, with some kangaroo-skins spread over him; the men, women, and children howling and lamenting, much in the manner of the lower Irish. They supplied him with water from time to time, but his wound was evi-

dently mortal, and in less than an hour he expired. The chief's wife then took me away a short distance from where he lay, and the whole party set to work immediately to skin him; but from the distance at which I stood, I could not perceive the manner in which they did it. In the mean time two more men had entered the ring to fight; and here it may not be amiss to observe, that previous to each fight the same ceremony is used that is described by Thomas Pamphlet in the combat which he witnessed. The third fight was now going on, while our party were engaged in skinning their deceased companion; when it appeared, from a tremendous shout, that some unlooked-for event had happened in the pit. I afterwards learned that the spectators judged that foul play had taken place between the combatants. The crowd upon this drew away from the pit; and our party, accompanied by those tribes that were friendly to them, formed themselves in a line, while their adversaries did the same opposite to them. The battle then became general. Several from each side would advance, and having thrown their spears, again retire to the line, in the manner

of light infantry. Others would get behind the trees, and there watch an opportunity to hurl their spears with greater effect. In this manner the fight continued upwards of two hours, during which time many retired from the line severely wounded, and another man of our party was killed. What number may have been killed on the other side I had no means of ascertaining. Our party now began to give way, which being observed by the women and children with whom I was, they made signs to me to accompany them; and with the exception of those who were employed in skinning the body, we made off. Not being able, however, to run as fast as the rest, I was soon in the midst of the opposite party, who, however, notwithstanding my fears, did not attempt to hurt me, but merely laughed and pointed at me as they passed by, showing the same marks of wonder as the chiefs had done in the morning. I then walked back to the huts which we had left that morning, but found nobody there. However, I sat down by the fire, and towards evening they began to return, a few at a time. Just before dark I saw a large crowd approach, who (it seems) were bringing the bodies

of the two men who had been killed. They laid them down about twenty rods from the huts, and began a great lamentation over them. The first body was completely flayed, but they had not yet had leisure to skin the other. I attempted to approach, but was immediately prevented by all hands, and forced to return to the fire. Shortly afterwards our chief and his wife came back, and instantly commenced packing up their nets, &c. in order to depart. Two large fires were lighted where the bodies lay, in which, as I judged from the noise as well as the offensive smell, they were both consumed. Immediately after this our whole party decamped; and having travelled more than half a mile, we stopped for the night. Very early next morning we again started, and travelled all day with great expedition, without ever halting or eating any thing. Among our party were four women and three men wounded, the latter very severely. They however contrived, though with difficulty, to keep up with us. I had observed, during this day's march, two men, one of whom belonged to our tribe, and another to a tribe which was friendly to us, each of whom carried something

on his shoulder, but did not keep the same path with us, walking through the bush at a little distance abreast of us. Being curious to know what it was they carried, I attempted several times to approach them; but as soon as this was observed, I was invariably brought back by the others, who made signs to me not to go near them. We travelled that day about eight or ten miles, and towards evening arrived at the edge of a large swamp, where we halted, and huts were instantly erected by the women, who were afterwards obliged to go out and procure fern-root for the whole party, the men never providing any thing but fish or game. I lodged as usual with the chief, at a little distance from whose hut I observed the two men hang up their burthens, which I again attempted to approach, but was (as before) prevented. Here we remained two days, during which a large fire was kept constantly burning underneath the trees on which these mysterious burthens were hanging. On the evening of the second day, I once more attempted to find out of what they consisted, though I strongly suspected they were the skins of the two men who had been killed. The old chief, on

seeing me go near them, ran after me, calling loudly to me to return; but I persevered, and at last reached the place. I now saw that my conjecture was right: the two skins were stretched each on four spears, and drying over the fire. The skin of the head was divided into two parts, and hung down with the hair on it. The soles of the feet and palms of the hands were also hanging down, and the nails still attached firmly to the skin. Several of the men and women were sitting round the fire under the skins, and now invited me to sit down with them, which I did. They then gave me some kangaroo-skin to decorate my arms and head, and seemed to wish me to sing to them; but on my making signs that it was not proper to do so while the remains of our friends were not buried, they seemed surprised, and afterwards told me by signs that they were much pleased at my refusal. After sitting with them about half an hour, the chief's wife came and brought me back to the hut. Shortly afterwards, all the men dressed themselves in kangaroo-skins, and one of them in an old rug jacket which I had, and with one or two of the women, held a consultation round the fire, each

person having a fire-stick in his hand. After conversing about half an hour, two of the party separated from the rest, and having taken down the skins, set off at full speed through the bush; the rest followed, shouting and making much noise. After this I saw nothing more of the skins, nor do I know what became of them. In about three-quarters of an hour the party returned; and the man who had taken my old jacket gave it me back. The next morning we returned towards the Pumice-stone River by the same path which we had travelled to the fight, and the natives followed their usual occupations of fishing and hunting as if nothing had happened."

The fight which Pamphlet described as having been witnessed by him was not fortunately so sanguinary; and as the termination was very different from that above described, I shall insert it here.

ACCOUNT OF A FIGHT WITNESSED BY THOMAS PAMPHLET.

"About the time of our first arrival at Pumice-stone River, the young native whom we called the Doctor, and who used to bore the noses and scarify the skins of the rest of the tribe, had been wounded in the knee with a spear, while out on a hunting expedition, by a native of another tribe, at a distance of fifty miles to the northward. As the spear had broken in the wound, there was a good deal of inflammation in his leg, when he applied to me to cure him. This I effected by extracting a large splinter from his knee, and in a short time he was quite recovered. As soon as his cure was effected, and he was able once more to go out fishing and hunting, he sallied forth, accompanied by several of his tribe, in order to take satisfaction of the man who had wounded him; and having a great liking for me, on account of my having cured him, he insisted on my going with him.

"The spot appointed for the combat was a small ring, about twenty-five feet in diameter, about three

feet deep, and surrounded by a palisade of sticks. The crowd assembled to see the fight amounted to about 500 men, women, and children; and the combatants, followed by those who were friendly to them respectively, approached the ring in single file, and drew up in a regular manner on opposite sides of the circle. The whole assembly were well armed, many of them having five or six spears each. The two combatants then entered the ring, and having laid down their spears in opposite rows, point to point, began walking backwards and forwards, talking loudly to each other and using violent gestures, as if to inflame their passions to a due height. The women had previously been driven away, and the most profound silence reigned in the rest of the assembly. After about ten minutes spent in this way, they commenced picking up their spears with their feet, keeping their eyes fixed on each other, so as to prevent either from taking advantage of the other's stooping. In this manner they proceeded till they had each three spears, which they stuck in the ground, ready for immediate use. At the moment when they commenced thus picking up their spears, a

tremendous shout burst from the spectators, who immediately relapsed into their former silence. All now being ready, one or two of the friends of each party spoke across the ring for a few minutes; and as soon as they ceased, the Doctor threw his spear with all his force at the other, who, however, succeeded in warding it off with a kind of wooden shield called an *elemong*, into which, however, it penetrated three or four inches. The other then threw in his turn; but his spear was also warded off in the same manner. The third spear which the Doctor threw penetrated quite through the shoulder of his adversary, who instantly fell, when one or two of his friends, jumping into the ring, pulled out the spear, and returned it to its owner; and the tournament concluded with loud huzzas from all parties. They all then retired to huts, which had been erected for the occasion, and the next day they again met at the ring, in order to give the friends of the wounded man an opportunity to avenge his quarrel. But it appeared that no one wished to do so, as each had now wounded the other, and a reconciliation took place between the two tribes, which was announced by shouting,

dancing, &c.; and a parcel of boys were selected from each party, and sent into the ring to wrestle: after which both tribes joined in a hunting expedition, which lasted a week; but my feet being sore, I was consigned to the care of the women."

Messrs. Oxley and Stirling had named Thursday, the 4th December, for their return to the vessel; but after waiting dinner till past seven o'clock, we gave them over for that night; and were employed on the following day in completing our wood and water, so as to be ready for sea the next morning. On Friday evening, at sun-set, I went ashore and made a large fire, in order to serve as a beacon for the boat, which, however, not having arrived at ten o'clock, I went to bed, somewhat uneasy, lest some accident should have happened: however, after I had been in bed about an hour, Mr. Penson came down to let me know that he had heard and seen a gun fire. On this I rose, and just before midnight the boat came alongside, having rowed with very little intermission since five o'clock in the morning. They were all much fatigued, par-

ticularly Messrs. Oxley and Stirling, who had not been well before they left the vessel, and now appeared quite exhausted, from constant exposure to a hot sun for twelve or fifteen hours daily in an open boat. Our hardships were rendered less tolerable from our having been so shamefully robbed by our servants, in consequence of which these gentlemen had no wine or spirits to take with them.

Mr. Oxley told us, that after losing the first day in the examination of a large creek, which Finnegan mistook for the river, they had on the following day entered the river itself, by an entrance three miles wide, and had proceeded above fifty miles from the mouth. The water was fresh about eighteen miles up, even at high water, and where they left off, the tide still rose four feet and a half. This magnificent river, the further examination of which they were obliged with reluctance to postpone to a more favourable opportunity, was, at the termination of their progress, above half a mile wide, and eight fathoms deep; and from an eminence near it they obtained a view of its course, meandering for nearly thirty miles through a rich

flat country, clothed with large timber, among which was an unknown species of pine in considerable abundance, which from its size, and the apparently excellent quality of the wood, will probably prove a valuable acquisition to the colony, it being well calculated for ships' spars. The soil on both banks was a rich black loam, and in every part the wild indigo was growing in abundance.

Having been thus successful beyond our expectations in the main object of our expedition, and the cutter being ready for sea, we got under way in the morning of Saturday, 6th December, with the last quarter of flood tide, and the wind at N.E., in order to work out of the bay; but while we were on the last tack that was necessary to clear Moreton-head, the wind suddenly chopped round to the southward, and came on to blow with great violence. The gale continued till Monday afternoon, though it was less strong than that we encountered off Break-sea Spit, and then it moderated as suddenly as it commenced. The wind then veering to the N.E. we stood away before it, having been driven about twenty miles to the northward during the gale.

The next morning, about eight o'clock, we were within a few miles of Turtle Island; and Mr. Stirling and I, who had, ever since we left it, been anticipating the pleasure we should feel in bringing back a quantity of turtle to our friends in Sydney, with much difficulty prevailed on Mr. Oxley to come to with the cutter under the lee of the island. We then went ashore; but, owing to the late gale, the breakers ran so very high, and the tide was so far in, that though we saw numbers of turtle swimming round the island, not one of them was able to land. However, we procured a large quantity of mutton-birds' eggs, together with several birds, and a large bag of spinach, with which we went back to the cutter, and immediately got under way. The eggs are excellent, and are with difficulty distinguished from hens'. Indeed, one of our men assured me that he had often sold them in Sydney market for hens' eggs. They afforded us a dish of excellent pancakes, which, with the spinach, were a real treat to us, as we had been long without any vegetables; and Mr. Oxley, Mr. Penson, and some of the men, had become badly afflicted with the scurvy. The breeze continuing

fair and steady, we ran on for the remainder of the day, and through the night, with all sail set; and next day at ten A.M. we expected, according to our reckoning, that we were off Smoky Cape, about forty miles to the north of Port Macquarie. It was, however, so hazy that we could not distinguish the land at that time; but in a quarter of an hour, on its suddenly clearing up, we found to our surprise that we were passing Port Macquarie, having thus in twenty-two hours run 205 miles, of which distance, as the cutter never exceeded seven and a half per hour by the log, the current must have drifted us about fifty-six miles.

We immediately hauled in for the shore, and the sea breeze shortly afterwards setting in, Mr. Stirling and I were enabled to land at about one o'clock, Mr. Oxley being unable to move from the swelling in his legs. We were received with the same hospitality which we had before experienced from Captain Allman and his officers, who immediately supplied us with fowls, vegetables, and every thing in their power, which they thought would be acceptable to us. We dined with Captain Allman; but having promised Mr. Oxley to return

to the vessel by four o'clock, P.M., we took a reluctant leave of our friends, and, accompanied by Mr. Fenton, returned to the cutter. Here, to our great satisfaction, Mr. Fenton was with some difficulty enabled to persuade Mr. Oxley to go on shore and remain for the night. Accordingly we all returned, and after spending a pleasant evening, and enjoying a good night's rest, on Thursday at noon we once more got under way, and on Saturday evening, December 13th, at six o'clock, we had the pleasure of coming to an anchor in Sydney Cove.

NARRATIVE

OF

THOMAS PAMPHLET,

AGED THIRTY-FOUR YEARS,

WHO WAS WITH TWO OTHER MEN WRECKED ON THE COAST OF NEW HOLLAND IN APRIL, 1823, AND LIVED AMONG THE NATIVES FOR SEVEN MONTHS.

TAKEN DOWN BY

JOHN UNIACKE, ESQ.

NARRATIVE,

&c.

We left Sydney, March 21st, in a large open boat, of twenty-nine feet six inches extreme length over all, and ten feet beam, belonging to William Farrel and Richard Parsons, for the Five Islands, to take in cedar. The crew consisted of Richard Parsons, John Finnegan, John Thompson, and myself. We had a considerable quantity of provision, flour, pork, &c. for the purpose of buying cedar, and four gallons of water and five of rum. About four o'clock the same evening, when within seven or eight miles of our destination, a violent gale came on from the west, which forced us to lower all sail, and keep the boat before the sea. The night came on with heavy rain and increasing wind, but we did not lose sight of land till shut out by darkness. The gale continued with unabated violence for five days, when it moderated;

but the sea continued to run so very high, that we were still obliged to keep the boat before it, without being able to carry any sail till the eleventh day, viz. 2d April, when the sea being much fallen we made sail, supposing that the current had drifted us to the southward, and that we were then off Van Diemen's Land. We had no compass, but we steered by the sun, as near as we could guess, a N.W. course, expecting very soon to make the land in the neighbourhood of the Five Islands, our original destination. Our small stock of water was totally expended on the second day, and the rain we caught in the commencement of the gale was so spoiled by salt water, that we were forced to throw it away. Our sufferings were dreadful for the following thirteen days, having nothing to drink but rum. We were almost unable to speak, and could with difficulty understand each other. John Thompson, a Scotchman, the best hand in the boat (having been an old man of war's man), had become quite delirious from drinking salt water, and was totally useless to us. On the fifteenth day (6th April), a heavy shower of rain fell, and our sails being lowered and spread, we

caught about a bucket and a half; but from the sails having been so much drenched with salt-water, it was almost useless to us. On the eighteenth day (9th April), a light mizzling rain fell, when we caught a bucket-full, which was much better. Thompson recovered a little on getting some of it, but still continued severely purged and otherwise affected by the salt water he had drank. We still continued steering the same course, N.W. as we imagined, till the nineteenth day (10th April), when about eleven o'clock A.M. John Finnegan having gone up to the mast-head, said that he saw land right a-head, which he declared to be the headland of Port Stephen, he having formerly worked there; but not being able to credit him, I went up to the mast-head myself, and, after looking earnestly for some time, was unable to determine whether it was land or a cloud: however, we determined to steer for it; but towards evening we lost sight of it entirely. Thompson was at this time very bad, and Finnegan had become quite deaf; while Parsons and myself, though not so bad, were hardly able to speak or move: a dreadful lassitude came over us, and it was with

much difficulty we could keep our watch of two hours each. We continued in this state till the twenty-first day (12th April), when at daylight, it being my watch, I distinctly saw land a-head, which, as the morning advanced, appeared to be three or four islands. We made all sail for them. Thompson, on hearing this joyful news, apparently revived a little; we had been obliged to bind him hand and foot, three or four days before, to prevent his jumping overboard, being completely deranged: his feet were now untied, when he immediately came aft to me, imagining we had already been on shore, and entreated for God's sake I would give him fresh water. When he found I was not able to comply with his request, he became worse; raving in the most incoherent manner, saying he had just dined with his family in Scotland, &c.: he then lay down near the well, and in the course of an hour expired. We now stood on for the land till about ten o'clock, P.M. when, expecting to get on shore at daylight next morning, we hove the boat to, being then, according to our judgment, about an hour's run from the shore. We saw plainly the natives round their fires, and intended

to keep clear of them, if possible, the next day. About midnight the boat struck on a reef of rocks, but being light, the heave of the sea carried her over it without damage; and when daylight broke, we found we had drifted so far to sea that the land was barely visible: however, we had a fine fresh favourable breeze and smooth water, and again steered for the same land, and by sunset were within two or three miles of shore, but a little to the north of the place where we hove to the night before. We were, however, fearful of venturing on shore on account of the natives, whom we again distinctly saw; we therefore kept on through the night, steering north. In the morning the wind was light and the water smooth, and we were close in with the shore. I now saw plainly a run of fresh water trickling through the beach, and proposed to take the boat's running rigging and make it fast to the keg, and swim ashore with it, by which means they could haul the fresh water on board; but this was objected to by Parsons, who being half owner of the boat, was afraid of her being lost: we therefore continued our course all day, and towards evening Parsons declared he was

dying, and that he must have fresh water if the boat was lost. We therefore looked out for a place to run her ashore or land, but the breakers and swell prevented us; so we continued our course all that night under easy sail. Thompson's body had continued on board all this time, as we constantly expected to be able to land and bury it: it now, however, began to grow offensive, and we consulted whether we should not throw it overboard. This was agreed to after some altercation. He was then searched, and in his waistcoat we found his ticket-of-leave sewed up. Parsons then bound a handkerchief over his face, and he was thrown overboard. He had been kept so long that he swam as light as a cork on the water. We continued the whole of this day, the twenty-fourth (15th April), running along shore to the northward, without being able to effect a landing; and during the night we ran on the same course under easy sail. The next morning Finnegan, who was at the helm, said he saw a bight in which we could anchor, with a stream of fresh water running in it. We accordingly steered into it, the water being tolerably smooth, and let go our anchor at about

half a quarter of a mile from the shore, and payed out about forty fathoms of cable to let her drift further in. I then stripped, and having made the running rigging fast to the keg, jumped over and attempted to swim for the shore; but I was so weak and exhausted, that, what with the little surf, and what with the keg, I was in the water near an hour and a half before I could succeed in landing; but no sooner did my foot touch the ground than I ran to the fresh water, and lying down by it, I drank like a horse. I then returned to the beach for the keg, which I again left and ran back for another drink. This happened three or four times; and when I attempted to fill the keg, I was quite unable to do it, from weakness and the quantity of water I had swallowed. In the meantime it began to blow very fresh from the eastward, and my companions called loudly to me to come on board to assist in hauling the boat off; but the surf ran so high, and my weakness was such, that I did not dare to venture again into the water: I therefore called to them, as the breeze freshened, to cut the cable and let her run ashore. This, after some time, they did; and with the

help of a little swimming, both got safe on shore. The boat grounded on the sandy beach, and in less than five minutes her bottom was stove in. The eagerness of my companions for fresh water even exceeded mine. I had brought on shore a pint tin pot to fill the keg: Parsons emptied this thirteen times in succession; while Finnegan lay down in the water, and drank to such excess that his stomach could not retain it, but threw it all up again. This he repeated four several times. We had all of us stripped off our clothes for the purpose of swimming on shore, and the surf now ran so high, that it was impossible to approach the boat for the purpose of getting them; so that we were all perfectly naked, with the exception of an old rug jacket that Finnegan picked up next morning. The beach on which the boat struck was a low sand, surrounded by sand-hills, which did not even afford fire-wood; but had it been ever so abundant, we had not the means of kindling a fire; we therefore ascended the hill, and lay down on the sand to pass the night. It was raining heavily, and I being the weakest was placed in the middle between my companions. We suffered

much throughout the night from cold and hunger; and next morning, when day broke, we found the boat had gone to pieces, and that some few of the things in her had drifted ashore. We then went down to the beach, and found three bags of flour, two of which were totally spoiled; but the salt-water had not penetrated above two inches into the third. We therefore emptied those which were spoiled, and each took from twenty to thirty pounds of good flour, being as much as we thought we were able to carry. We still imagined we were far to the southward of Port Jackson. Four or five days before we were wrecked, we saw many flying-fish and dolphins, and caught one or two of the former; but it never struck us on that account that we were to the northward of Port Jackson. Accordingly, after making a wretched meal of flour and water, which we mixed in a bucket that had drifted ashore, we set out along the beach in a northerly direction, and continued to walk, as expeditiously as our weakness would allow, till near dark. We then observed a native path striking into the bush, which apparently cut off a bluff head before us: this we determined to follow, and in a

short time we saw before us a black woman and child, carrying water in a bark vessel. Fearing that if we were seen, this woman would alarm her tribe, we concealed ourselves till they had passed, and then continued our journey. There were several large huts near where we saw the woman; but the men were probably employed in fishing, as we did not see any. After proceeding about a mile, we reached the beach on the other side of the head; and on leaving the bush saw a large hut, near which was a boy amusing himself by throwing a spear at some crows. There were a great number of native dogs round the hut, but they did not appear to notice us. After a short time the boy turning round saw us, and instantly ran into the hut, from which a man now made his appearance. He hastily snatched a spear from the side of the hut, and then took hold of the child with the intention of running into the bush; but a very large woman ran out, and throwing the child on her back, instantly disappeared. I now called to the man to stop, when, to our astonishment, he answered in good English, "What do you want? Do you wish to kill me?" and then followed the

woman. This circumstance convinced us that we were in the neighbourhood of some English settlement, and gave us great spirits, as we had now hopes of shortly reaching some place where our wants would be relieved. It will be afterwards seen that we were wrong, and we could never account for this Moreton islander's being able to speak English, while the natives of Moreton Bay appeared never to have seen a white man before*. I then desired Finnegan to go into the hut and fetch some fire, which he did; after which we proceeded, intending to stop at the first fresh water we fell in with. This happened in the course of a mile: it was a shallow pool about six inches deep. Here we made a fire, and having mixed some flour and water, made cakes of it, and set them down to roast. While thus employed we saw some native dogs, which appeared to have followed us from the hut; and shortly afterwards I saw a man's head peeping over the bank behind us, and then two or three more. We beckoned them to approach,

* Captain Flinders encountered them in 1799; but Pamphlet must have been in a delirium when he thought the native spoke English.

which, after some time, they did, when we offered them some cake, which they pretended to eat, but immediately spat it out again. Their number now amounted to about twelve; and they began to feel us about the breast and shoulders in a manner that greatly alarmed us: we therefore prepared to move again, as soon as we had finished our meal. They now became very urgent that we should return with them to the huts we had first seen; but we persisted in proceeding to the northward. They had nets on their backs, with which they made signs that they would catch fish for us; but when they found we were obstinate, some of them prepared to accompany us, and one or two of them took up our bags of flour to carry for us. We proceeded about a mile with them, when we came to another set of huts, into which our conductors invited us; and on our consenting, they appeared quite happy, dancing and singing around us. They then made a fire, near which I lay down to sleep with my bag under my head, while one of the natives remained, as if to take care of me, and keep up the fire. My companions went into one of the large huts, where every sort of attention

was shown them, and passed the night there. In the morning, after having breakfasted on some of our cakes, we again set out, accompanied by our kind friendly natives, who brought us down to the beach, and again seemed very anxious that we should return the way we came, but they did not offer to use any kind of force. We, however, determined to proceed to the northward, supposing that that course would ultimately lead us to Port Jackson; and when they found we would not return, some of them, as before, accompanied us on our way. After proceeding about three miles, they led us into the bush, where we found more huts. Here again they wished us to remain; but after sitting with them about an hour, we proceeded much against their wish, accompanied by one of their number. We walked along the beach, and passed several more huts, but the inhabitants did not appear to take any notice of us. At the last of these huts our guide left us, pointing out another station at some distance, and making signs that, by proceeding, we should fall in with a canoe. He also took us to a rising ground, where he indicated a point of land at some distance, which (as

the place where we were appeared to be an island) we imagined to be the main land. We then proceeded till about three or four o'clock in the afternoon, when we found near the beach four or five large huts, apparently deserted; and there being a good run of water near them, we resolved to pass the night there. The next day, finding that the natives did not appear, we determined to remain till the following morning, in order to refresh ourselves a little. We then again proceeded on our journey, and continued travelling along the beach for the following five days, without meeting any natives, or any thing worth notice. Our feet being sore, we were not able to walk far at a time, and we helped out our flour from time to time with cockles and other shell-fish, which we met with in our way. On the fifth day we arrived at a high sandy point, where we found our further progress stopped by a channel about three miles wide, through which the tide appeared to run very rapidly. We were now certain that we had been thrown on an island, and our thoughts were therefore directed towards the means of reaching the main land. At the back of the sand-hill, we found a small

well of fresh water, which had been dug by the natives; near this we made a fire and passed the night. We observed fires on the opposite shore, and early the next morning we kindled a large one down on the beach, which being seen by the natives, one of them passed over in a large canoe. As he approached, however, we retired behind the hill; and when he had hauled up his canoe, he made directly for the fire. We then made our appearance, but no sooner did he observe our colour than he ran back to his boat, and jumping in, pushed rapidly off, shouting and roaring with all his might. In the meantime, another canoe was launched from the opposite side with two men, who met the first about half across the channel, and they then both paddled towards the place where we were sitting. When they had landed, we were unwilling to approach them, lest they should again be frightened, and therefore remained sitting quietly by our fire. The three men then approached cautiously towards us, and, having examined us at a distance, returned to their boats, and made signals with some pieces of bark to those on the opposite shore, when two more canoes pushed off, with five or six

men in each; and, as soon as these had landed, the whole party, to the number of fourteen, approached us. They were perfectly naked, and had neither spears nor any other kind of weapon with them. They still appeared shy of coming near us, but at last one man came close to the fire, and on our making signs, two or three more followed his example, and in a short time the whole party had formed a circle round us. Parsons happened to have a pair of scissors, which had belonged to Thompson, and their beards being very long, he commenced cutting them, which appeared to delight them greatly. They remained an hour with us; and on rising to go away, we got our bags on our backs, and prepared to accompany them. This however they did not seem inclined to permit, but ran down quickly to their boats. We then endeavoured to secure one of their canoes, but they were too quick for us, and jumping in, pushed them rapidly away. We now began to despair of being able to quit the island, and returned very unhappy to some deserted huts, which we had seen about three miles before we arrived at the point. Here we passed the night, and next morning returned to the point, in hopes

of being still able to persuade the natives to take us across the channel. On approaching it, our joy was excessive at seeing the large canoe, that had appeared first on the preceding day, lying on the beach without any person near it. On looking round, however, we saw two natives, who were apparently proceeding towards the place where our boat had been lost, for we now found we had walked nearly round the island. They did not appear to notice us, but kept on their way, upon which we proceeded with all speed to secure the canoe. On examination, we feared that it would not carry us all three with our bags, &c.; so, having consulted awhile, I agreed to remain behind, and let Parsons and Finnegan cross over, when it was stipulated that one of them should return and fetch me. They accordingly pushed off, and I retreated to the top of the hill, from whence I was able to see them the whole way across. On the canoe's approaching the shore, I could perceive a great number of natives walking out in the water to meet them, which made me very apprehensive that they were about to destroy them; and when they had landed, the whole crowd

got round them and moved in towards the bush, which at last hid them from my sight. I remained looking out till evening, expecting to see the canoe every minute, but in vain. I therefore returned to the little well, where we had passed the first night, and having kindled a fire, spent a very wretched night, being greatly alarmed lest my companions should have met with some misfortune. In the morning, I returned to the beach and made a large fire, in hopes that, on seeing it, the canoe would return for me. However, I was again disappointed, nor was I able to perceive a single native on the shore the whole day. I now began to lament my hard fate, in being left alone in this desolate place, where, after the little flour I had was expended, I must expect to perish either by hunger or the hostility of the natives; and I returned to the well, fully convinced that I should never again see either of my unfortunate companions. The next morning, in walking along the shore, near the point, I saw a large cask, which had drifted ashore from some vessel. Conceiving it might contain some provisions or spirits, I set to work to get some of the hoops off; but when I

had succeeded, I found, to my disappointment, that it contained only six other casks, one inside the other. They appeared quite fresh, and had not been long in the water: they seemed to be intended to hold oil. While thus employed, I gave many an anxious look to the opposite shore. I was proceeding up the hill again, when I saw the canoe put off with two persons in it, whom, on its nearer approach, I ascertained to be Finnegan and one of the natives. On reaching the beach, the native took his nets on his shoulder, and marched off in the same direction as the two who had before left the canoe; but before he went, he made signs for me to go back with Finnegan. Finnegan now told me that nothing could exceed the kindness with which they had been treated by the natives, who had lodged them in a large hut by themselves, and given them as much fish as they could eat, but that they could not before persuade the natives to let the canoe come over for me; and it was only by accident he was now enabled to come with the native I had seen, who was going to visit his friends on the island. The tide was now running out of the channel with great rapidity, and I wished Fin-

negan either to pull along shore for some distance, or to wait till the tide slacked; but he obstinately persisted in pulling straight across without delay. I was obliged to comply, and we pushed off; but no sooner had we left the shore than, in spite of all our efforts, the current took us out to sea. We still continued paddling for about an hour and a half, by which time we had drifted out close to the breakers, which were very heavy all round us; and, as we had no hope of the canoe's living if she once got among them, we redoubled our efforts, but to no purpose: we were soon in the midst of them; but, contrary to our expectations, the little canoe rode it out much better than a larger boat would have done. We soon got clear of them, and were now in the open sea beyond them. The tide still continued very strong, and we did not relax our efforts to gain the opposite shore, where we saw the natives, and Parsons in the midst of them, running along and watching our progress. At last, after about five hours' hard paddling, the tide turned, and we reached the shore in safety, eight miles from the place where we had originally intended to land. We found Parsons and a number

of natives waiting on the beach, and were received by them with many demonstrations of joy. They lifted the canoe into the bush, and presented us with several roasted fish, and then conducted us to their huts. They placed us in a very large well-built hut by ourselves, and supplied us with fish, water, &c. very liberally. Here we remained for a week or ten days, during which time we were most hospitably treated by the natives. They would not, however, suffer us to approach the huts in which their women were, for the first five or six days; and at night five or six of the younger men would sleep in front of our hut. But they afterwards became less vigilant, and we used to pass through their huts among the women as we pleased. Having now recovered our strength in some degree, and being much refreshed, after consulting together, Parsons and I resolved to continue our endeavours to reach Sydney; but we had some difficulty in persuading Finnegan to accompany us. He said that the blacks were so friendly that he wished to remain with them, sooner than encounter the difficulty and danger of attempting to return to any of our settlements. At length, however,

he consented to go; and accordingly, early in the morning, about the tenth day, we set out in a westerly direction, in order to get round the large bay, of which the island that we had originally been thrown upon forms the eastern boundary. We had saved as much of our flour as possible, so that our stock still amounted to about forty pounds, the greater part of which Parsons carried. Finnegan carried the rest, and a stick of fire; while I bore an axe and a tin pot, which we had saved from the wreck. The natives had pointed out an inlet to us at the distance of twelve or fourteen miles, where, they informed us by signs, we should find a canoe, in which they directed us to cross to an island, that was just visible, towards the bottom of the bay. After we had proceeded about ten miles, the fire went out, at which Parsons, who was a very violent, passionate man, declared he would kill Finnegan, and struck him a severe blow with the handle of the axe, and would in all probability have murdered him had I not interfered. Finnegan now begged for mercy, and said he would make all haste back to a place where we had passed a native fire, about three or four miles back. Accordingly

he departed; but after waiting at least five hours, on his not making his appearance, we resolved to return ourselves. We left our flour, &c. in the bush, and retraced our steps to the fire. It was nearly extinguished, but after some difficulty, I succeeded in making it burn. Here we stopped an hour, in hopes that Finnegan would appear; but, on the approach of evening, we thought it best to return to the place where we had left our provisions. We therefore set forward, each carrying a stick of fire this time, lest one should fail us. However, just as we had reached the place, to our mortification and sorrow, both sticks became extinguished, so that, our flour being the only food we had, and having no fire to dress it, we determined to take two or three pounds of it with us, and go back once more to the fire, which we had taken the precaution of making up, before we left it. The night was far advanced when we reached it a second time, and having made a cake of our flour and eaten it, we lay down for the night. In the morning we baked the remainder of our flour; and, after remaining two or three hours, in expectation that Finnegan would still come, we again

walked on to the place where we had left our provisions, each this time carrying two large sticks of fire. We justly concluded that Finnegan had returned to the natives, whom we had left the day before, and therefore took no further concern about him, but pushed on with what expedition we could towards the place where the natives had given us to understand we should find the canoe. About four o'clock, P. M., we arrived at some huts in the immediate vicinity of the place they had pointed out, but were too much fatigued to look for the canoe that night; and having found water in a swamp hard by, and lighted a fire, we made a cake for supper, and slept in the huts. From this time forwards, we always took the precaution of lighting a fire at every two or three miles as we travelled, that we might not again experience the same inconvenience. Next morning, we proceeded to search for the canoe, and found it exactly in the place where the natives had given us to understand we should. We then took it down to the water, in order to ascertain if it would carry us both; but it had been so long exposed to the heat of the sun, that it opened in several places, and

would not float with one of us. This was a dreadful disappointment, as the beaches began to be covered with mangrove trees so thickly, as to prevent our proceeding along them, and, having no shoes, we were unable to walk through the bush. Therefore, after having consulted a short time, we determined on going back to the blacks, especially as we expected to find Finnegan there. We accordingly took our flour, &c. and immediately set out on our return. By night-fall we had arrived within three or four miles of their huts; here we found a fire and fresh water, and remained all night. Next morning, the tide being high, the mangroves prevented us from walking on the beach. We were therefore obliged to remain till towards low water, when, just as we were about to start, we saw Finnegan, accompanied by two natives, approaching us. It appeared that these men had left their nets at the huts where we found the canoe, and were fearful lest we should take them. They were bringing Finnegan with them, that we might not hurt them; but as soon as they saw us, they made signs to him to return with us. This however we would not allow, as

we were very much enraged at his leaving us, in the way he did, without fire, and were resolved to have nothing more to do with him. We therefore made him proceed with the natives to the canoe-huts, while we went on in the other direction, towards the huts where we had lived with the natives. About half a mile before we reached them, we saw the natives fishing: they had been very successful; and on seeing us they immediately put a quantity of whitings on the fire, nor would they allow us to proceed till we had filled ourselves with them. They then conducted us to our old quarters, and having kindled a fire, they left us some fish, and went out again to catch more. We now set about making ourselves as comfortable as we could, when just at night-fall we were surprised by the return of Finnegan and the two blacks with their nets. They had travelled the distance in one day, which it took us three days to perform, and had forced him to keep up with them. He was dreadfully fatigued; but his two companions, after leaving him, went out and procured fish and fern-root for him and themselves. We now became reconciled to him, and were all as

friendly as ever, resting ourselves for the next three days in the hut, where the blacks regularly brought us fish and fern-root, which latter they called *din-gowa*. We now consulted whether we had better take one of their canoes by night, or endeavour to make one ourselves; and having decided upon the latter, we made choice of a tree, and immediately fell to work to cut it down and form a canoe. We worked from sunrise to sunset for nearly three weeks, having no other tool but the hatchet; and during the whole time the natives brought us food, where we were at work, and likewise left fish in our hut daily. During the whole of this time, Finnegan refused to work with us, which the blacks observing, frequently took the axe out of our hands and offered it to him, making signs that he should use it, and, on his continuing to refuse, they no longer brought him food, though to us they continued a liberal supply. He was consequently obliged to procure fern-root, &c. for himself. At the expiration of three weeks, our canoe being complete, the natives would not allow us to launch it, but did it themselves; and when they saw it afloat, with Parsons and me in it, their joy and admiration

knew no bounds: they leaped, danced, and roared, following us up and down the beach. Being now satisfied that it would answer our purpose, we landed, and the natives rolled the canoe up again on the beach, not allowing us to touch it. The remainder of the evening was spent in making preparations for our departure, Finnegan still refusing to go with us, notwithstanding our entreaties that he would. The natives having given us a quantity of fish, &c., Parsons and I set out the next afternoon with the flood-tide. We had not proceeded above a quarter of a mile, when the natives, perceiving that Finnegan did not accompany us, hastily launched a canoe, and two of them embarking, he was by the rest forced to follow, when they paddled quickly towards us; but we had gotten round a sand-bank that lay off some distance from the shore. They therefore pulled to the bank and made Finnegan land on it, where they left him, and went back to the huts. As he was unable to swim, he would have been drowned when the tide rose, if we had not pulled back for him, as we immediately did. Being once more all together, we made the best of our way for the island before-mentioned, to which

the blacks had advised us to steer, and about eleven o'clock at night we reached it. We immediately secured the canoe, and made a good fire, which was scarcely done when it began to rain, and continued to pour incessantly during the night. The next morning, the rain having cleared off, we proceeded to the opposite side of the island with the canoe, where we procured some fern-root, with which we pushed off for the other side of the bay. The tide being strong, we did not reach the shore till after dark, when we found six or seven huts and some fire. We could hear the natives, who appeared to have just left this place, making much noise, a little to the southward, where they were fishing, but they did not come near us that night. The next morning we went up to a rising ground at the back of the huts, from which we could command a good view of the country. From this place we saw another point far to the northward, but the distance appeared so great, and the shore appeared to recede so far, that we were afraid to venture across in our canoe; we therefore returned to the huts, and having drawn up our canoe on the beach, we set out to walk round the bay. The mangroves

were so thick that we could not long keep the shore, but followed a native path which seemed to lead in the direction we wished to proceed in. On the third day we arrived on the bank of a large river, at a place where it was evident the natives use to cross over; but it was too wide for us to attempt to swim, and we could not find a canoe; we therefore resolved to go up the river until we should find some means of crossing it. Accordingly we travelled on for nearly a month, being very much impeded by the number of salt creeks, which we were obliged to walk round, as neither of my companions were able to swim sufficiently well to attempt crossing them. At last we reached the bank of a creek, on the opposite side of which we saw two canoes; one of these I was resolved to procure. I accordingly swam across, but I found myself so weak (as we had now lived for a month on fern-root), that it was with great difficulty I reached the other side. I loosed the canoe, and brought it back to my companions. It was, however, so small that it would not carry more than two of us at a time. I therefore took Parsons over the main river first, and then returned for Fin-

negan; but we found the brush so thick, and the country so rough, that it was impossible for us, naked and shoeless as we were, to travel it. I was therefore obliged to take them back in the same manner, to the place we had left. We then commenced our return the way we had come; but we had not in returning any thing like the difficulty which we experienced in coming up, since, whenever we came to a river or creek, instead of travelling seven or eight days in order to get round it, we were enabled to cross it in the canoe. We thus continued for two or three days, Parsons and Finnegan walking, and I paddling down in the canoe, till on the opposite side of the river we found another canoe; and being all now able to float down the river, we agreed to rest where we were a few days, in order to lay in a stock of fern-root. While thus employed, we fell in with a party of blacks, who were going to fish with their nets, and on our asking them they gave us a good meal of fish: but the next day they seemed anxious that we should leave them; and upon our not doing so, as readily as they wished, they made an attempt to seize our canoes. We were fortunate

enough, however, to get them out of their reach, and proceeded on our journey. In two days afterwards we reached the mouth of the river, where, on a sand-bank at the entrance, I was so lucky as to kill five large sting-rays, which afforded us some good meals. The river, as high up as we reached, was brackish, and a very strong tide ran in it: it was above a quarter of a mile wide where we turned back. We now left the smaller canoe, and my companions walked along the beach, while I, in the other canoe, pulled along the shore. In this manner we continued our course to the northward for three days, and on the evening of the third day reached the point which had been originally pointed out to us by the blacks on the island, where our boat was lost. This was the 101st day after we left Sydney, Parsons and I having kept a strict account thus far; but from this time forward we totally lost our reckoning. I had brought Parsons across the last bay in the canoe, and had promised to go back immediately for Finnegan; but he, having walked a little distance further along the shore, found a canoe, in which were twenty or thirty large fish. This he immediately seized, and we had scarcely

landed, when we perceived him paddling towards us. On his approach, he called out to us to make a good fire, as he had plenty of fish; upon which we ran down to the shore, and as soon as he landed, having hauled up the canoe, we carried the fish to some empty huts which we found hard by. In the mean time, the natives who owned the canoe began to call out, and at length followed Finnegan across in another canoe to the number of about ten. By this time several of the natives of the side on which we were, being alarmed by the noise, had joined them, and they all proceeded towards the huts. We had now for several weeks lived almost entirely on *dingowa*, which being but a poor kind of food, together with the fatigue of travelling so far under a burning sun without clothes, had weakened and emaciated us very much, and we resolved to run every risk sooner than lose the fish we had thus obtained: we therefore placed them under some bark, and I took my axe and Finnegan a stick, being determined not to lose them without a struggle. However, when the natives approached, they seemed at once struck with our miserable condition; and instead

of attempting to repossess themselves of the fish, some who had their nets with them instantly set to work to procure more for us; and one or two fetched us as much *dingowa* as they could carry. The next night they took us to their huts, where they entertained us in the same hospitable manner as the blacks, with whom we had before lived, had done.

(*Continued by John Finnegan, Pamphlet being sick.*)

We had resided with these blacks about four or five days, when Pamphlet, having gone out fishing with them one day, came back and said it was useless to remain there any longer, as he had seen the head of Jervis's Bay at a distance of about fifteen miles, and, therefore, proposed to go to it the next day. To this Parsons agreed; but as I had every reason to fear violence from Parsons, who had once or twice attempted to kill me, I resolved to remain where I was for the present, till I had fairly gotten rid of him, and then to attempt to travel by myself. They accordingly set out the next morning, and I remained behind, with the chief of the tribe, who

had been very kind to me ever since our arrival here. However, the next evening Parsons and Pamphlet, being unable to procure food, returned to the huts. Here we all remained for about a month; during which time we were distributed in different huts among the natives, the old chief always keeping me with him, while every one of the tribe contributed to our support, one bringing fish, another *dingowa*, and so on; so that we were as comfortable as we could expect to be in our situation. At the end of a month we again grew anxious to get home, if possible, and accordingly resolved to make one more effort. Having collected a great quantity of fish and *dingowa*, we set out one afternoon, and pursued our course northward along the beach for about ten miles: here we intended to pass the night; but just as we had made our fire, four of the blacks, with whom we had been living, came up with us, and used every entreaty to make us return with them. However, we imagined that they only followed us in consequence of our having promised them the axe and some other things, which we had not given them; and that in all probability more of their tribe

would arrive before morning; we therefore drove them away, and proceeded about a mile further, and there rested for the night. We resumed our journey very early next morning, and in the course of the day were overtaken by a black man and woman belonging to the tribe we had left. These people also tried to prevail on us to return, but without success; and after accompanying us about a mile, they struck into the bush and left us. Towards evening we came to a river, which appeared too considerable for us to attempt to cross; we therefore rested on the bank that night, and next morning went up it about a mile. Here we found a canoe, and brought it down to the place where we had slept, and in the afternoon at low-water we crossed the river in it, and rested on the other bank that night. The next morning we proceeded on our journey, and in the course of the day fell in with another smaller river, on the bank of which were a number of huts. Here we found an old black man, who was unable to move, both his legs and arms having been broken at some distant period, and never having been set. There were also three women, with some children, all

eating fish, with which, on our arrival, they instantly supplied us. Here we stopped for three days, when, having observed a woman crossing the river at low-water by walking, we did the same, and again proceeded on our journey. The same day we fell in with another river, up the bank of which we walked two days, and on the second evening met some natives, among whom we were surprised to see a man belonging to the tribe with whom we had tarried so long: he was one of the four who had followed us the day we left them. This man, when we first arrived among his tribe, was laid up with a spear-wound in the knee, and was cured by Pamphlet, by extracting part of the spear that had broken in the wound. He had in consequence become much attached to Pamphlet, and now again urgently entreated him to return with him. To this Pamphlet, whose feet had become extremely sore, at last consented. His friend was then on his way to a great meeting of natives, where he was to fight the man who had wounded him. Accordingly the next morning, Pamphlet and he set out together for the fight, while Parsons and I pursued our journey. The next day

we crossed the river, and continued travelling for two days longer, when, arriving at the bank of another river, a quarrel arose between Parsons and me, on which he opened his knife and swore he would murder me. I then ran into the bush, and he followed me: however, I succeeded in getting away from him, and travelled till evening with great expedition up the bank of the river. At night-fall I met a party of blacks crossing the river in three canoes, and endeavoured by signs to make them understand that I wished to cross too. This they would not allow, but made me turn back with a fishing black and his wife, who, after four days, brought me to the place from whence I had at first set out. Here I found Pamphlet, and was again received by the old chief with the greatest kindness, he seeming quite delighted with my return.

(*Resumed by Pamphlet.*)

The day following Finnegan's return, the old chief being about to go with several of his tribe to a fight at some distance, took Finnegan along with him. He was very anxious for me also to accompany him, but on my making signs to him that my

feet were still very sore, he permitted me to remain behind without further solicitation. I now daily accompanied the men of the tribe on their fishing excursions, and was always supplied by them in the most liberal manner. They would not even allow me to roast the fish, or pound the *dingowa*, which they gave me, but always brought them ready dressed. One day, however, the old man in whose hut I lived having caught several large fish, did not give me any, as was usual with him; and on my asking for some, he refused me rather gruffly. Upon this, fancying they might be getting tired of me, I resolved to leave them, and accordingly, taking my axe, I set out at once, in order to attempt, if possible, to rejoin Parsons. I had not, however, gone far, when I was followed by four of the young men, who made use of every persuasion in their power to entice me back, to which I at last consented, the more readily as each of them brought two spears, and I was not quite certain what use they would have put them to, had I persisted in my refusal. After this I lived with them in the same manner as before, expecting Finnegan's return every day; but having now lost

our reckoning for some time, I cannot form any idea how long I remained, or what time Finnegan was away. At last, one evening, as I was sitting by the fire and the blacks were roasting fish for me, I heard some natives shouting on the beach and calling me; upon which I rose and walked slowly towards them; but what was my astonishment and delight, when I saw a cutter under full sail standing up the bay, about three miles from where we stood! I instantly made towards her with all the speed I could, followed by a number of the natives; but before I had run half the distance, she came to an anchor within half a quarter of a mile of the shore. On coming abreast the vessel I hailed her, and was immediately answered; and shortly afterwards a boat pushed off from her, from which landed Mr. Oxley the Surveyor-General, Lieutenant Stirling of the Buffs, and the recorder of this narrative. I now learned, to my great surprise, that I was at least five hundred miles to the northward of Port Jackson, instead of being, as we always imagined, to the southward of Jervis's Bay. I was taken on board the vessel that evening, where, after I was cleaned, I was decently clothed

and humanely treated; but my head and heart were so much affected by this unexpected turn of fortune, that I was unable to answer any questions that were put to me that night. The next morning, however, I became more collected; and in the course of the day my satisfaction was greatly increased by the return of Finnegan, who experienced the same kind treatment that I had previously done. I now found that upwards of eight months had elapsed since I left Sydney; consequently, I had spent nearly five of them with these hospitable natives of Moreton Bay. Their behaviour to me and my companions had been so invariably kind and generous, that, notwithstanding the delight I felt at the idea of once more returning to my home, I did not leave them without sincere regret.

Mr. Oxley and Mr. Stirling set out the following morning, taking Finnegan with them, in order to examine the river which we had been so long in attempting to cross; and on their return, in five or six days, the Mermaid cutter got under way, and we all set sail for Sydney.

JOURNAL OF A ROUTE

FROM

BATHURST TO LIVERPOOL PLAINS,

IN NEW SOUTH WALES.

EXPLORED BY

MR. ALLAN CUNNINGHAM,

HIS MAJESTY'S BOTANICAL COLLECTOR FOR KEW GARDENS.

(With a Map.)

JOURNAL,

&c.

On Monday the 31st March, 1823, I set out with my people for the settlement of Bathurst. In the afternoon we crossed the Nepean River, and encamped at the foot of the Blue Mountains, about two miles beyond the settlement of Emu.

At daybreak of the 1st April we resumed our journey over the mountains. Upon reaching Spring-wood, about noon, we rested our horses awhile, and then continued onward until sunset, when, having travelled twenty-four miles, we halted, and pitched our tents at a swamp, which afforded us abundance of tolerable water, although the supply of grass or herbage for our horses was exceedingly small. The thermometer had a considerable range in the course of the day. At six A.M. the mercury stood at 66°, at eleven at 83°, from which it fell at seven P.M. to 68°. Much rain fell in the course of the night.

The morning of the 2d, however, although a little cloudy, had every appearance of a fair day. The thermometer, at seven A.M., when we continued our journey, showed 70°, rising to 75° at three P.M., when we reached Blackheath, another day's stage. A southerly wind, that had been blowing fresh all the day, at length brought up some heavy black clouds, which, in passing to the N.W., drenched us with rain, ere we could pitch our tents. At night again, heavy rain, with thunder and lightning, set in for the night, continuing with alarming fury until daybreak of the 3d, when the storm partially subsided, leaving me, however, undetermined to advance, since frequent showers were falling, and a thick mist covered the whole of the mountains in the vicinity. About eight A.M. the thermometer stood at 59°, and the clouds breaking to the westward, I was induced to make an effort to reach Cox's River in the course of the day. The air was exceedingly moist and raw, and every way disagreeable for travelling. We descended the pass without accident, and arrived at Cox's River early in the afternoon, when I again rested my horses for this day,

having in view a fatiguing stage to-morrow, that would occupy the whole of that day. The thermometer was stationary at 60° throughout the afternoon, falling 2° at eight P.M.

4th. The morning was exceedingly cloudy, and much rain fell in the hilly range before us to the Fish River, which we crossed at two P.M.; and upon advancing four miles beyond it, to Emu Valley, we encamped for the night, when rain again set in, with a fresh S.E. breeze.

Saturday, 5th. Raw, moist atmosphere; wind at S.E.; the thermometer, at seven P.M., was 59°. Having despatched my cart and pack-horses on their last stage to Bathurst, I rode forward, in order to reach that settlement early in the forenoon, to secure a ration of fresh beef from His Majesty's store for myself and people, who did not arrive at the plains until sunset.

6th to the 14th. The weather has been between these periods extremely unsettled and variable.

On Monday the 14th, I superintended the packing of my provisions, reducing my heavy luggage to pack-horse carriage, and issuing to each

of my five men a complete suit of warm winter clothing.

Tuesday, 15th. Morning very foggy, with every indication of a warm day. Took my departure from Bathurst with five heavy laden pack-horses and five men, with provisions for ten weeks, purposing to explore the country north from the Cugeegong River, as far as the extensive clear tracts of level land called Liverpool Plains. The vegetation of the line of country to the Cugeegong River (whose left bank we reached in the afternoon of the 18th) assumed a very different appearance from that which I observed in November last. Few plants were in flower; but the late rains had caused a great exuberance in those species that clothe the lower lands and are generally valuable to the grazier. Having crossed the Cugeegong at my old ford, I pitched the tents on a flat, upon its right bank, which, from the near approach of the hills to the river, afforded me greater security for my horses. Weather clouded, with a thunder squall to the westward in the afternoon.

Saturday, 19th. A very fine morning. Since

it is very probable that I may, in my return from my proposed long tour, penetrate through the broken mountainous country to the eastward of my present encampment, whence the Cugeegong derives its origin, I have determined to trace the river upwards to a small cleared flat, void of timber, named the Plain of Daby, in order to make such observations upon the country as will be useful to the colonial government, and enable me fully to recognize certain leading features of it, should I be obliged to return southerly through it to Bathurst, at the close of this journey. I accordingly reforded the Cugeegong, directing my people to proceed forward with the horses up its left bank. Steep, abrupt hills, inclining sharply to the water, soon, however, obliged me to quit the river altogether in search of a better and more moderately rising country for my heavily laden beasts. At length, after pursuing a route varying S.S.E. and E. for four hours, I found it only possible to proceed forwards by climbing a main range, from which I found all the minor rocky hills diverged. About four P.M. a favourable and easy descent induced me to quit the range, when I soon entered the

valley discovered last year, crossed the pretty swamp-oak creek that runs through it, and in an hour I got among my old marked trees, leading me to the junction of the creek and the Cugeegong River, as well as to the spot where I had forded the latter last December. As the day was closing in upon me, and my horses were much fatigued, I halted on a flat near the river for the night, sending three of my people up the stream, in search of a safe shoal, to lead the pack-horses over, to the north or right bank. The night throughout was very chilly, although my thermometer continued stationary at 46°.

Monday, 21st. Morning foggy. Thermometer, at seven A.M., 46°. Resuming our journey easterly, we pursued our route as near the bank of the river as the rocky hills, clothed with an uninteresting brush-wood and callitris pyramidalis, would allow us, occasionally passing through some grassy valleys, thinly clothed with a stunted timber of the few ordinary kinds of eucalyptus. The Cugeegong, in these stages of our ascent, presents some pretty basins of deep stagnant water, from which it occasionally dwindles to

a small glassy creek, whose channel is wholly choked up with reeds (arundo phragmites) and typha minor. Crossing at one of these narrows, our course was E.N.E. over a fine grassy country, occasionally seeing the river meandering below us; when, having effected twelve miles, and rain again falling, we were induced to encamp on a fine reach of the Cugeegong, about four miles west of the plain of Daby. In this day's stage I observed no signs of inhabitants, and no animals of any description. Granite is frequent on the hills and in the bed of the river; limestone being also abundant on the higher lands, as well as on the immediate banks of this stream.

Tuesday, 22d. Heavy rain continued throughout the fore part of the day, obliging us to remain within our tents. In the afternoon, I sent two men to the eastward, to a swamp observed from a ridge in the route of yesterday, and suspected to be the flat named by the natives *Daby*. In the evening they returned, reporting that they had crossed the plain, or flat, which was about three miles and a half distant from our tents, and that on the western edge of it an extensive grazier, re-

siding at Bathurst, had recently erected a hut and stock-yard. The wind continued fresh from the east, with exceedingly clouded weather. Thermometer, at eight A.M., 52°, and at four P.M. 55°.

Wednesday, 23d. Much wind during the night, and cloudy weather continued this morning. At eight A.M. we proceeded E.N.E. through a timbered grassy country about four miles, when we entered the open bare lands of Daby, through which the Cugeegong winds from the eastern broken country, being joined on the western side of the plain by a creek of running water, proceeding from the northern rocky semicircle of hills. The Cugeegong here preserves an uniform width of twelve yards, the banks being low, muddy, and abounding in reeds; and thus it divides the heart of the flat lands of Daby from east to N.W. Daby, of whose fine pasturage much has been said at Bathurst, may be described as a tract of several miles in length, from S.E. to N.W., well covered with an abundance of grazing herbage, thinly wooded, having patches perfectly bare of tree or shrub, and of an exceedingly rich, black, moist, loamy soil, adapted to all the purposes of agriculture. Amidst

these fine patches of land there are portions somewhat elevated above the ordinary level of the flats, which are composed wholly of a loose deep sand, and productive (in conformity with the general character of the continent) of several curious and interesting plants. A double hill, bearing east from my tent, induced me, by its rocky aspect and elevated appearance, to ascend it, as well to examine its botanical productions, as to take a few cross bearings of the principal points of this irregular country. Several small kangaroos were skipping around the rocks, of which the higher parts of the hill are formed: they were, however, too active to allow us to shoot them, instantly retreating into the deep recesses of the summits.

24th. My horses had been so negligently shod at Bathurst, that the shoes of two were falling off already; and I was obliged to despatch a man back to the settlement for a supply of spare shoes and nails.

The man having returned to me on the afternoon of the 26th, the shoes of all my horses were secured, and some repairs to their pack-saddles being effected, I determined to proceed northerly on

Monday, 28th. The exceedingly broken sub-mountainous structure of the country at N.E., N. and N.N.W., obliged me to commence my route from the plain of Daby, on the Cugeegong, considerably to the west of north, in part over a rising open forest land, tolerably well watered, lightly timbered, and occasionally interspersed with confined brushes. Availing myself of the country's at length allowing me to travel north, I descended to a grassy valley, bounded by rocky hills of moderate ascent, which I traced, as it declined at north by west along the margin of a swamp; when, having effected ten miles, we halted in a vale beneath a part of the boundary hills, which was studded with limestone of an excellent quality.

29th. Throughout the following seven miles the country is a succession of wet valleys and dividing ridges; the former declining westerly towards the Cugeegong, into which it was evident that the waters that had collected and formed in each a swamp, drained the land at due north, and more especially to the east of that point, continuing broken and very irregular. The timber was the same as that of the river, with occasionally a few

iron-bark trees, on the brushy descents from the hills. The general disposition of the leading ridges, at nearly right angles, with a direct north course, rendered the succeeding ten miles of the journey rather fatiguing, especially as the ascents to the summits of the intersected ranges were exceedingly steep, rocky, and otherwise difficult; and the interjacent narrow valleys continuing to dip westerly, showed us that their only point of easy access is from the bank of the river. An extent of apple-tree (angophera lanceolata) flats at length succeeds, with little or no interruption during four miles, to the base of a ridge of hills lying east and west; and although this part of the country abounds in kangaroos of large size, it appeared wholly unfrequented by natives, no traces whatever (such as had been every where obvious on the trees in our previous route) being observed in the whole extent. This circumstance may, however, be reasonably attributed to the absence of water, none being found by our expedition until we had reached the foot of some rising grounds, bounding these flat lands to the north. The timbers are of apple-tree, iron-bark, stringy-bark, and box of ordinary size. The rocks

were chiefly of a decomposing sand-stone, with a pudding-stone studded with pebbles of quartz and jasper. A few detached blocks of granite were also observed in a swampy vale.

30th. Upon leaving our encamping ground under a hill named Mount Burchell, and passing through a boggy tea-tree (melaleuca linariifolia) swamp, at the immediate base of the above-mentioned boundary hills, whose waters it receives; and upon penetrating thence about a mile through a body of honeysuckle (banksia integrifolia) brush, our route was effectually stopped by the broken precipitous aspect of the country. Perpendicular ridges, faced with rock, overhanging ravines of considerable depth, occupied a range of the compass from north to E.S.E. By dint of much labour we attained the summit of a grassy range at N.N.W.; and I hence beheld not only the frightful irregularity of the country easterly, to whose verge we had approached, but had a bird's-eye view of a very promising land, extending forty-five or fifty miles before us, to the base of a range of mountains lying east and west, and which bounded my view to the north; the intermediate country,

although hilly, appearing very practicable. Having taken a set of important bearings of points above the horizontal summit of this extensive range, which I considered might possibly constitute the grand southern boundary of Liverpool Plains*, we descended to a rich grassy valley winding to the N.W.; and having traced it about four miles, crossed a fine creek running to the westward, and forming the boundary limit, north of the extensive vale, which it abundantly and permanently waters.

May 1st. Onward northerly, about three miles, since the ranges of hills, which were generally disposed N.N.W. and S.S.E., would not allow us to pursue a course better than N.N.W., we travelled over a continuation of low grassy hills and vales, thinly timbered with the usual species of eucalyptus; when upon penetrating through a narrow patch of iron-bark brush, the country at once became open, the soil rich and loamy, the ge-

* An inference drawn from the observations of a Mr. Scott, who (with Lieutenant Lawson) in searching for Liverpool Plains last year, having penetrated to the base of a lofty impassable range of mountains, returned, considering that he had passed either to the east or to the west of those extensive cleared tracts of country.

neral surface nearly level and but slightly wooded, enabling us to advance due north about five miles, with no other interruption than that of passing a large muddy watercourse descending westerly, which, although nearly dry and choked with reeds at this season, is evidently a considerable rivulet in the rains, as we gathered from the wreck of wood and stubble upon its banks. Another mile, north by east, brought us to the base of a rocky sterile range of bare hills, which appeared to extend themselves far to the eastward, whence another creek of like form and importance with that we had passed rose, receiving, as it advanced westerly, the drained waters of the broken rocky ridge at whose foot it ran. Although the country to the westward, in continuation of the thinly wooded forest land over which we had travelled, appeared perfectly open, moderately timbered, and every way adapted to travelling, as far as I could observe from the higher rocks of the bold range, its northern boundary, yet having already made more westing in my northerly course, in consequence of the general disposition of its main ridges, than I had originally intended, I penetrated through an uninteresting brush-wood

of the irregularly-surfaced rocky ridge, and then proceeded N.N.E. about two miles over a diversified tract, in part a sterile siliceous scrub, connected with the ridge, and in part a patch of thinly wooded grassy flat, indifferently watered, and named by the aborigines Nandoura, which again immediately becomes invested with considerable sandy brushes of honeysuckle.

2d. From the small flat of Nandoura, an uniformly bad country extends nine miles, the greater portion of which consists of a level forest, intersected by deep, muddy, reedy creeks and stagnant holes of water, clothed with a small useless timber of box and blue gum; the soil being for the most part a stiff tenacious clay, producing a wiry grass, interspersed with tufts of rushy and harsh plants of cyperaceæ, decidedly indicative of a permanently wet tract of country, from whose nearly level surface the rains are but partially drained.

3d. Low stony ridges, covered with a very dense, lofty brush of underwood, and heavily timbered with tapering iron-bark, occasionally intersected our route.

4th. And as the country at length obviously

declined to the N.E. and east, in the direction of some prominent points in the belt of mountains before us (of which bearings had been taken in the earlier stages of our journey), we fully hoped we were fast approaching the verge of a more open and improved tract of land, although at a lower level than the miserable desolate country through which we were penetrating.

6th. Pursuing a steady course N.E., we, in two miles, passed the confine of these uninteresting, unprofitable washes; and upon reaching the brow of the ridge of forest hills, we at once descended to a fine tract of good country, watered by a stream, whose winding channel could be easily traced by the particularly dark verdure of the swamp-oak (casuarina paludosa) on its banks, several miles in a N.E. direction. This small river (which I since learnt is the Goulburn of Lieutenant Lawson, whose marked trees we have repeatedly intersected in our route from the Cugeegong) presented to us at this period a stream thirty-six feet wide, flowing to the S.S.E. and S.E., within an ample outer reedy channel of fifty yards in breadth, which should seem to be filled in some seasons of heavy

rains, wherein its waters are swollen to a perpendicular height of twelve feet above the present ordinary level, as appears by the lodgment of stubble in the branches of the stupendous swamp-oaks on its margin. The Goulburn evidently takes its rise in the south face of the mountainous ranges, which were distant from us from ten to fifteen miles, and which extend (as far as could be observed) from N.W. to about E.N.E.; and the river having watered some beautiful open grazing lands on its left bank, winds S.W. to the rocky bases of the hilly ridges, by which we had descended to this truly fine country, and thence it takes a decided bend to the S.E. Its rocks are of a sand-stone, often coloured with oxyd of iron; and although fragments of a compact whin were met within its channel, they appear to have been rolled down from the lofty northern ranges in the vicinity. The large cod and bream (as they are called) of the waters falling westerly, which by reason of their voracious nature are easily taken by the angler, have not been observed in this river, the deep clear pools of which abounded with a short, thick, black fish, not to be tempted by our baits.

Upon taking a retrospect of my irregular route (exceeding eighty miles) from the Cugeegong River to this stream, I would observe that, although portions in my latter stages are barren and unimprovable, the interjacent valleys, in the hilly part of my tour, afford excellent cattle pasturage, and will probably ere long be every way worthy of the consideration of the grazier, their respective points of entrance being evidently from the banks of the Cugeegong, or country in a north line from Mudgee.

Goulburn River is distant, by the most practicable route, 125 miles north from Bathurst, and about sixty-five or seventy miles N.W. from the head of Paterson's River (a branch of Hunter's River), a good meridional altitude of the sun placing the ford, by which we passed it, exactly in the parallel of 32° south, its presumed longitude by estimation being 149° 54′.

7th. Along the left bank of this interesting stream, to the N.E., an extent of nine miles of rich grazing tracts meets the eye, consisting of clear open levels or small plains, and grassy hills of the most easy acclivity, which to the S.E. are bounded by ridges of forest land, thinly

clothed with timber. The level tracts, immediately bounded by the river, occasionally break into small plains, whose areas comprise from 100 to 150 acres, clear of tree or shrub, and with the downs, or open gently rising grounds, furnish all the grasses and herbage of the Cugeegong and other western rivers, with the addition of a tall luxuriant species of danthonia, or kind of oat-grass, not remarked on other streams.

The soil of these limited plains, or more level lands, is of a moist alluvial nature; whilst that of the small downs, especially near the southern extremity of this beautiful tract of country, is rich, loamy, and dry, possessing every advantage of local situation to call forth the diligence of the agriculturist; and being admirably adapted to the formation of artificial meadows for sheep, or wheat lands, as far as the boundary rocky hills to the S. E. Viewed collectively, the lands on Goulburn River offer an eligible situation for the establishment of a very profitable and convenient agricultural and grazing farm, inasmuch as it will be centrically distanced between the located pasture-lands on Hunter's River, and our future stock stations on

Liverpool Plains. Their only possible line of communication will, by reason of the structure of the country, be found to intersect the Goulburn, at or about the ford by which we passed that stream.

8th. Leaving Goulburn River, our course to the N.E. led us about seven miles over a part of the hilly ridge, forming the lateral branches of the northern belt of mountains before us, which appeared to extend very far to the eastward; and upon descending to a narrow, rich, grassy valley, we reached another water, having all the characters, in point of breadth, depth, velocity, and tendency, of the Goulburn. This small stream, which was discovered last year by Lieutenant Lawson during his tour with Mr. Scott, was then named the Wemyss, as a compliment to our Deputy Commissary-General, and together with a third stream, which I have now named Scott's Rivulet, flowing through an open, clear apple-tree flat, about a mile east of it, rises in the northern barrier, and pursues a course through a very considerable level, wooded country to the S.S.E. and S.E.

9th. Continuing our route N.E. along the margin of Scott's Rivulet, towards some very conspicuous

points in the mountain barrier, distant about fifteen miles (of which bearings had been originally taken in the earlier stages of these journeys), the country again becomes hilly, and in other respects resembles the land to the westward of Wemyss's River. It, however, becoming more lofty, irregular, and broken by deep narrow valleys, as I approached within five miles of a lofty point in this barrier of mountains, which I have named Oxley's Peak, I deemed it prudent to halt, and having encamped, to examine the country around me from the most commanding eminence to which I could ascend, being fully satisfied that the distance to which I had penetrated from Bathurst, and the course by which I had conducted my little expedition, ought to have brought us to the verge of those large plains, to whose vast extent Mr. Oxley has in his Journal made special reference.

10th. It was with no small difficulty, and by a penetration to the centre of this formidable barrier, in which I crossed numerous streamlets proceeding from the many branching, steep, walled ravines around me, whose union formed the pretty rivulet which ran past our tents to the S.S.E., that I was

enabled to reach the summit of a mount, which I have named M'Arthur's (after my respected friend Hannibal M'Arthur, Esq.), and which commands a most extensive view on all sides, amply repaying me for the fatigue experienced in attaining these pinnacles of the barrier.

The country to the westward of our line of route from the Cugeegong appeared open, level, and moderately timbered, compared with the course I had pursued thence to Goulburn River; as did also the lands bearing from S.E. by south, to south, through which that stream, together with other waters which we had passed to the east of it, flows. The view between those points extends for a distance of between forty and forty-five miles to ranges of hills of ordinary elevation, which border upon that extreme point of Paterson's River, situate N.W. from the point of Howe's line of intersection, as seen in Mr. Oxley's large chart, published by Arrowsmith. This entire extent of southern country, on whose ample surface small patches of plain were remarked, seemed as if it would afford to the farmers of Hunter's River (upon passing the hills in their own immediate vicinity) every facility of com-

munication with the N.W. interior by the way of Goulburn River. To the S.E. the land is irregular and ridgy; and thence more east to N.E., and even N.N.E., it gradually rises to a bold and mountainous feature, the declination of the country being uniformly south. Upon looking north and N.N.W., I was gratified with a most extensive view of those considerable plains, which have been in part the object of my search, whose expanse of cleared surface we should ere this have traversed, had the structure of the country been favourable to our northerly advancement. The greater body of Liverpool Plains hereabouts lie N.N.W., from which narrow lateral branches extend several miles to the east, between some detached woody ridges, variously disposed on the general surface. These strips stretch themselves again south to the immediate base of the barrier ranges on which I was stationed. A few detached mounds of conical and rounded figures were scattered on the greater or main patches of plain, beyond which the expanse of level country continues for a distance which I could not justly estimate, on account of the haze that hung over it. The rock of the more elevated

parts of this mountainous range is a compact whin, generally disposed in horizontal strata, although, on the summit of the point whence I had taken a set of bearings of the country around, it assumed a basaltic form, being disposed vertically in cubical masses: the bases are sand and pudding-stone. Although there appeared no difficulty in passing along the winding declivities of the northern face of the mountains to a branch of Liverpool Plains immediately beneath me, the ascent, nevertheless, to this station from my encampment was so exceedingly steep and precipitous, as to render it totally impossible to lead my packhorses over them. I therefore determined (since the moderate appearance of the ranges east favoured my intention) to trace their south base in that direction in search of a pass, by which not only my horses, but the cattle and sheep of the farmer, might pass without danger, to those extensive pastures situate on their northern side.

11th to 16th. However, after pursuing an easterly course five days, in which we effected about thirty-five miles of very severe hilly travelling, all further advancing was totally stopped

by the mountain ranges; and their lateral wings becoming bluff and fronted by perpendicular rocks, which formed a chain of deep precipitous ravines from N.E. to nearly S.S.E., an outlet to the flat southern country at south by west, and S.S.W., was the only direction left us to pursue. Exhausting as may easily be conceived to be a journey, whose course had uniformly met at right angles the lofty lateral branches of this collection of mountains, it nevertheless was not without its interest and importance; since it determined the extent northerly of the interjacent valleys, as well as the number, size and general appearance of the creeks or rivulets, which water them at so high a stage, immediately beneath the main barrier, and at only a mile or two from their origin.

From Goulburn River to our most eastern point of penetration, no fewer than nineteen large creeks, or swamp-oak rivulets, very distinct at their respective points of rising, fall from the southern declivities of these mountain ranges, and with a considerable rapidity descend south and S.S.E. to the fine level country, which, from all the points in every stage of our eastern route, was seen at those

bearings. Several of these waters constitute at once rivulets, which in some periods of heavy rains are swollen to a width varying from eight to twelve yards, the evidences of which were obvious in the stubble that had lodged itself on the branches of the swamp casuarinæ, which clothe and shade their banks; and of these one stream, proceeding from a point of the mountains to which several ravines converge, exhibited all the proofs of being, in the wet season, so considerable as not only to fill its ample channel (exceeding ninety feet in breadth), but to inundate the fine grassy open meadows on either bank. Heavy logs, the wrecks of successive floods, were heaped upon one another, seven feet above the then ordinary level, or two feet higher than the outer bank.

Since the whole of these streams have one common tendency southerly, towards the extreme or western point of that trunk or main branch of the Coal River, which had been formerly intersected by Mr. Howe, in his journey north from Windsor, little or no doubt can exist of their constituting its principal sources, especially as the body of water, which the confluence of these rivulets might be

supposed to form, agrees with the magnitude of Hunter's River at that particular stage of its ascent. The principal valleys, which generally lie north and south, stretch themselves, from the immediate base of the mountain ranges, to the moderate country southerly, whence they are easily accessible, are copiously watered, and furnish excellent cattle food, whilst their boundary hills afford generally an ample range of sheep pasture.

Having failed in our attempts easterly, to discover any part of moderate elevation in this extensive line of bold mountainous land, by which I might have passed to the northward, and with a view of returning to my encampment on Goulburn River, whence I had determined to explore the continuation of this mountainous barrier westerly, I descended south, purposing upon reaching the open forest to pursue my journey west, at such a distance from the lateral grassy ranges proceeding from the mountains, as would enable my people and horses (both of which had been harassed in the course thus far to the eastward) to travel with ease and despatch.

19th. In about eight miles of progressive descent

S.S.E. through a fine thinly-wooded grazing forest, we intersected a small river, formed evidently by the junction of several of the mountain streams, and winding to the E.S.E. through a beautiful flat tract, wooded chiefly with angophera or apple-tree. Its outer banks were forty yards wide, although the breadth of the stream at this season did not exceed sixteen feet, by an extreme depth of two fathoms; but as the land in its vicinity is entirely alluvial, and exceedingly rich, and the marks of floods were observed eighteen feet above the surface of the water, it is evidently swollen to a very considerable extent when heavy rains fall upon the mountains. Upon passing this stream at a pebbly ford, we continued our journey south about three miles, through a level grassy country, moderately wooded with several trees of apple and gum, and bounded to the west by a steep abrupt ridge of hills, extending south from the barrier ranges from which we had retreated; the country to the east, as far as S.E., still continuing in bold, lofty, hummocky ranges. In the hope that the steep rocky chain of hills westerly, which occasionally presented perpendicular stony

heads to the S.E. would terminate, or become so moderate, that we might shape a direct course across the country to Goulburn River, we travelled as near its base as the small broken water-gulleys proceeding from it would allow.

20th. Journeying onward south about sixteen miles, through a rather indifferent country, occasionally breaking to an open grazing forest, and again becoming brushy, barren, and confined by much underwood, we at length were enabled progressively to advance west, by penetrating an abrupt, broken, narrow tract of country, consisting of bold steep ridges, bluff heads, and unconnected, irregularly-formed, stony elevations, separated from each other by small sharp grassy valleys, through which my pack-horses were able to travel without difficulty. Doubtless the whole once formed a line of connexion with the lengthened range of precipitous hills, whose base we had traced southerly twenty-five miles, and which at this stage terminated in perpendicular rocky crags of sand-stone, in a rapid state of decomposition. From some points of the rising grounds in the latter part of our route to this broken tract, I ob-

served the considerable expanse of open moderately-timbered country, which we were leaving to the east and S.E., to be bounded in the far distance by low forest hills, and seemingly to afford every facility to a penetration to the coast line.

21st. Quitting these narrow passes, we traced a fine rich valley about three miles in a north-westerly direction, when we reached the bank of another river, flowing gently to the southward between the hills that bounded the fertile flat on which we had encamped. It is evidently formed of a union of several of the mountain rivulets, and although its stream did not exceed twenty feet in breadth, by the depth of one fathom, I could not but be forcibly struck with the obvious proofs of the immense floods that at certain periods descend from the northern ranges, and overflow the high outer banks, which are at least eighty yards apart. Heavy logs, the wreck of successive freshes, were heaped upon each other on the secondary banks of this river, whilst the stems of several sturdy swamp casuarinæ inclined so as to form an angle of about 45° with the bed of the river; and those, that had withstood the enormous

weight and pressure of many tons of flowing water, bore on their limbs a mass of small timber and stubble at least twenty feet above the ordinary level of the stream. There existed no proof of these great floods occurring periodically. If they did, they would render a country apparently so intersected by mountain streams scarcely habitable. On the contrary, their occurrence seems manifestly rare, from the decayed appearance of the wreck that proves their existence at all. Large water-worn pebbles of quartz, jasper, jade, and their aggregate masses, were frequent in its channel, but no rocks of any description were observed on the higher banks, which, with the lands on either side, are of alluvial decomposition. This fine stream has received the name of Blaxland's River; and, with others flowing from the N.W., in all probability constitutes in twenty miles Paterson's River.

22d. A series of unconnected rocky ridges of considerable elevation, and crowned with pine, lying in no regular order, and separated from each other by small grassy valleys, obliged me to pursue a north course, upon quitting our encampment on

this river; and having with much labour accomplished eleven miles, by reason of the irregularity of the country, which often opened to fine clear grassy hills, we at length intersected a stream which, possessing all the character of its banks, current, and general appearance, induced me to consider it the Blaxland, ten miles nearer to its source.

Upon tracing its banks upwards, I observed, in some deep pools, that were formed at the extremity of its narrow reaches, the same species of small fish that had previously been seen in the Goulburn. Our attempts, however, to secure them by the hook were here also unavailing, for on the least alarm they darted from our sight to the darker recesses, beneath the overhanging muddy banks. Upon resuming our journey, we pursued a course west from Blaxland's River, through a moderately hilly tract of forest country and intermediate valleys, grooved with pebbly water-courses. Having advanced about five miles, several points of the mountain belt, set at other stations to the westward, were again fully recognized, and their bearings being again taken determined our posi-

tion, in the line of route in which we were travelling.

The country at length becomes more open, less woody, of a good loamy soil generally, and clothed with the usual grasses. The hills also are of a very easy acclivity, bounding rich valleys, which afford good cattle and sheep pasture. Continuing our route west northerly, over some low hills, which at length declined to swelling open grassy downs, we reached a large swamp-oak rivulet, winding round the base of a ridge of hills on its western side to the very open lower southern country.

26th to 28th. Upon the left bank of this fine limpid stream, which I have named Smith's Rivulet, we were detained four days, in consequence of the alarming sickness of one of my people; and although my anxiety for his recovery, as also my general attention to him, in order to effect that recovery, did not permit me to proceed far from our encampment, to examine the country around, I nevertheless ascended a lofty ridge bearing about west from our tents, and took a set of valuable bearings to all the leading points on the northern

ranges, having a tolerable view of the country around me. From S.S.W., by way of south, to S.S.E. the land appears (with the exception of a few low wooded ridges) perfectly level, for an estimated distance of thirty-five or forty miles, to the base of a long-backed range lying east and west, and being evidently connected with the broken mountainous land in the vicinity of Daby, upon the Cugeegong River. The open downs, or grassy easy declivities, which extend along the east bank of Smith's Rivulet, are traced, round the bases of the hills whereon I was stationed, to the level southern country, where they are circumscribed by the land becoming wooded; and beyond this, on the general level, are observed two small plains, lying relatively north and south, each appearing about a mile in diameter.

The mean of four meridional altitudes of the sun placed the situation of our encampment on Smith's Rivulet in 32° 2′ 6″ south latitude, the presumed longitude being about 150° 24′ east.

29th. Resuming our journey to the westward, we passed along the foot of some forest hills to a wide thinly-wooded valley, extending several miles

N.W. and north, towards the base of the mountains, from which a large stream, similar to Smith's Rivulet, descended, meandering through the bosom of the very pretty vales, along which we travelled upwards of two miles. A hilly irregular tract of forest country succeeds about five miles, whose higher ridges are rocky, and occasionally covered with a brush of plants, uninteresting even to the botanical traveller.

Upon passing these, however, we gradually descended to a level open tract, not so permanently watered, or productive of such tolerable timber, as the country through which we had passed of late; and upon pursuing an uninterrupted route west about six miles (part of which was over clear grassy downs lying N.E. and S.W.) we at length crossed Scott's Rivulet, and in another mile N.W. passed Wemyss's River at the very spot where we had three weeks before forded it.

30th. In order to avoid the more difficult lofty ridges in our former route from Goulburn River, we commenced our journey from our encampment on this stream, two points to the south of west, and having travelled about eight miles of generally a

hilly irregular country, we intersected our old marked trees, near the open flats of Goulburn River, by which we returned to our original position on that stream, after an absence of twenty-four days, in which period I had ascertained the nature and importance, to the grazier, of the country a degree to the east and north from the base of an impervious belt of mountains, towards the western extremity (at present known) of Paterson's River, in a south direction; as also, the number and magnitude of the several streams that (rising in the south face of those barren ranges) descend and flow through a declining southern tract of country, and which, from their tendency, are (on reasonable grounds) presumed to constitute the principal sources of the trunk or main branch of the Coal River.

June 1st. Although my provisions were very considerably reduced, on my return to our encamping ground on this river, as were also the conditions of my people and horses, and although I ran a risk scarcely warranted by prudence, since I could not foresee what swollen waters might interrupt our quick return to Bathurst; nevertheless,

conformably with the plan I had digested, upon failing in the discovery of a passage north to Liverpool plains in my route easterly, I reduced the weekly ration of myself and people, determining to employ a period of seven days in exploring, in a north-westerly direction, the continuation of these mountains, which appeared to extend their blackened ranges westerly for an unlimited distance.

2d. Having given the people and horses a day's rest, we proceeded upon our new route to the N.W. over a rising open forest, but observing, upon an advance of a mile, a most evident break of the main ranges of hills at north and N.N.E., I was induced to alter my course to that direction. A route thus commenced I was enabled to maintain with little variation during the succeeding eleven miles, through several narrow but rich, well-watered valleys, and over some very moderately-rising minor hills, without much labour to my pack-horses, all of which had become thin and debilitated.

3d. The summits of the leading hilly ranges appeared very rocky, and thinly timbered with stringy bark, box and blue gum; whilst their ac-

clivities, from the grazing valleys which they bound, were well covered with a grassy herbage, constituting dry walks for sheep. At length, an irregular series of lofty mountainous ranges, peeping over one another northerly, as far as the eye could see, and extending from the eastward towards the N.W., obliged us to climb some steep hills, and pursue a western course across some narrow valleys and lofty forest ridges, lying north and south, at right angles with that route.

4th. Upon accomplishing a laborious journey, though not exceeding seven miles, a lateral branch of the mountain range trended to the S.W., and being faced by a very narrow deep ravine, whose bottom I could not perceive, totally prevented our further procedure in that direction. From the point at which we had halted, we observed the country from east to north, and thence to N.W., to be a vast collection of bold lofty ranges, occasionally in series one behind the other, and again divided and terminating in steep precipitous heads, which overhung deep yawning glens and sharp rocky ravines. In this route westerly, we passed the lofty ranges which separate the eastern and

western waters; for, upon descending to their intermediate valleys, we remarked the rivulets which ran through them to incline most decidedly to the S.S.W. and S.W., being the first streams we had observed to have that tendency during the last four weeks. Seeing, therefore, the country from east, by the way of north, to almost west, was closed against us, and that there appeared no probability of discovering, by further perseverance westerly, any passage through this formidable barrier, I had almost determined to quit its blackened ranges altogether. However, upon observing some patches of open plain, bearing S.S.W. in the only direction left us to pursue, I resolved to descend to them, and from thence I should be able to see distinctly that tract of country, over which I could proceed a day or two longer with tolerable ease to my pack-horses, and which would best meet the views of my expedition prior to my return to Bathurst, a route I should be obliged very soon to pursue, as well on account of the condition of my men and horses, as of the very reduced provisions which we had to subsist upon.

5th. I accordingly conducted my party through a fine rich valley, watered by a creek, issuing from the ravine, and wooded with apple-tree, blue gum, and swamp oak, and having traced it about seven miles, it broke into small open plains perfectly clear of timber, which lying N.N.E. and S.S.W. appeared to extend between some rising grounds three or four miles. The steep range of forest hills that limited the valley on its western side, upon extending to this strip of plain, which I have named Duguid's, becoming exceedingly low and moderate, induced me to advance to the westward over it, through an open grazing forest, which soon brought me within sight of another heavy, bold, lateral range, constituting the boundary of a valley, much more ample at its entrance from the forest, and more promising, in its trending, to the object of my research, than any recess towards this belt of mountains that we had yet explored. The aggregate body of these mountainous ranges evidently inclined to the N.W., and their respective principal branches descended generally S.S.W. parallel to each other, forming valleys more or less

spacious, through which the waters rising in the southern declivity of this belt escape to the interior, bearing S.W. and W.S.W. from us.

The difficulties with which we had to contend in every stage of our journey, more especially during our near approaches to these mountains, considered with the observations I have of late made on the arrangement of their main or aggregate body, and its respective parts, fully convinced me that the only practicable mode of continuing their examination, with a view towards discovering a passage through them to the northward, would be by travelling on the broad base, formed generally in the lower country at the southern extremities of their lateral branches, exploring at each stage those large valleys that open upon it, and which, by their general tendency, might afford the hope of ultimate success. Thus impressed, and deeming the valley south of us well worthy our examination, I continued our journey to it over a fertile flat of apple-tree, the soil partly of a loose, rich, vegetable decomposition, and partly of a still alluvial nature, particularly along the margin of a fine brook, which ran through the vale from the N.E. Upon an in-

clining plane, we were enabled without difficulty to trace this valley to the N.N.E. about eight miles; when finding it became very contracted and sharp, by reason of a converging disposition of its boundary and other minor ranges, I was induced to halt and ascend a high point of the western range above us, being fully satisfied, from the northing we had made since we left Goulburn River, that we could not be many miles distant from the southern limit of Liverpool Plains. To my utmost gratification, upon tracing the line of mountain ranges, which continued very far to the N.W., a very considerable depression in the back of the main ridge, distant about three miles, afforded me a clear, although limited, view of a part of the open plains north of this extensive barrier; on which I immediately recognized and identified several detached round mounts, that had been previously seen from the summit of a lofty pinnacle (Mount M'Arthur) situate in these mountains to the eastward of us.

6th. Having again taken their bearings, as also those of several points around me, I descended to my people, and lost no time in shifting my encampment to an open valley immediately at the

base of the mountains, and within two or three miles of this apparently practicable passage to the northern country.

7th. Upon proceeding to examine it, I found that, from the level of the valley, the ascent through a close, lightly-timbered forest was exceedingly gentle and gradual to the highest part of the gap or pass, which was distant from our encampment about two miles; and the declivity on the northern side of the ridge, although less moderate (its face being grooved by small water-gulleys) was nevertheless found practicable, and not to exceed a mile to the open wooded country at its base. This was observed to be timbered with large and stately box, and watered by a rivulet, which meandered through the forest northerly, forming in its progress the western boundary of a considerable extent of plain, about eight or nine miles north from the highest part of the pass, which on either side is overhung by bold, lofty heads of the mountain range. Having directed a line of trees to be marked from our encampment through the passage to the verge of the nearest plain, I climbed to the summit of the eminence on the east side of the pass, and thence

had a most beautiful and extensive view of the country before me. From the northern base of these mountains, a level, open forest land extends from W.N.W. to north, to the foot of a long-backed range lying east and west, and distant sixteen or twenty miles; its ridge towards the western extremity being exceedingly hummocky and irregularly pointed.

On the eastern side of this woody country is distinctly traced, by the line of swamp-oaks on its banks, the small rivulet which rises in these mountains and runs direct north, its line of course forming, with the forest, the western verge of the nearest or most southern extensive patch of clear plain, whose visible extent easterly from my station was limited to the N.N.E. by detached, steep ridges of hills, between which, however, on their northern sides, these cleared levels evidently stretch themselves, and communicate with several patches perceived under some rising grounds as far to the eastward as N.E. This southern plain, whose breadth to a slight boundary line of apple-trees on its northern side is estimated at ten miles, presents a considerable expanse of brown grass and herbage;

and, excepting a small clump and a few scattered trees on its south-western angle, is perfectly clear of brush or shrub. Upon extending the view beyond it north, the plain or open level country continues very many links, its general surface being sparingly studded with a few detached mounts, or an occasional line of small trees, through which a few sharp points were barely discernible on the distant line of horizon. It was a subject of regret to me that the exhausted state of my provisions, as also the generally debilitated condition of my people and horses, would not permit me to advance northerly to explore these vast levels. I was therefore obliged to content myself with the simple discovery of a practicable passage through a bold range of mountains to them, but for which those unlimited, seemingly abundantly watered, grazing levels would be entirely closed against us from the southward.

8th. A good altitude of the sun at noon gave me for latitude of my tent in the valley 31° 43′ 45″ south, my longitude by estimation continuing about 149° 30′ east.

9th. In my journey to Bathurst, from which

the difference of latitude alone gave me a distance exceeding 100 miles, I fully purposed intersecting the Cugeegong River as near the stock-stations of Mr. Cox or Lieutenant Lawson, as the structure of the intermediate country would permit me, since in the event of any failure of my provisions that might take place from detention by swollen rivers in my route, my party might procure a sufficiency of aid from those establishments to carry them forward to the southern settlement without distress. We therefore proceeded on our homeward-bound route along the vale, which we found declined to the S.W., and consisted of rich grazing flat, watered by a swamp-oak creek, and bounded by a steep ridge of hills on its S.E. side, the mountain-range overhanging it to the N.W.

At about eight miles the vale, which had not throughout its extent from the pass exceeded a mile and a half, at length opens to a clear patch of plain, extending to the west along the base of the mountainous range about two miles and a half, and skirted over its S.E. side by a moderately-timbered forest of apple-tree, box, and some white gum; the creek which had, in its progress through

the vale, received some small addition to its stream, being traced immediately under the range on the west verge of the beautiful open level tract, which I have named Harrison's Plain.

Perhaps no situation, from its local advantages, is more eligible for a general grazing establishment than Harrison's Plain, inasmuch as it not only offers its open downs, which comprise at least a space of cleared land exceeding 700 acres, free from wet bottom, and therefore favourably adapted to sheep-pasture, but it commands a very beautiful and extensive cattle range, exceeding eight miles throughout the vale, to the pass over the mountainous range to Liverpool Plains.

10th. Desirous, under our present circumstances, of pursuing as direct a route southerly as the trending of the ridge of hills to the eastward would allow us, we stretched across part of the plain to the skirts of the wooded land, and thence advanced to the south and west, about eight miles, through an uninteresting forest, occasionally rising to low rocky ridges, covered with a scanty underwood. At length a strip of iron-bark brushy forest obliged me to direct our course more to the westward,

when we immediately descended to a fine open wooded flat, connected with those fertile grazing lands which appear confined to a narrow limit between the line of forest which we have penetrated, and the foot of the ranges N.W. from us, which still continue to stretch themselves very far to the westward southerly. Upon accomplishing fourteen miles from the northern extreme of Harrison's Plain, we again halted upon a creek, which, receding from the foot of the western range, assumes at this stage the character of a deep-banked, but narrow, rivulet. A level, clear tract of land, devoid of trees, between it and the above-mentioned range, about a mile wide, and extending north and south three or four miles, I have named Alcock's Plain, in compliment to another gentleman of His Majesty's Treasury, that to the northward bearing the name of one of its secretaries.

11th. Upon prosecuting our journey south about a mile through a flat forest, we reached the edge of another beautiful open plain, where the creek, having taken a more westerly course, had stretched itself again beneath the western ranges, which we here observed of moderate elevation trending in the

line of W.S.W. This plain, which I have dedicated to a friend, the worthy director of His Majesty's gardens at Kew, extends apparently six miles to the W.S.W., is bounded on the north by the mountainous range, and on the opposite point by a broken ridge of sand-stone rock, covered with pine and brushwood, and so extremely abrupt as totally to prevent me from pursuing my direct course. We were therefore obliged to pursue a route considerably to the west of south, stretching from one angle of the forest to another on the skirt of the plain, whose greatest breadth, clear of timber, does not exceed a mile. Upon quitting the verge of Aiton's Plain, we penetrated through a barren forest of box, abounding in brushes of the native indigo (indigofera australis) and the blue vine (kennedia monophylla), and upon passing several low gravelly ridges proceeding from the rocky pine-range, which continued unbroken to the S.W., we at length reached the foot of a detached rocky head, which I ascended to observe the appearance of the country around.

The barrier of mountainous land which has extended from the pass thirty miles to the S.W. in

one uninterrupted impassable range, continues to the west an estimated distance of forty-five or fifty miles, and constitutes the northern boundary of a very considerable tract of level, open, wooded country in that direction. To the west of Aiton's Plain, and simply separated from it by a line of apple-trees, is another of somewhat larger dimensions, which I have named Hawkins's Plain, upon whose north side the creek that has followed us from the northward runs, continuing under the mountainous range to the westward. Upon looking to the S.S.W. and S.W., the country, although broken and ridgy, appeared very practicable for the prosecution of our journey. Since, therefore, we had already gone farther to the west, in consequence of the disposition of the ridges of hills, than I had originally proposed, I rejoined my people, and continued our journey to the S.S.W. about six miles, over a very barren, irregular forest, interspersed with dense patches of brush, especially on some lateral, low, rocky ridges, connected with the pine-range still bounding us to the S.E.

12th. A low, heavily-timbered flat, abounding in pools of water and bog-plants, and evidently

subject to occasional inundation, brought us, in another mile from the dry barren grounds, to the margin of a small river, whose muddy steep bank, clothed with tall reeds, in many places concealed the deep waters which ran through its channel to the west.

Tracing its right or north bank to the eastward, about a mile and a half, over a fine, rich, alluvial forest-land, timbered chiefly with apple-tree and blue gum, and affording an excellent grazing run for cattle, we at last succeeded in fording to the opposite bank, and thence we were enabled to shape a more direct course towards our point of destination than we had hitherto been enabled to do. This small river, which, from its relative position, may be presumed to be formed by an union of three northern swamp-oak creeks, that were intersected previously to the discovery of the pass, is about twelve yards in breadth, of various depth, not exceeding two fathoms at the time we passed it; but subject in seasons of heavy rains to be flooded to a height of ten feet, when the whole of the forest-lands, from its banks to a pine-ridge a mile distant, is laid under water. This river is

called Pubo-batta by the aborigines. I have, however, called it Lawson's River, after the commandant of Bathurst, who first intersected it in January, 1822, to the westward of the point at which we had passed it.

Continuing our journey S.S.W. we passed through an open forest-country, productive generally of an useless, ordinary-sized timber, of apple-tree, box, and some blue gum, and very indifferently watered, since in the space of five miles a very shallow siliceous water-channel alone interrupted the dull level sameness of the forest, in which I remarked a few detached small pools of discoloured water.

13*th*. A rugged bushy pine-ridge, lying east and west, and extending in such direction as far as we could perceive through the timber of the forest, at length interrupted our progress southerly. However, having passed it, with some difficulty, to a low declining valley, and finding some stagnant pools of water resting on the stiff tenacious clay of the country around, I encamped, as much to obtain some bearings from a rocky head of the pine-ridge, as to give my debilitated pack-horses (almost wholly without shoes) a little rest, although in a place

affording them very indifferent pasture. Having taken bearings of a hummocky, lofty range of hills at S.S.E., and apparently distant from twenty to twenty-five miles, which I satisfactorily recognised as being situate near Mudgee, on the Cugeegong River, we were induced to prosecute our journey with as little loss of time as possible, especially since the louring, unsettled state of the weather had rather impressed me with the apprehension of being detained by the rains.

14th. As some heavy showers began to fall, we were able to effect only three miles and a half, through a continuation of uninteresting open forest, furnishing a heavier timber than the lands we have passed, but equally destitute of living streams. A few scattered native cypresses (callitris pyramidilis) of blighted growth, together with occasional clumps of honeysuckle (banksia integrifolia), tended in some degree to diversify the too prevalent sameness of the scenery around.

Continuing our journey S.S.E. about three miles, we entered an extensive iron-bark forest, the deep siliceous soil of which, resting on a stiff clay, being rendered extremely rotten and boggy by the showers

that had fallen the preceding night, showed us that after two or three days of heavy rain, this tract of country would be totally impassable. However, having struggled through its confined brushes, we reached a somewhat improving tract of land, more open, less timbered, and of a firmer surface, but still very badly watered; only one creek of any importance, filled with a stagnant putrid water, being met with in a route of about twelve miles and a half. This brought us to the neighbourhood of some elevated lands, observed from the pine-ridge I had ascended, one stage to the southward of Lawson's River.

Observing some rocky hills bearing from south to S.W., we prosecuted an irregular route easterly over some rising grounds, and along a ridge of broken, low hills, upon which were scattered large blocks of granite, whose decompositions being washed into the narrow intermediate valleys, formed a base, over which our horses travelled with confident firmness. Having effected about ten miles, we descended a ridge S.E. to a very wet valley, when, to our surprise, we crossed several recently trodden cattle-paths, which, as they led over some

rocky hills to the east, I did not deem it prudent to follow. Their discovery, however, satisfactorily proved to me our near approach to the Cugeegong River.

We therefore continued a S.E. course, but had scarcely proceeded a mile, before I had to regret leaving the higher grounds for the valley, although the former were broken and rocky, and consequently injurious to the ill-protected feet of my pack-horses. The rains which had recently fallen had so super-saturated the deep soil, that my horses were sinking in above the knee in these boggy grounds, thus rendered by the partial rains as soft as a quick-sand. At length we managed to struggle about two miles to a broad but shoaly creek, evidently the channel by which these wet lands are drained into the Cugeegong; and upon crossing its stream, which flowed to the westward, we halted, both man and horse being fairly worn out with the excessive fatigues of the day.

15th. Calculating that a course south, about four or five miles, would bring us to the river, we quitted our fires on the creek at an early hour; but had not proceeded a quarter of a mile over the

open forest, before our horses fell under their small loads in the boggy soil, obliging us to return to the firmer grounds on the creek. Most unexpectedly, as we were tracing it westerly, we overtook a stockman of Mr. Cox (an extensive grazier on the Cugeegong), who was in search of strayed cattle, and from him we obtained the information of the discharge of the creek into the river about three miles below his master's station. Learning that every part of the forest-land south from us was perfectly impassable, by reason of the heavy rains that had lately fallen upon the country around, we continued winding along the creek W.N.W. and N.W. about five miles, when it united with the Cugeegong at a beautiful, clear, fertile flat, named Gurran by the aborigines.

We continued our journey south up the bank of the river, over rich alluvial flats, covered with strong grasses and luxuriant nutritious herbage, constituting a permanent pasture for cattle. The late rains had swollen the waters of the Cugeegong to a level with its extreme banks. The declivity of country nevertheless was so exceedingly moderate, that its current was barely discernible. This ex-

ordinary fulness of the river afforded me but little hopes of being able to cross its stream until its waters had considerably subsided. However, upon arriving at the part immediately opposite the hut and stock-yard of Mr. Cox, we were shown a good ford three feet and a half deep, by which we safely crossed this considerable stream, and encamped at that gentleman's station.

16th. Here I rested my people and horses from the fatigues of their journey, and we procured such comforts, particularly vegetables, as this recently-formed establishment afforded.

I have now traced my long-protracted journey throughout all its stages, to the left or south bank of the Cugeegong River, having ascertained (for the information of the colonial government) the structure and agricultural importance of the country situate at the spring-heads of those streams which constitute Hunter's River, the character of the lands westerly to the pass, through a formidable range of mountains that forms the southern boundary of Liverpool Plains, as also the route by which the only line of communication can be opened to them from the settlement of Bathurst; the mea-

sured distance between these open tracts of country being 160 miles.

The mean of four meridional altitudes of the sun, taken during the period of four days' rest at this station, places it in lat. 32° 32′ 54″, my estimated longitude being 149° 39′ east.

20th. We pursued our journey to Bathurst up the left bank of the Cugeegong, which consists chiefly of rich alluvial flats, wooded generally with the apple-tree, with little or no interruption by rocky, brushy patches, about twenty-four miles S.E. to the point at which the beaten path intersects the river. These fine grazing grounds vary in depth to the boundary ranges from one to three miles, as the hills approach or recede from its banks, and occasionally open into plains perfectly clear of timber, and therefore affording excellent situations for stock runs.

22d. Heavy, clouded weather, proceeding from the southward, with every indication of a long continuance of rain being about to meet us, I lost no time, upon reaching the beaten route to Bathurst, at the point where it intersects the Cugeegong, in advancing to the settlement, and we arrived there

on the evening of the 27th, showery weather having prevailed ever since the 20th, on which day we resumed our journey from Mannar, the native name of Mr. Cox's stock-station.

27th. Upon our arrival at Bathurst, we learned that rain had fallen during the last six weeks on the plains, and that the Macquarie River had been flooded so considerably as to inundate the wheat-lands on its upper bank, a circumstance never before witnessed since the establishment of the settlement.

ON

THE ABORIGINES

OF

NEW HOLLAND AND VAN DIEMEN'S LAND.

BY

BARRON FIELD, ESQ.

(*Read 2d January,* 1822, *before the Philosophical Society of Australia.*)

ON

THE ABORIGINES,

&c.

PREVIOGSLY to laying before this Society a few collections of new, and corrections of old, materials, on a topic to us most near and interesting, I wish to guard my humble paper against any expectation that its title may excite, of a complete and satisfactory dissertation upon a subject which has been so little investigated, and which is so difficult of investigation. Of the aborigines of New South Wales, the manners and language are fast decaying; and of those of Van Diemen's Land, they have never, from the unsociable disposition of the males, been properly made known to us. Much also remains to be learnt of the numerous islanders of the Indian and Pacific Oceans, before we can be said to have materials enough to elucidate the great mystery of the peopling of the world; and it is to be hoped that the institution even of this

Society will, by collecting and digesting all the physiological facts which lie within its reach, contribute in some degree, however inconsiderable, to solve the mighty problem.

In the mean time, the most philosophical division of the varieties of the human species, is that of Professor Blumenbach, into the Caucasian, the Mongolian, the Ethiopian, the Malayan, and the American; but, with no more light than that which the residence of a few years in New South Wales and Van Diemen's Land has afforded me, I am of opinion that the professor is wrong in classing the natives only of the *north-west* coast of New Holland, and of the island of Van Diemen, in the Ethiopian or negro variety, and the rest in the Malayan, together with the more civilized and enlightened natives of the Indian Archipelago and the South Sea Islands; and I think that *all* the aborigines of Australia are of Ethiopian origin. I am fully aware of the distinction between the natives of New Holland and those of Van Diemen's Land, although I never before heard of any reason for exempting the New Hollanders of the north-west coast from this distinction; and I

cannot learn any from our associate, Captain King, who has seen more of that coast than perhaps any European: but I do not think the difference between the New Hollander and the Islander of Van Diemen by any means sufficient to class the Australians into two varieties, like those of the Birmanese and the Great Andamaners*, or the Malays and the negro races of the Indian Archipelago†. The skull, the genius, the habits, of the Australians appear to me, as far as I have been able to investigate the subject, to have, in all of them, the degenerate Ethiopian character, like that of the Andamaners, and the negro races of the Indian Islands; and Professor Blumenbach, and after him Professor Lawrence, have proved that the accidents of straight or woolly hair, in different families or tribes, are very insignificant marks of diversity, and do not at all render it necessary, with Colonel Symes, on the origin of the Great Andamaners‡, and Mr. M'Leod, on that of

* Symes's Embassy to Ava, pp. 130, 131.

† Crawfurd's Hist. of the Indian Archipelago, b. i. ch. i.

‡ Embassy, *ubi supra*.

a woolly-haired Philippine Island near Luconia*, to call down the trenchant machinery of a wrecked

* Voyage of the Alceste, p. 205. After all, I suspect that Mr. M'Leod has confounded the woolly-haired pigmies of the interior of Luconia, the *negrettos di monte,* with this imaginary island.—See Blackwood's Mag. vol. iii. p. 577. De Zuniga, in his History of the Philippine Islands, is of opinion that, from their common flat nose and their dialects of one common language, the origin of both the Indians and the negroes of these islands is nearly the same: but surely the Malay nose is very different from the Negro; and I doubt the fact of the resemblance of the two languages; and so does Mr. Maver, his translator; but he seems to confound the aboriginal negroes with the Tagalese. Zuniga's theory is, that both the Indians and the Negroes (especially the latter) are of South American and not Malayan origin. Now, no two things can be more different than the Ethiopian and the American varieties of our species. The Malayan is nearer to the American, and the Mongolian so similar, that the peopling of the western world has generally been attributed to the Tartars of the north-eastern parts of Asia. To derive the Indian Islanders from America is going back again, and reversing all the scriptural and philosophical pre-eminence in antiquity of the East: it is to make population circumnavigate the globe. But I will give the Spaniard the benefit of his argument, however unphysiological:—

"No doubt can be entertained that the radical language, from which all these dialects spring, prevails from Madagascar to the Philippines, with local shades of difference. It is spoken too in New Guinea, and in all the islands to the southward, in the Marianas, in the islands of San Duisk [a strange corruption of Sandwich], in those of Otaheite,

African slave-ship, to " account for the phœnomenon," or " explain the historical mystery."

and in almost all the islands in the South Sea, as far as the isle of Pasquas, which is not more than 600 leagues distant from the coast of South America. On observing that the proper names of places, about the middle of the continent of South America, are very similar to those of the Philippines, I endeavoured to procure a vocabulary of this country, and did not fail to examine with great diligence and attention the few words of the language of Chili which Ercilla mentions in his Araucana, and which I found perfectly conformable to the language of Tagala.. The name *Chili* is a derivation from this language : the cormorant is called *cochile*, and this is a name which the Malays give to the sons of their kings. *Chilian*, which is a town of Chili, is a compound from the language of Tagala, in which language the termination *an* gives the signification *town*. Thus, from *Cachile* we draw *Cachilian*, meaning a town where there are cormorants. *Mapocho*, which is the situation where the city of Santiago stands, is another word of Tagalic composition, signifying a town, and *pocquiot* being a kind of herb, we form the name of *Mapocquiot*, a town in which there is abundance of this herb. In Chili, they frequently double the syllables in forming a word, as *ytayta*, *biobio*, *lemolemo*, *coloco*. A great many other words are either actually of Tagalic derivation, or assimilate closely to that language. In examining the structure of these two languages, we are compelled to conclude that they flow from one and the same source; and I dare affirm that the Indians in the Philippines are descended from the aborigines of Chili and Peru, and that the language of these islands derives itself immediately from the parent source, those of the neighbouring islands being dialects of this. Many will urge the absurdity of this

The difference between the Birmanese and the Great Andamaners, the Malays and the Papuans,

supposition, on the plea that the more immediate vicinity of the Philippines to Malacca must have occasioned them to be colonized by the Malays, as our historians generally assert. I do not deny that these islands could easily have been peopled by the Malays; but how could they colonize the Isles de Palaos and Marianas, which are distant more than 300 leagues? And it is still more improbable that they colonized the islands of San Duisk [Sandwich] and Otaheite, which are distant 2000 leagues from the Philippines*. All these people, however, have the same language, the same manners and customs, and consequently the same origin as our Indians. There is, in my opinion, this other reason for supposing these latter islands could not be peopled from the westward, viz.—that in all the torrid zone the east wind generally prevails †, which, being in direct opposition to the course from Malacca and the adjacent islands, it is fair to conclude that the inhabitants of all the islands of the South Sea came from the east, sailing before the wind; for we have seen it often happen that the Indians from the Palaos have arrived at the Philippines precisely under these circumstances. On the contrary, we have no instance on record of any of the Philippine Indians having been, even by accident, carried by the winds to the islands to the eastward. Indeed, we know the reverse of this to be true, since at times the most experienced pilots, in attempting this navigation, have been compelled to return without falling in with the islands they went in search of, from the necessity there is, in the voyage, of being provided with proper nautical instruments. Here, therefore, we appear

* But the whole Pacific, from Malacca to Easter Island, is thickly studded with islands, for stepping-stones.—B. F.

† But see *postea*, p. 219, note.

the New Zealanders and the Australians, is radical, and constitutes a variety in the human species. The origin of each race must be looked for much

to have found the most probable solution of our difficulties, that is, that the first settlers came out of the east (we may presume from the coast of South America), and proceeding gradually to the westward, through the Pacific Ocean, studded as we find it with islands at no very great distance from each other, and of course of easy access before the wind, it follows that to whatever point in an eastern direction we can trace the Tagalic language, we may conclude that at that point emigration must have commenced." *History of the Philippine Islands, Manilla,* 1803, vol. i. c. 2.

"At Watteo, Captain Cook met three natives of Otaheite, who had been driven by the winds and currents thus far to leeward in attempting to pass in a canoe to Uliatea. Captain Cook, after relating their story, observes: 'The application of the above narrative is obvious: it will serve to explain, better than a thousand conjectures of speculative reasoners, how the detached parts of the earth, and in particular how the islands of the South Sea, may have been first peopled, especially those that lie remote from any inhabited continent, or from each other.' But this fact, as well as others of the same nature, proves directly the contrary of the inference deduced from it by Captain Cook, namely, the peopling of Polynesia from the west; for in all these instances, the natives have been driven from east to west by the trade-wind and equatorial currents, and hence the real consequence would seem to be, the derivation of the Polynesian race from America; a consequence, however, which every physical and moral feature of these people forbids us to adopt." *Tuckey's Maritime Geography,* vol. iv. pp. 55, 56.

higher up than in a wrecked slave-trader, and the difference lies much deeper than (like Sampson's strength) in the hair. "The distribution of organic beings on the globe (says Baron Humboldt) depends not only on very complicated climatic circumstances, but also on geological causes, with which we are entirely unacquainted, because they are connected with the original state of our planet*." The Birmanese, the Malayans, and the New Zealanders, are all susceptible of civilization. The Birmanese are referred by Blumenbach to the Mongolian variety of our species, and their civilization is of great antiquity: the Sumatrans, Javanese, and other East Indian islanders of the Malayan variety, have also their religious antiquities; and the South Sea islanders are evidently, from their persons, their aptness for civilization, and their language, of Malayan origin likewise; but the Great Andamaners, the Papuans, and the Australians, like their superiors, the American Indians, have never yet shown a disposition to lead any other life than that of the hunter

* Edinb. Philosoph. Journal, vol. vi. p. 280.

and fisher, or to acknowledge any other government than that of the strongest, and any other law than that of nature *. After the attempts

* The best and latest account of the North American Indians is given by Mr. Hodgson of Liverpool, in the Missionary Registers for November and December, 1821. The American Board of Missions have two schools or native institutions in actual work, viz. Elliott among the Choctaws, and Brainerd among the Cherokees; the former consisting of 80, and the latter of 200 (Mr. Hodgson says 80) children; and the Board are forming other missionary settlements among the Indians; but what are these among a population of 258,969, as the Indians of the United States alone are still stated to be? It is like the poor four black children that composed the Australian Native Institution (!) in 1823. But it is more promising to learn, that in 1819 the Council of the Lower Towns of the Choctaws devoted their third of an annuity of 6000 dollars for seventeen years, which they have been receiving since 1816 from the United States, for the sale of a tract of country, to the establishment of a school in their district; and this example was followed in March, 1820, by the Six Towns, and in June by the Upper Towns; 6000 dollars being thus appropriated annually to this object by the nation. Mr. Hodgson adds, that one of these districts had before requested the United States not only to forbid the introduction of ammunition into the nation, that the hunter may be compelled to work, but to send their annuity in implements of husbandry; that at a recent general council of the chiefs, 1000 dollars in money, and upwards of eighty cows and calves, were subscribed for the use of schools; and that the total contribution of the Choctaws to this object exceeds 70,000 dollars. When the farmer and his family begin to cut the corn themselves,

of more than thirty years, by the constant neighbourhood of colonies of Englishmen, to civilize

the fields will be cleared. On the other hand, the national council of the Creek Indians refused to receive a mission. The Cherokees are said to be making considerable advances in civilization. They have divided their country into districts, have laid a tax on the people to build a court-house in each district, and have appointed four circuit judges; and are rapidly adopting the laws and manners of their white brethren. The English language has been adopted as the official one, in which the national records are kept, and is universally gaining ground among the nation. Not a few individuals, and those of influence, have altogether discarded the Indian language and customs. It is a circumstance uncommonly favourable, that so great a proportion of those who have already become Christians consists of mothers of families; because, according to the manners of the Cherokees, with these resides the principal influence on all the other members of a family, both as to external arrangements and their way of thinking. By marriage, the husband is considered as in some degree adopted into the family of his wife, and the wife's brothers are regarded as, in some respects, entitled to more influence over the children than their own father. "As few of the Creeks are rich enough (says Mr. Hodgson) to purchase many negroes, all the drudgery is performed by the women, and it is melancholy to meet them, as we continually did, with an infant hanging on their necks, bending under a heavy burthen, and leading their husband's horse, while he walked before them, erect and graceful, apparently without a care." Christianity is the only religion that has ever equalized women with men; and if, with all this bodily slavery to the men, and mental influence over them, the women of North America do not

the natives of New Holland and Van Diemen's Land, they are exactly in the same state in which we found them; and, I am afraid, the following history of the Ethiopians of the Indian islands will equally apply to those of Australia:—

"The brown and negro races of the Archipelago may be considered to present, in their physical and moral character, a complete parallel with the white and negro races of the western world. The first have always displayed as eminent a relative superiority over the second, as the race of white men have done over the negroes of the west. All the indigenous civilization of the Archipelago has sprung from them; and the negro race is constantly found in the most savage state. That race is to be traced from one extremity of the Archipelago to another; but is necessarily least frequent where the most civilized race is most numerous, and seems utterly to have disappeared where the civilization of the fairer race has proceeded furthest, as in Sumatra, Java, and perhaps

introduce christianity with civilization in her hand, they do not deserve to be other than they are.

Celebes; just as the Caribs and other savages of America have given way to the civilized invaders of Europe. The negro races of the Archipelago increase in numbers in the inverse ratio of improvement, or, in other words, as we proceed eastward. In some of the spice islands, their extirpation is matter of history. They are the principal races in some of the islands towards New Guinea, and nearly the sole inhabitants of the portion of that great island itself, which, from its physical character, we have a right to include within the limits of the Archipelago.

"The east insular negro is a distinct variety of the human species, and evidently a very inferior one. Their puny stature and feeble frames are not to be ascribed to the poverty of their food or the hardships of their condition; for the lank-haired race, living under circumstances equally precarious, have vigorous constitutions. Some islands they enjoy almost exclusively to themselves, yet they have in no instance risen above the most abject state of barbarism. Wherever they are encountered by the fairer races, they are hunted down, like the wild animals of the forest,

and driven to the mountains or fastnesses, incapable of resistance*."

The difference between the New Hollander and the Van Diemen's-lander is slight in the skull, and slighter still in the colour, genius, or habits. M. Péron says, that the Van Diemen's Islander has a large head, especially remarkable for the great length of the diameter from the chin to the sinciput, and that that of the New Hollander is less bulky and compressed in the back part, while that of the Van Diemen's Islander is elongated in the same direction. The great difference consists in the hair, which is either straight or curled in the former, and woolly in the latter. The difference, in Africa, between the neighbouring tribes of the Hottentots and the Kaffers (both Ethiopians) is infinitely greater; the former being short, yellowish, with high cheek-bones and flat noses, and the latter being tall, deep brown, with the high forehead and prominent nose of Europeans. It is language and genius, and not shape or colour, that are the only tests of affinity of the human race.

* Crawfurd's Hist. Ind. Archipel. vol. i. pp. 18, 24.

Language (says Mr. Horne Tooke) cannot lie; and from the language of every nation, we may with certainty collect its origin. The similitude and derivation of languages (says Dr. Johnson) afford the most indubitable proof of the traduction of nations, and the genealogy of mankind. They add physical certainty to historical evidence, and often supply the only evidence of ancient emigrations and of the revolutions of ages, which have left no written monuments behind them. But neither the analogy nor the diversity of language (says Baron Humboldt*) can suffice to solve the great problem of the filiation of nations. They afford only simple probabilities. Mr. Marsden, the author of the History of Sumatra, and Mr. Crawfurd, of that of the Indian Archipelago, have traced what they call the Great Polynesian language, from Madagascar to New Guinea and the South Sea Islands.

"In the general character, particular form and genius of the innumerable languages, spoken within the limits of the Indian Islands (according to Mr.

* Personal Narrative, vol. iii. p. 285.

Marsden) there is a remarkable resemblance, while all of them differ widely from those of every other portion of the world. This observation extends to every country, from the north-west extremity of Sumatra to the western shores of New Guinea, and may be even carried to Madagascar to the west, the Philippines to the east, and the remotest of Cook's discoveries to the south *. The original clothing of the Sumatrans is the same with that found by navigators among the South Sea Islands, and in Europe generally called Otaheitan cloth †."

" One original language (says Sir S. Raffles ‡) seems in a very remote period to have pervaded the whole archipelago, and to have spread (perhaps with the population) towards Madagascar on one side, and the islands in the South Sea on the other; but in the proportion that we find any of these tribes more highly advanced in the arts of civilized life than others, in nearly the same proportion do we find the language enriched by a corresponding accession of Sanscrit terms, directing us at once to the source whence civilization flowed towards these regions."

* Archæologia, vol. vi. p. 154.

† Hist. of Sumatra, p. 43. ‡ Hist. of Java, p. 369.

Now we cannot find the smallest vestige of this language in the thousand Babel tongues of the New Hollanders and Van Diemen's Islanders. And so it is with the Ethiopian races of the Indian Archipelago.

"The negro races (says Mr. Crawfurd*) who inhabit the mountains of the Malayan peninsula, in the lowest and most abject state of social existence, though numerically few, are divided into a great many distinct tribes, speaking as many different languages. Among the rude and scattered population of the island of Timor, it is believed that not less than forty languages are spoken. On Ende and Flores we have also a multiplicity of languages; and among the cannibal population of Borneo, it is not improbable that many hundreds are spoken. Civilization advances as we proceed westward; and in the considerable island of Sambawa, there are but five tongues; in the civilized portion of Celebes not more than four; in the great island of Sumatra not above six, and in Java but two."

Mr. Crawfurd, in one of his pages, has given us a specimen of the Great Polynesian language, in

* Hist. Ind. Archipel. vol. ii. p. 79.

which I find that the words for *eye**, *die*, *bird*, and *board*, are exactly the same, and no fewer than ten other words nearly the same, as those in the Church Missionary Society's New Zealand Grammar.

"That the New Zealanders are of the same race with the people of the tropical isles (says Mr. Nicholas†) I think is unquestionable; and so striking a resemblance do they bear in their manners and customs, as well as in the conformation of their bodies, to the natives of Otaheite, of the Society Isles, of the Marquesas, the Fejees‡, the Tonga or Friendly Isles, and of Easter Island, that it is impossible not to consider them the offspring of the same primitive stock. They are likewise identified with them in their superstitions and their systems of theogony, which are only modifications of a common belief, originally assented to by the whole of them, and altered in the lapse of time according to caprice and circumstance.

* The word for *eye* is the only one, out of a vocabulary of forty, that is nearly the same in Port Jackson, Caledon Bay, Endeavour River, and King George's Sound; but it bears no resemblance to the Polynesian word.

† Voyage to New Zealand, vol. ii. p. 267.

‡ Not the Fejees, see p. 218, *postea*.

But what appears conclusive on the subject is, that all these islanders speak one general language, the variation in the words being only dialectical, while in many of them no difference is perceptible."

Of this similarity Mr. Nicholas has given an example in his vocabulary, where the New Zealand and Tonga words are compared. He then proceeds to deduce the South Sea Islanders from the Malays, and adopts Dr. Francis Buchanan's and Sir Stamford Raffles's derivation of the East Indian Islanders from the Tartar stock.

" To judge from external appearance, that is to say, from shape, size, and feature (says Dr. Buchanan*) there is one very extensive nation that inhabits the coast of Asia. It includes the eastern and western Tartars of the Chinese authors, the Calmucs, the Chinese, the Japanese, and other tribes inhabiting what is called the peninsula of India beyond the Ganges, and the islands to the south and east of this, as far at least as New Guinea."

Professor Blumenbach sees physiological reasons

* Asiatic Researches, vol. vi. p. 219.

to divide this "nation," as Dr. Buchanan calls it, into two varieties of the human species, which he calls the Mongolian* and the Malayan. Mr. Nicholas then endeavours to trace the connexion between the South Sea and the Indian Islanders; and here I think he tries to avail himself of resemblances which are too general and unimportant, and even descends to the absurd fancy, that the Mosaic account of the creation may have been transmitted from Egypt to Asia, and so (between Siam and China) through the Indian Archipelago to New Zealand, because the people of the latter islands are generally impressed with the belief that the first woman was formed of one of the ribs of a man, and because *heevee* is their word for *bone*. This is like the fancy of many of the New Englanders, that the North American Indians were the descendants of the ten tribes of Israel, because in some of their songs they could distinguish the word *hallelujah*. All our religious emigrants and

* Mongolia is about the latitude in Asia, where M. Bailly places that still more ancient people than the Egyptians and the Orientals, which he conceives to have existed, from the knowledge and civilization common to both.

missionaries are apt to assimilate the manners and superstitions of their respective savages to Judaism, the Old Testament being the ancient history with which they are most familiar. The great principle of Polynesian religion, the *taboo*, is manifestly of Asiatic origin.

"But it is among the Batta nation (says Mr. Nicholas), a people who inhabit that part of Sumatra bordering on the Straits of Malacca, and who have preserved their genuineness of character from the first period of their origin to the present time, that customs and institutions obtain, which in the aggregate resemble those in New Zealand almost to identity."

Now it unfortunately happens that the Battas are not of the Malay, but of the negro race of Indian Islanders*, so that Mr. Nicholas, instead of exalting the New Zealanders to the rank of Asiatics by the laboured parallel which he draws, is only demonstrating them to be Ethiopians. But, in spite of their advocate, I believe the New Zealanders not to be of the savage negro, but of the

* Lawrence's Lectures, p. 570.

civilizable Malay race; and I adopt the following paragraph from Mr. Crawfurd, as the truth of the whole matter:—

"The common circumstance of affinity between all the languages, both of the Indian Archipelago and Australasia, is the Great Polynesian. I think it will be found that the languages nearest to Java, in geographical position, or which possessed in any respect the easiest intercourse with it, will, in the ratio of these advantages, be found to contain words of the Polynesian. They are abundant in the Malay and other cultivated tongues of the west, decrease as we go eastward, and most where there is most barbarism; until in the distant islands of the South Sea a few straggling words only are found in the languages of the more civilized tribes, and even these do not reach the dialects of such abject savages as those of New Holland*."

"In whatever way" (said the acute Bishop Watson, long before these lights were shed upon the subject†) "the islands of the South Sea may have become inhabited, the similarity (I do not say the

* Hist. Ind. Archipel. vol. ii. p. 92.

† Anecdotes of his Life, vol. i. p. 411.

identity) of the languages spoken in them all, leads us to believe that they have all had one common origin, and the time (I conjecture) will come, when the mother language of all the various dialects spoken in these islands, will be discovered in some part of Asia."

Mr. Crawfurd has now proved, with great learning and ingenuity, that the parent seat of this great Polynesian language was Java: and Professor Blumenbach, with equally probable physiological reasoning, has traced both the Indian and South Sea Islanders to the Malayan variety of the human species. The only object of the present paper is to exclude the Papuans, the New Hollanders, and the natives of Van Diemen's Land from this class, with which both he and Mr. Lawrence have confounded them, and to place them among the negroes of the Indian Archipelago; and in that arrangement I am fortified by the following passages from Dr. Prichard's Inaugural Disputation on the Varieties of the Human Species, pp. 85—89, and from Captain Tuckey's Maritime Geography, vol. iii. pp. 315, 316.

"India is inhabited by a mixed race, made up

of the aborigines and of others, whom the pursuits of war and conquest have at various times brought there. The religion of Bramah seems to have been introduced from the north, and at later periods vast numbers of the Mongols have entered and conquered the country. These mixtures have effaced the peculiar characters of the original inhabitants, which we must therefore seek for in the islands protected by their situation from such visits. The islands of the Indian Sea, as well as those of the Pacific, contain two races of men, differing in many respects. One of these approaches, and in some instances equals, the blackness of the negro: the hair is curled and woolly, the body slender, the stature short, the disposition barbarous and cruel. The other is more like the Indians of the continent, has a fairer skin, larger limbs and stature, better proportions, and exhibits some marks of humanity and civilization. According to Forster*, the former, who are aborigines, have occupied the middle and mountainous parts of many islands, leaving the coasts and plains to the more recent colonists.

* Observations during a Voyage round the World, pp. 281, 282.

They occupy the highest parts of the Moluccas, the Philippines, Formosa and Borneo, all New Guinea, New Britain, New Ireland and New Caledonia, Tanna, Mallicollo (New Hebrides), New Holland and Van Diemen's Land [and, according to the preface to the London Missionary Voyage, Louisiade, Solomon's Isles, Santa Cruz and the Fejees*]. The more recent nation occupies Sumatra and the other islands of the Indian Sea, Otaheite, and the Society Islands, the Friendly Islands, Marquesas, Ladrones [or] Marian and Caroline Islands, New Zealand, Sandwich and Easter Islands [to which may be added Navigator's Islands†]. The language of all the latter re-

* Mr. Mariner confirms the dissimilarity between the Figese and the Tongese (Friendly Islanders).

† "At first we perceived no difference between the language of the people of Navigator's Islands and that of the people of the Society and Friendly Islands, the vocabularies of which we had with us; but a closer examination taught us that they spoke a dialect of the same tongue. A fact which may tend to prove this, and which confirms the opinion of the English respecting the origin of these people, is, that a young Manillese servant, who was born in the province of Tagayan, on the north of Manilla, understood and interpreted to us most of their words. Now it is known that the Tagayan, Talgal, and all the dialects of the Philippine Islands in ge-

sembles the Malay; and there can be no doubt that they spring from that race, and have spread by

neral, are derived from the Malay; and this language, more widely spread than those of the Greeks and Romans were, is common to the numerous tribes that inhabit the islands of the South Sea. To me it appears demonstrated, that these different nations are derived from Malay colonies who conquered these islands at very remote periods; and perhaps even the Chinese and Egyptians, whose antiquity is so much vaunted, are moderns compared to these. Be this as it may, I am convinced that the race of woolly-haired men, still found in the interior part of the islands of Luconia and Formosa, were the aborigines of the Philippine Islands, Formosa, New Guinea, New Britain, the New Hebrides, Friendly Islands, &c. in the southern hemisphere, and of the Carolines, Ladrones, and Sandwich Islands in the northern. In New Guinea, New Britain and the New Hebrides, they were not to be subdued; but being vanquished in the islands further east, which were too small to afford them a retreat in their centres, they intermingled with their conquerors; and hence originated that race of very black people, whose complexion still remains a few shades deeper than that of certain families in the country, who probably made it a point of honour not to contaminate their blood. These two very distinct races appeared striking to our eyes at the Navigator's Islands; and I can ascribe them to no other origin.

"Perhaps it may be objected that it would have been very difficult for the Malays to pass from the west to the east, to arrive at these different islands; but the westerly winds are at least as frequent as those from the east, in the vicinity of the equator, in a zone of seven or eight degrees north and south; and they are so variable, that it is very little more difficult to make a voyage to the eastward than to the westward." *La Pérouse's Voyage*, chap. xxv.

their ships over those distant spots. The black people are every where barbarous, and, according to Forster, have languages not agreeing with each other. In neither case can we perceive any traces of the influence of climate*. The latter race,

* "All former navigators, and especially Captain Cook in the Endeavour, found the immense continent of New Holland very thinly inhabited. The diminutive size of its inhabitants, the peculiarity of their customs and habits, their total want of cocoa-nuts, cultivated plantations and hogs, together with the most miserable condition of their huts and boats, prove beyond all doubt that the South Sea Islanders are not descended from the natives of New Holland. But, what is still more convincing, their language is totally different, as evidently appears from the examination of a vocabulary obligingly communicated to me by Captain Cook. We have therefore nothing left but to go further to the north, where the South Sea Isles are, as it were, connected with the East Indian Isles. Many of these latter are inhabited by two different races of men. In several of the Moluccas is a race of men who are blacker than the rest, with woolly hair, slender and tall, speaking a peculiar language, and inhabiting the interior hilly parts of the countries: in several isles these people are called *Alfoories*. The shores of these isles are peopled by another nation, whose individuals are swarthy, of a more agreeable form, with curled and long hair, and of a different language, which is chiefly a branch or dialect of the Malayan. In all the Philippines, the interior mountainous parts are inhabited by a black set of people, with frizzled hair, who are tall, lusty, and very warlike, and speak a peculiar language, different from that of their neighbours. But the outskirts, towards the sea, are peopled with a race infinitely fairer, having long hair and

scattered in various parts of the vast island of New Holland, which has such variety of temperature,

speaking different languages. They are of various denominations, but the Tangales, Pampangos, and Bissayas, are the most celebrated among them. The former are the more ancient inhabitants, and the latter are certainly related to the various tribes of Malays, who had overrun all the East India Islands before the arrival of the Europeans in those seas. Their language is likewise in many instances related to that of the Malays. The isle of Formosa or Tai-ovan has likewise, in its interior hilly parts, a set of brown, frizzly-haired, broad-faced inhabitants. The isles of New Guinea, New Britain, and New Ireland, have certainly black-complexioned inhabitants, whose manners, customs, habits, form, and character, correspond very much with the inhabitants of the South Sea Islands, belonging to the second race in New Caledonia, Tanna, and Mallicollo; and these blacks in New Guinea are probably related to those in the Moluccas and Philippines. The Ladrones and new-discovered Caroline Islands contain a set of people very much related to our first race. Their size, colour, habit, manners, and customs, seem strongly to indicate this affinity; and they are, according to the account of some writers, nearly related in every respect to the Tagalese in Lucon or Manilla; so that we may now trace the line of emigration by a continued line of isles, the greater part of which are not above one hundred leagues distant from each other. We likewise find a very remarkable similarity between several words of the fair tribe of islanders in the South Sea and some of the Malays. But it would be highly inconclusive, from the similarity of a few words, to infer that these islanders were descended from the Malays; for as the Malay contains words found in the Persian, Malabar, Braminic, Cingalese, Javanese, and Malegass, this should likewise imply that the nations

every where retains its black colour, although the climate at the English settlements is not much unlike that of England, and in Van Diemen's Land, extending to 45° south latitude (it is well understood that the cold is much more severe in the southern hemisphere, at an equal distance from the equator than in the northern), they are of a deep black colour, and have curled hair like the [African] negroes."

" In the inhabitants of this Grand Archipelago we find two great races, totally differing in physical appearance and in moral character: these are the Malay, and the Papua or Oceanic Negro. The Malay is no longer considered as aboriginal of the little peninsula of Malacca, into which, by his own

speaking the above-mentioned languages were the offspring of the Malays, which would certainly be proving too much. I am therefore rather inclined to suppose that all these dialects preserve several words of a more ancient language, which was more universal, and was gradually divided into many languages now remarkably different. The words, therefore, of the language of the South Sea Isles, which are similar to others in the Malay tongue, prove clearly, in my opinion, that the eastern South Sea Isles were originally peopled from the Indian or Asiatic northern isles; and that those lying more to the westward received their first inhabitants from the neighbourhood of New Guinea."—*Forster's Observations,* pp. 280—283.

tradition, he is only a comparatively modern emigrant from Sumatra and Java. Neither is this race confined to the archipelago, to which we have assigned its name, but is diffused throughout the vast Polynesia, from the Mariannes to the solitary Easter Island, and from Owhyhee to New Zealand. Throughout this immense extent the Malay physiognomy cannot be mistaken, and the Malay language is universal, with no greater variations than are found in European languages derived from the same root. The wide dispersion of this race, in islands sometimes separated by many hundred leagues of sea, has been a subject of much difficulty to the learned; some supposing it from America; but both the physical appearance and language contradict this idea. Others suppose the Malays to be the aborigines of a continent submerged, while others have attempted to trace them to an ancient civilized people of Java, connected with India.

"The second race, the Papua or negro of the Grand Ocean, is distinguished by the obtuseness of the facial angle, the thickness of the lips, the hair frizzled without being woolly, the members dis-

proportionately long and very slender, and the sooty complexion. This race occupies New Guinea and the neighbouring islands (except the Freewill Islands of Carteret), New Holland, New Caledonia, and the Fidgi Islands. Remnants of it are also found in the Philippines, by the name of *Ygolotes* and *Negritos*, and in the Moluccas, where they are called *Haraforas* and *Alfurezes;* the *Googoos* of Sumatra seem also to be of the same race. The physical conformation of the Papua, and particularly the squareness of the head, distinguish him from the African negro, and authorize the supposition of his being indigenous in these countries. With respect to language, it affords no ground for reasoning, every tribe having a jargon radically differing from each other."

The inference to be drawn from the above analogies is certainly, that the Australians will never be civilized, and that the South Sea Islanders will; and experience is every day fulfilling the reasoning. We have now lived among the former for more than thirty years; and the most persevering attempts have always been made, and are still making, to induce them to settle, and avail themselves of the

arts of life; but they cannot be fixed, nor is it possible by any kindness or cherishing to attach them. They have been brought up by us from infancy in our nurseries, and yet the woods have seduced them at maturity, and at once elicited the savage instincts of finding their food in the trees, and their path through the forest,—propensities which civil education had only smothered *. They have been removed from their native country, and in a foreign land have they robbed and run away from their fosterer and only protector †. They have quick conceptions, and ready powers of imitation; but they have no reflection, judgment, or foresight. They have no wants but such as are immediate; and they have therefore never become either builders, or cultivators, or mechanics, or mariners; nor had they ever any civil government or religious superstition, like the Otaheitans, the Sandwich Islanders, and the New Zealanders. They are the only savages in the world who cannot feel or

* The Rev. Mr. Cartwright is my authority for this fact. The same is said of the North American Indians by Dr. Falconer, "On Mankind," p. 263.

† This happened to the Rev. Mr. Marsden, at Rio de Janeiro.

"know that they are naked;" and we are taught in the Scriptures that the eyes of man cannot be opened to what we call a civilized or artificial life, knowing good and evil, till he acquires a sense of (perhaps false) shame or "fear," as it is called in the Bible. The Payaguas and Mbayas are abominated by the other South American Indians, because they are unacquainted with modesty. They have plenty of clothes, but they make a bad use of them (says the historian of the Abipones *), for they cover those parts of the body which may be exposed, and bare those which modesty commands to be concealed. This is precisely the consequence of giving clothes to the Australians; and twenty years' daily commerce with European ladies and gentlemen fails to shame them. The women, however, (adds Martin Dobrizhoffer) of both nations wear that degree of clothing which modesty requires; and even the negroes of the Philippine Islands (according to Zuniga) cover the fore part of the body with a piece of bark. Now in Australia

* See an Account of the Abipones by Martin Dobrizhoffer, translated from the Latin by Sara Coleridge, vol. ii. pp. 127, 128.

they are both naked, the man and his wife, and are not ashamed, with the exception on the part of the women of the sitting posture, mentioned by Labillardière. And it is therefore I am of opinion that our savages will never be other than they are. An intelligent and experienced member of the committee of our Native Institution (the Rev. Mr. Cartwright) feels this impediment to their civilization so strongly, that he would compel them not to come into our towns naked; but I doubt the practicability both of the means and the end. True,

"Without black velvet breeches, what is man?"

but how could they be "whipt from tithing to tithing," because their breeches are black epidermis? Modesty is an innate feeling, that no human power can inculcate—no government and general order legislate. Yet not for this cause let us relax our efforts in their favour; nor let us ever deny them a compensation for the game which we have scared from the confines we have usurped—"the native burghers of this desert city." Still less let us treat them as our Malayan brother-colonists do the aboriginal negroes of the Indian Islands, of whom Mr.

Crawfurd says, that "whenever they are encountered by the fairer races, they are hunted down like wild animals of the forest, and driven to the mountains or fastnesses, incapable of resistance*." Let us continue to them the chance of receiving the comforts of civilization and the blessings of religion, as an indemnification for the new vices and diseases which they imbibe from us too readily. And if, even with all our cultivation, the result should be the same as that of the poor persecuted Ethiopian, who is "found guilty," by the Indian islander, "of a skin not coloured like his own," and if decay or extermination of the simple race of Australia should be the gradual end of our colonization,—

> Yet deem not this man useless,
> But let him pass,—a blessing on his head!
> And, while in that society, to which
> The tide of things has led him, he appears
> To breathe and live but for himself alone,
> Unblam'd, uninjur'd, let him bear about
> The good, which the benignant law of heaven
> Has hung around him, and while life is his,
> Still let him prompt the lib'ral colonist
> To tender offices and pensive thoughts.

* Hist. Ind. Archipel. vol. ii. p. 26.

Then let him pass,—a blessing on his head!
And, long as he can wander, let him breathe
The freshness of the woods.
May never we pretend to civilize,
And make him only captive!
Let him be free of mountain solitudes;
And let him, where and when he will, sit down
Beneath the trees, and with his faithful dog
Share his chance-gather'd meal; and, finally,
As in the eye of Nature he has lived,
So in the eye of Nature let him die!

ON

THE GEOLOGY

OF PART OF THE

COAST OF NEW SOUTH WALES.

BY

ALEXANDER BERRY, ESQ.

(*Read* 1822, *before the Philosophical Society of Australia*).

ON

THE GEOLOGY,

&c.

During a former residence in this country, I was induced to visit Hunter's River, to which my journey was made by sea, and from which I returned in the same way; but the vessel being forced to put into Broken Bay, I walked across to Port Jackson.

The line of coast presents in general an aspect of bold perpendicular cliffs of sand-stone, lying in horizontal strata. These cliffs, however, are occasionally interrupted by sandy beaches, behind which the country is low and flat, the high land appearing to retire considerably. On a near inspection, these spaces, now occupied by sandy beaches, seem, at no very remote period, to have formed the entrance of bays and arms of the sea. In many places they are even now so partially filled up, that we still find extensive salt-water

lagoons, separated from the ocean only by a bank of sand, through which the water yet occasionally forces a passage. The strata of sand-stone consist of beds lying one upon the other in the most regular manner, so that they have evidently never undergone any deviation from their original relative situation. It is true that the beds are not invariably strictly horizontal, but this arises perhaps from a gentle yielding of the substrata. Some of these beds, although perfectly horizontal, and of regular thickness, consist of thin laminæ, which incline at a considerable angle to the north-east. This sand-stone may generally be called silicious. It is rarely argillaceous, chiefly in this state over coal: it is then soft and very decomposeable. Among the coal metals we occasionally meet thin beds of what may be called calcareous sand-stone.

The country immediately to the south of Hunter's River is (as is well known) an extensive coal-field. The cliffs on the sea-shore present a most interesting section of the coal-field strata. There in one day more information may be obtained, than in other places in many years. I traced the strata for nine miles, when they abruptly terminated by

suddenly bending downwards, and sinking below the level of the sea. From this place a long sandy beach and low land extend to the entrance of Lake Macquarie (called also Read's Mistake). The south head of Lake Macquarie rises into high cliffs, in which the coal strata again present themselves. Dr. Hutton would have given much for a single day's walk along this shore. Here we see at one glance the progress of some of the most interesting operations of nature—the work of many ages. It appears as if the crust of the earth had been broken, and a bold and regular section forced upwards, and presented to our examination. Between the coal-beds we find strata of sand-stone and beds of slate-clay with vegetable impressions; sometimes (but more rarely) indurated clay-stone. Embedded in these strata, there is found abundance of argillaceous iron ore. This is occasionally cellular and in layers; but for the most part it appears in the form of petrifactions of trees and branches, irregularly dispersed. Near the southern termination of the coal-field (that is, where I have mentioned its sinking beneath the level of the sea), two large beds gradually approach, and at length

meet. They do not, however, incorporate, but run parallel; and at this place there is a mass of highly indurated pudding-stone, which reaches from the surface of the coal to the top of the cliff. The coal-cliff abruptly terminates at the entrance of Hunter's River, then forming what is called coal-head. On the north side of the river, a sandy beach and low land extend to the vicinity of Port Stevens.

The coal is decidedly of vegetable origin: the fibre of the wood is often quite distinct.

The vegetable impressions in the slate-clay under and over the coal are no less worthy of an attentive consideration. I have seen some of these subterranean plants in full flower, so that a skilful botanist might ascertain even their species. I think that I have been able distinctly to recognise the leaf of the zamia spiralis.

Upon the whole, what I now advance consists of mere hints, thrown out to induce some adequately scientific person fully to investigate this very curious and untrodden field.

I afterwards found, by examining the ravines, that the sand-stone strata extended from the sea-

coast to the river Nepean on the west. In many of these ravines I found indications of coal, viz. coal-field schistus with vegetable impressions, argillaceous iron ore, the same calcareous stone formerly indicated, and even fragments of coal. Through that extent of country, the sand-stone seems to spread like a level platform; and although the country rises in hills and ridges, these seem to consist of a mass of clay, the surface of which has been worn into inequalities by the action of water. Consequently the higher portions, which contain most of the original soil, are more fertile than the bottoms of the valleys, unless these have been covered by alluvial depositions. This clay is generally at the surface red, and impregnated with iron: in some places, however, it is white and saponaceous, appearing under the form of beautiful pipe-clay; and I have seen this white clay contain nodules of calcareous stones resembling stalactites, and evidently formed by aqueous deposition. At the depth of a few feet it generally assumes the appearance of schistus, impregnated with sulphate of alumina and sulphate of iron.

Beyond the Nepean River the sand-stone strata

are forced upwards, and extend from north to south, forming the range of hills known in the colony by the name of the Blue Mountains. Towards the north shore, these mountains are sterile and rugged. Towards the south, however, the sand-stone is in many places covered or displaced by whinstone, which sometimes assumes the form of common, at other times of porphyritic, trapp. In the latter state it shows itself throughout the verdant, well-watered, and very desirable pastoral district of Argyleshire. In this county, wherever the soil lies upon sand-stone, we find it consisting of the common Australian clay. Over the whin-stone, again, it invariably consists of light black mould. On advancing further to the south, both granite and primitive lime-stone are found. I have however seen neither, and am therefore unable to speak more fully on the subject.

As I have lately had an opportunity of examining some parts of the coast, as far south as Mount Dromedary, I shall annex a short account of such further observations as I have been able to make.

It was Lieutenant Johnston's and my first intention to have entered Shoal Haven River. We

found it, however, opening into the sea through a sandy beach, and with a chain of breakers across the entrance, in the same manner as when it was examined several years ago by Mr. Oxley. We therefore stood towards the little haven three miles to the southward. A low sandy beach extends from the river to Shoal Haven. There is, however, a high rocky point on the south side of the entrance; and this protects the little passage from the southerly winds, and prevents it from being filled up.

This high land extends some miles along the coast, and is at length terminated by a shoal lagoon. It consists of sand-stone lying upon indurated blue slate-clay, covered with the usual Australian soil. I almost think it was originally a barrier island to an extensive bay behind, now occupied by low alluvial land. At high water this place seems at first of some consideration, being rather extensive, and presenting many arms. At other times it seems merely a collection of mud banks, the tops of which are covered with mangroves, and with shallow channels. At the top of one of the arms, it is separated from Shoal Haven River by a narrow

isthmus, not two hundred and fifty yards broad, and across this we hauled the boat to examine the river.

The land at the back of Shoal Haven, and south of the river, is low and swampy, so as in some places to be incapable of producing trees. There is, however, a more elevated border along the immediate bank of the river. Behind this it sinks into a lagoon, which seems, at no distant period, to have been the bed, or at least a channel or branch, of the river, then opening into Shoal Haven. Indeed even now it is hardly elevated above the level of the sea at high water. At a distance of about eight miles from the sea, the shores of the river become high, and consist of perpendicular sandstone cliffs. This appeared to be the original mouth, which formerly discharged itself into a large bay, sheltered by an island. This bay is now filled up, and presents the appearance of low alluvial land, swamps, and lagoons.

We went up the river more than twenty miles, when we were stopped by a long rapid. At this place the river might be about one hundred and fifty yards wide, and was flowing perhaps double

that distance over small, rounded, water-worn stones, which it hardly covered. The tide flows thus far, which may be considered the termination of the inland navigation. For some distance below, the alternate projecting points consist of alluvial land. They are, however, of small extent, often bounded behind by the steep precipices, which formed the ancient shore of the river, and seem, from the marks left by the floods, exposed to dangerous inundations. I ascended one of the cliffs near this place. The sandstone was little compact, hardly fit for the purposes of building, and although it did not entirely resemble pudding-stone, still it consisted of, or at least contained, the fragments of older rocks, viz. lumps of quartz, fragments of primitive clay-slate, &c. Here I collected some alum, almost pure, which had oozed from the crevices of the strata. At the season of the year when we visited Shoal Haven River (January), we found the water hardly fresh, a few miles below the rapid, and indeed the upper part of the river more resembled a long lagoon than any thing else, having little current, and a very inconsiderable rise and fall of tide.

Not finding a convenient watering-place in Shoal Haven, we put into Jervis's Bay, and anchored under the shelter of Bowen Island, where we readily supplied ourselves. I found that the heads of Jervis's Bay and Bowen Island consisted of the same horizontal strata of sand-stone observed in other places. However, as we entered late in the evening, and went out early next morning, I had hardly an opportunity of making further observations at that time.

On leaving Jervis's Bay we proceeded to the southward, and in the course of the forenoon entered with our boat a small opening beyond the deep bay, south of St. George's Head. We found the entrance defended by a reef, under which small craft might receive shelter. At this time there was a depth of four feet at low water over the bar. The inlet runs in a northerly direction, and terminates at the distance of about five miles, in a large salt lagoon, which lies to the south and west of Jervis's Bay. The shores of the inlet are generally low, and are either sandy or swampy. Near the lagoon, however, on the western side, there is

forest land. The creek, through its whole extent, seems separated from the sea merely by a sandy flat of recent formation.

The same afternoon we attempted to enter an opening to the north of a point of land, lying nearly east of the Pigeon House, and which was described to us by the natives as the entrance of a river. We were glad, however, to return in safety, without effecting our purpose, after having the boat nearly filled in attempting to pass the bar. After this we proceeded direct to Bateman Bay, which we entered in the evening, and came to an anchor late at night under Snapper Island. Next day I proceeded up the river Clyde, in company with Lieutenant Johnston, its discoverer. The general appearance of the river agrees very well with his description. He was, however, surprised to find it quite salt, in situations where he had found, on his former visit, about a month before, excellent fresh water. (It was then very rainy weather.) At a short distance below what he calls the first rapid, the river was fresh, and most likely will continue so about that place at all seasons. At this place, however, the navigation ceases, and we could only

proceed a few miles further in the boat at high water. Thus far the direction of the river is northerly, with an inclination to west: the fresh-water run, however, comes chiefly from the south-ward. Throughout, the river winds in a beautiful manner among the hills, which slope gradually to the water's edge. These hills are moderately wooded. The white gum (eucalyptus) is the most prevalent. Generally the soil is rather barren, and is covered with low ferns, prickly shrubs, and a kind of dwarf palm, called *burra-wang* by the natives (zamia spiralis). As we ad-vance up the river, the alternate projecting points, on either side, consist of rich alluvial soil, but are of small extent. The general course, as I have said, of the river, or rather inlet, is northerly with an inclination to west, and it ceases to be navi-gable about ten miles south of the hill called the Pigeon House. None of the supposed branches are of any moment, being merely salt-water inlets, which terminate at a short distance among man-groves. It is barely possible that some of them may have a small run of fresh water at their heads. Fresh water is scarce at the lower part of the river.

Indeed we found merely one small spring, and that was not only indifferent, but below high-water mark. The river itself is free from shoals, but is rendered comparatively useless, from a bank at the entrance, over which there is only ten feet of water. Snapper Island may afford shelter for a few small vessels.

At the spot where the river ceases to be navigable, (accompanied by Mr. Hume and Thomas Davison) I took a journey of four days into the interior, with a view to examine the country. Generally we found it very hilly, consisting of steep ridges, divided by narrow valleys, so narrow indeed that they frequently ought rather to be called ravines. They are, however, very rich, and generally well watered, overgrown with tall ferns (filices), fern trees (alsophila australis), palms (corypha australis, and seaforthia elegans), stately mimosas, and magnificent flooded gums (eucalyptus). The sides of the hills are too steep for the plough, but the soil is well adapted to the culture of the vine. We did not find a piece of good pasture, or what is called good forest land, in the whole district.

The geological character of the country is different from those parts of New South Wales which I had formerly examined. The only rock consists of a kind of coarse argillaceous schistus, containing mica, of various appearances, resembling, at Snapper Island, imperfect clay-slate, but in most other places assuming the appearance of grey wacke. It lies in a vertical position, and the strata extend from south-west to north-east. I found that it equally traverses the bed of the river and the summit of lofty ridges, and contains innumerable veins of quartz of all dimensions. On travelling towards the westward, we found the ridges gradually to ascend, and at length the summits were topt with sand-stone. My visit did not admit of accurate observation; but so far as I was able to judge, these ridges seemed first to rise to the level of, and then to rest like abutments against, the table-land of Argyleshire. On descending, which we did by following the course of a ravine, we again found the old rock; but although it still followed the same line of bearing, its character appeared to change. It was hardened into compact clay-stone, and the veins were more twisted, as if it had been

softened by the action of intense heat, and in many places the quartz assumed the form of agate or rock flint. Following the course of the ravine, it brought us to a small river ten or twelve miles west of the Pigeon House, in the bed of which we found masses resembling clay, porphyry, and jasper. This river led us to the foot of the Pigeon House, which we ascended. There is first a steep ridge, formed of the schistus already mentioned, but more abounding in mica—(indeed I found some specimens of almost pure mica slate). At the top of the ridge there is a lofty terrace of pudding-stone. The country upon this assumes the form of table-land, and the soil is a poor clay, covered with stunted bushes. The cone of the Pigeon House rises upon this plain. It consists of horizontal sand-stone, and the dome, which crowns the whole, consists of enormous masses of the same material. At the foot of the cone we found a run of water. Actual observation can alone determine the point, but I considered from appearances that we had here attained the level of Argyleshire. On descending from the Pigeon House, we again crossed the river I have before mentioned, now become a considerable

stream, and flowing slowly to the eastward through a rich valley; but at this place it seemed affected by the tides. From hence we regained the Clyde, and rejoined our vessel.

On leaving Bateman Bay, we proceeded with the vessel about twenty miles to the southward; and on our return attempted to enter an opening which is indicated in the chart about seven or eight miles to the southward of the bay. Here, however, was such a fall of tide, as rendered it at that time totally impracticable. We therefore landed outside on a point, and walked across, when we found the water extending among the hills in the shape of a salt lagoon. We passed a night at anchor under the small island at the entrance of Bateman Bay, which is capable of affording shelter to small vessels from easterly winds.

The outer island of Bateman Bay is of the same formation as Snapper Island, consisting of an imperfect clay-slate of a blue colour with white layers. These white layers are generally in a state of decomposition, but the blue part is highly indurated, and the strata are twisted in all directions; so that it is impossible to describe them. They appear

as if they had been exposed to intense heat. The shores of the bay, on the contrary, consist of a soft red clay-stone, lying, as was said, in a vertical position, which gradually gets more indurated as we advance up the river, and at length assumes the form of grey-wacke slate.

Our progress was delayed by southerly winds, and I had a better opportunity of examining the appearance of the coast on our return than before. We now succeeded in entering the mouth of the river which we had crossed at the foot of the Pigeon-house. The banks are alluvial, beyond which there is some tolerable forest-land. We could only proceed upwards for about four or five miles, when our further progress was stopped by large trees lying across the bed of the river. Were these impediments removed, I think it would be navigable for boats to the foot of the mountain.

About four miles to the northward we entered another opening. Most of the prominent inlets along the coast are on the north side of rocky points. This, however, was on the south side of a point of whinstone. The entrance was very shallow; but at a distance of several miles, we

found deep water surrounded by high land, showing us the process of filling up an ancient harbour.

A few miles to the northward of Bateman Bay, the vertical strata disappear, and are succeeded by horizontal sand-stone, which continues with interruptions to Jervis's Bay. These interruptions consist of long sandy branches and projecting points of whin. I landed on several places, under the shelter of those points, and walked for miles along the shore. I found the country uniformly fertile and well-watered, wherever the basis consisted of this rock. I was not inclined at the time to attribute this formation to a volcanic origin, even although I found plenty of pumice-stone lying upon the beach, because as this had evidently been thrown up by the water, it might have floated from New Zealand; but, on further reflection, I cannot help thinking that these points are of igneous formation, or rather that the matter of which they are formed has been projected from under the sand-stone in a liquid state.

We again entered Jervis's Bay, where we were detained several days by unfavourable winds, so that I had an opportunity of examining many

parts of it. Although it receives no rivers, we found fresh water in abundance at the driest season of the year. On the north side, the soil is low, sandy, or swampy, and in many other places indifferent. I found however good land, both forest and alluvial. The access to the bay is safe and easy; and although it is not such a magnificent harbour as Port Jackson, still it affords good shelter and safe anchorage, and is superior to many of the best frequented ports in the world. The port of Cadiz, which has been renowned from the earliest ages, is not to be compared to it; and in the progress of colonization, there is no doubt it will hereafter be the seat of an important settlement.

I shall now conclude with a few general observations, chiefly arising from the foregoing facts.

1st. The extent of country, to which I have adverted, is bounded on the west by a range of high land, generally at some distance from the seashore, which, however, advances to the very coast to the southward of Port Hacking, when it forms what is called the Five Island or Illawarra Mountain; but which, on reaching the northern bank of Shoal Haven River, again recedes to the westward.

2d. This range bounds the waters or rivers which fall into the sea on the eastern coast.

3d. These rivers do not flow direct to the coast, but a great part of their course is parallel with it, running to the north—witness the Clyde*, Pigeon-house, Nepean, and George's River. Has this course any connexion with the extensive vertical strata which I found extending to the north-east at Bateman Bay, and which seem to form the basis of the country?

4th. The rivers seem progressively to increase in magnitude as we advance northerly; thus, Clyde, Pigeon-house, Shoal Haven, Nepean, Hunter's River, and, I believe, the Hastings may be added to the climax†. George's River, indeed, which is hemmed in by the Nepean, is less than Shoal Haven; but its course is also northerly.

5th. A clay soil, having little attraction for moisture, is the general characteristic of this part of the country. The absence of springs depends upon the impermeable quality of the soil; and the

* The salt water inlet of the Clyde runs northerly, but the fresh water runs chiefly from the southward.

† And now the Brisbane.—EDITOR.

scarcity of running water is caused equally by this, and by the shape of the country.

6th. One of the most celebrated English agriculturists has remarked that the softest fleeces are produced from sheep depasturing on a clay soil. This not only corresponds with the past experience of New Holland, but gives great hopes for the future.

Much has been written about the geography of plants. Equal attention ought to be given to the soils which they delight to inhabit. This is not the place for such discussions. Still, as being intimately connected with my present subject, and so important, that there can be no successful cultivation of exportable commodities in this colony without attention to it, I cannot conclude without adverting to it.

The plants produced on our clay soil contain generally little or no alkaline salt, perhaps because it does not exist in the soil. Tobacco abounds in alkaline salt. It is not therefore proper for such soils, and, although the plant will vegetate in them, its quality must be inferior. The clay soil is equally unfitted for the vine, because the roots will

penetrate to the aluminous schistus, which will either poison the plant, or communicate an inferior flavour to the grape. Again, the vine will grow luxuriantly in the mere alluvial soil, and the fruit will be large, but the juices watery. The truth of these remarks is beautifully exemplified by this country in a state of nature, where in the midst of iron-bound gum-tree forests, we meet with circumscribed spaces, in which plants of a different description are growing with tropical luxuriance.

As this country is so peculiar, and has so many apparent disadvantages in the midst of some seeming advantages, it becomes our duty to improve the latter, and to obviate the former. It is therefore perhaps happy that its colonization has been deferred until the present time, when the sum of human knowledge, both moral and physical, is so extended, that these attempts may be made upon just and rational principles, the result of which may be expected to be very different from such as originate in mere experiment, or (what is still worse) from such as are the offspring of a false theory.

ON

THE ASTRONOMY

OF THE

SOUTHERN HEMISPHERE.

BY

DR. CHARLES STARGARD RUMKER.

(*Read 13th March*, 1822, *before the Philosophical Society of Australia*).

ON

THE ASTRONOMY,

&c.

In offering to this Society the present paper, I must beg leave to remark that, if it cannot be expected in any science that the most learned themes shall excite general interest, but if, on the contrary, they rather lose popularity in proportion as they are rich in intrinsic value, this is most to be feared of astronomical tracts, in which conciseness and simplicity constitute the highest perfection of style, and by far the most essential points are expressed in algebraical formulæ, which to non-mathematicians are less intelligible than hieroglyphics, and where a very few figures often comprehend the whole fruits of many years' uninterrupted tedious labour. The entertaining topics of this science, that please without requiring theoretical knowledge, are so much exhausted, the wonders of the heavens have been so often profaned by astrono-

mical book-makers, that I should be sorry here to follow so sacrilegious an example; the more so as I conceive the object of this Society to be the promotion of the knowledge of subjects peculiar to this new part of the world, and not to dwell on matters that may be equally well discussed in the old one. In this view, Australia offers to astronomy as ample a field for its researches, as to any branch of natural philosophy. I shall endeavour therefore to enumerate the advantages which astronomy can derive from an observatory in New South Wales, on account of its geographical position, pointing out those subjects which demand our particular attention.

The most obvious object in astronomy, that entirely depends on locality, is parallax. Every body knows that parallax is the change in the apparent place of an object, produced by a change in the place of the observer. The trees of a wood, through which a traveller passes, are continually changing their relative situation; those which are the farthest remote being the least affected. Thus travelling from the northern zones to this southern hemisphere, we observe a similar phenomenon

amongst our fellow-travellers the planets, which disappear with the infinitely distant fixed stars, whilst this is most conspicuous in our satellite the moon. The position of a fixed star, therefore, not being altered, either by our moving from one spot on the earth's surface to another, or (which gives us a striking idea of their immense distance) by the whole earth performing with us her twelve months' voyage of six hundred millions of miles round the sun, we may consider them as permanent fixed points, and, by a comparison of them with the planets, discover the changes in the apparent situation of the latter. An observer in the north will find a planet's distance, from the identical fixed star, different from what an observer in the south would find it at the same moment. This difference is the parallax, the quantity of which depends on the distance of the two observers on the earth's surface, and may be determined with the greater accuracy, the greater this distance is. Hence already appear the material advantages of the geographical position of New South Wales in astronomical regard. A small disadvantage arises from the great difference of meridians, which allows us not to

make simultaneous observations with Europeans. This disadvantage is, however, more than compensated by our being for the same reason enabled to observe all such eclipses, and other phenomena of short duration, as cannot be observed in Europe. The observations of parallax are particularly precious during the nearest or perigean distance of the planet, happening at the time of its opposition or inferior conjunction. Such opportunities, where a planet, in passing between us and a fixed star, covers it, are still more valuable; and, most so of all, are the very scarce occasions, when inferior planets cover others, or pass over the sun's disk, as these may serve to corroborate the parallax of each other and that of the sun.

As the parallax of an object depends entirely on its distance from us and the dimension of the earth, it is evident that, from the same observations which tend to determine the parallax, we may also deduce the absolute distance of the sun and planets from the earth, by a simple computation of a triangle, of which the distance of the two observers in the northern and southern hemisphere of the earth is the base, and the planet the summit. In

all these cases the advantage of an observatory in the southern hemisphere is obvious. Merely for the purpose of observing the transit of Venus over the sun's disk, expensive expeditions were sent to different parts of the earth. By the English government, Captain Cook was sent to Otaheite, Mason and Dixon to the Cape of Good Hope, Dimond and Wales to Hudson's Bay. By the French government, the Abbé Chappe d'Autrouche was sent to Tobolsk in Siberia, and Père Pingré to Rodriguez, one of the Mauritius Islands. The Spaniards sent Medina to California on the west coast of America. From Germany, went Père Hell to Wardehuus in Lapland; and many other expeditions were undertaken. We shall have this year the benefit of observing in New South Wales, on the 4th day of November, the transit of a planet over the sun's disk, without the inconvenience and expense of travelling.

As we can, from the dimensions of the earth, draw conclusions upon the planetary system, so we may reciprocally, from observations of the heavenly bodies, infer the figure of the earth. All astronomical observations rely on the laws of gravita-

tion. If the earth were a perfect sphere of homogeneous mass, the plumb-line would always tend towards its centre, and coincide with the radius sector. Similar arcs would be contained between two parts of a meridian measured on the earth's surface, and the corresponding parts of the celestial meridian, intercepted between the points, where the direction of the plumb-line, upwards produced, meets the heavens. But experience proves the contrary. Actual mensuration on the earth's surface accords not with difference of latitude determined by astronomical observations. Hence it follows that the plumb-line does not always tend towards the centre of the earth; but two and two plumb-lines in different places on the earth will, produced downwards, intersect each other in different points, which are the centres of the curvature of the earth in these respective places of its surface. This curvature varies, and from several measurements of this kind it appears that the greatest curvature of the earth is about the equator, and that it flattens towards the poles. The many expeditions which for this purpose have been sent to South America, Africa, Norway, and many other parts of the world,

are well known. The result of these is, that the length of the polar axis is to the diameter of the equator as 303 : 304—very few figures, that have, however, caused immense exertions, profound speculations, and laborious calculations, and are of the greatest consequence in all astronomical operations. This subject is at the present moment again particularly engaging the attention of all astronomers in Europe. A chain of triangulation, from the north of Denmark and Norway, is continued down to the south of Italy, with the view of determining, by a comparison thereof with the astronomical observations, the real shape of the earth; but these results would only imply parts of the northern hemisphere. It is not improbable, however, that the southern half is differently shaped; since, being proportionably covered with more water, it ought, in order to balance the northern half, to be of greater bulk; and this is moreover corroborated by the results of the measurements of La Caille at the Cape, and Lambton in the East Indies, which do not accord with the northern ones. La Caille even deduced from his observations, that the radii of the parallels in south latitude are less than the

corresponding ones in north latitude. The determination of these points forms, therefore, another subject for astronomical researches in this country, the extensive plains of which offer favourable opportunities for measuring base lines.

Besides laborious mensurations, simpler processes may lead to the same point. The shape of an ellipsoid depends evidently on the distance of any point on its surface from its centre. Are all these distances or radii sectores alike? then the body must be a sphere. If not so, are, in strict theoretical sense, three radii sectores, with the included arcs, sufficient to determine the ellipse, if it be one? but this is not probable, nor can the exactness of a few observations be relied on; and it is only by various observations in different parts of the world, that an approximation to the truth may be obtained. Now we have the means of ascertaining the relative length of the radii sectores, or distances from the centre of the earth, by the length of the pendulum. For the squares of the distances from the centre of the earth are inversely as the force of gravity; and the force of gravity is known by the number of vibrations of one and the same

pendulum, in equal intervals, in different parts of the world—or by the length of the pendulum, making in a given interval a certain number of vibrations. So as we advance more towards the poles, and our distance from the centre decreases, the same pendulum must in the same intervals make more vibrations, or the length of the pendulum vibrating seconds must increase. The length of such pendulum at New South Wales is therefore of great importance, and may serve to determine the figure of the earth.

Again—The greater part of the European observatories have remarked a difference between the latitudes obtained by circumpolar stars, and those by solar observations. An anomaly has also been discovered between the obliquity of the ecliptic deduced from the summer, and that from the winter solstice. The most probable cause of this inconsistency appears to be the incorrectness of the hitherto-established laws of refraction. If this be the case, we might expect greater anomalies in the southern hemisphere, and particularly in so unusual a climate as that of New South Wales; and observations of the above kind are desirable in this country.

A variety of interesting pursuits offer themselves in this yet-so-little-known part of the heavens. What a number of celestial bodies may, during centuries, have been roaming about in this wide field, that never rose to the arctic regions! Henceforth, none can escape. Sentinels being placed at the Cape of Good Hope and in Australia, no stranger can pass through the southern hemisphere without being hailed. Had these been on their posts thirty years ago, Enke's discovery of the periodical comet, which we expect to see this year, would not have been so long a secret, it being chiefly in high southern latitudes that it is visible. The comet that surprised us in 1819 below the north pole, would have been seen long before in the southern hemisphere. The comet which we in Europe observed in February of the last year but for a short while, it absconding in the sun's rays, would, after its perihelian passage, have been seen by antarctic astronomers as bright as that of 1811*.

* The comet, which in January and February, 1821, was seen by Europeans in the Pegasus, was a little south of Sydney seen by the Honourable Judge of the Supreme Court, Barron Field, Esq. From his observations, the comet's mean place, on April 3d, 1821, at 7h. in the afternoon, follows:

AR. 40° 27′ Dçc. 20° 0′ S.

To enumerate all the advantages which astronomy may derive from a fixed observatory in New South Wales, would be an endless undertaking. To an astronomer, immediately after his departure from Europe, sailing down the Atlantic Ocean, with every step he takes in latitude, the heavens present a new scene. Thus, as he mounts over the earth's curved back, which till then interposed itself between him and the heaven's southern zones, he gradually sees down into a new field, richly sown with unknown stars, which to register and class is his pleasant duty. In this we follow, under much more favourable circumstances, a noble example first given in 1677 by Edmund Halley in St. Helena, but particularly by Nicolaus de la Caille, who (badly supplied by his government, and worse fitted out with instruments) formed with indefatigable exertions, at the Cape of Good Hope, from the year 1751 to 1754, a catalogue of 10,035 southern stars, inclosed within the tropic of Capricorn, determined the parallax of Mars and the moon, the length of the pendulum, measured a degree of the meridian, made magnetic observations, besides many other works, each of which

would have immortalized him. But infinite is the task, and beyond human power. Neither Halley, La Caille, nor any of their successors, could or can complete it. Much is, and must be, left to do.

ON

THE MARITIME GEOGRAPHY

OF

AUSTRALIA.

BY

CAPTAIN PHILLIP PARKER KING, R.N.

(*Read 2d October*, 1822, *before the Philosophical Society of Australia*).

ON

THE MARITIME GEOGRAPHY,

&c.

A PERIOD of nearly three centuries has now elapsed since the first discovery of the continent of Australia, the Terra Australis Incognita of ancient geographers; and until within the last fifty years comparatively little has been done towards investigating its various productions, or the nature of its interior. The records of the visits of the early Spanish and Dutch navigators merely acquaint us that "it was for the greatest part desert, but in some places inhabited by wild, cruel, and black savages;" and although their labours comprised the discovery of its northern, western, and south-western coasts, yet it was not until the year 1770, that the productions and fertility of its eastern and most valuable shores were made known to Europe by the immortal Cook, whose persevering and laborious examination of its reef-bound

coast, in a crazy ship, and amidst a labyrinth of dangers, has justly placed his name in the foremost page of the annals of Australian geography.

This coast, to which he gave the name of New South Wales, extends chiefly in the direction of the meridian; and, being contained between the parallels of 10° and 39° south latitude, promises, from the variety of its climates, to afford the productions common to both inter and extra-tropical countries; whence a reasonable anticipation of the future weal of this extensive dependency of Great Britain may be justly entertained; but hitherto little has been effected to give a solid foundation to this speculative hope. Several voyages have been made round the continent in search of rivers, by means of which only a knowledge of its internal resources can be obtained; but none of important size or consequence have yet been found.

It is now thirty-five years since the colony at Port Jackson was first established; and during this period, explorative enterprise and perseverance have not been wanting; nor have dangers or privations deterred many zealous travellers from prosecuting their researches for the discovery of rivers.

These labours have been partially rewarded in the finding of large tracts of fine country, which will materially hasten the period of agricultural prosperity, towards which the colony is making such rapid strides. Mr. Oxley's Journals have already, in a great measure, acquainted us with the general features and character of the country four hundred and thirty miles to the westward of the colony, between the parallels of 30° and 35° 30′; and his track in 1817 would have crossed any river of importance, had such existed to the northward of the former parallel, or to the southward of the latter. The coast-line has been traced with care by Captain Flinders and others as far as the tropic; and to the northward of this, we did not detect in the whole extent of coast (a distance of eight hundred miles), any opening, rivulet, or creek, running twenty miles in an inland direction from the sea.

The absence of a river in this vast extent of mountainous country would appear a paradox, did we not know that the mountain-streams of this coast generally empty themselves into large lagoons of water, which are formed at the back of the

beaches, and communicate with the sea by shoal channels of from three to seven or eight feet in depth, through which the stream of tide usually runs out with great rapidity. Witness the lakes between Ports Stephens and Macquarie.

The south coast of this country is barren, and in every respect useless and unfavourable to any purposes of colonization. The nature of the rocks is generally calcareous; but in many parts from the South-west Cape to Wilson's Promontory in Bass's Strait, the basis of the rock is granite, which occasionally protrudes above the surface of the ground, and is covered with a crust of calcareous stone, on the top of which is a shallow sandy soil *. The two gulfs, St. Vincent and Spencer, are described by Captain Flinders, who first discovered and examined them. They contain salt water to their heads. At the top of the latter is a range of elevated hills, one of which (Mount Brown) is three thousand feet high; but from the summit no rivers or lakes were seen. Captain Flinders says of the

* Flinders's Voyage to Terra Australis, vol. i. p. 113.

view from this hill, " In almost every direction the eye traverses over an uninterruptedly flat, woody country, the sole exception being the ridge of mountains extending north and south, and the water of the gulf to the south-westward *." He further remarks of this place: " Mr. Brown found the stone of this ridge of craggy mountains to be argillaceous, of a reddish colour, smooth, close-grained, and rather heavy." Very little good soil was found.

To the eastward of this, as far as the entrance of Bass's Strait, the coast is very sandy, and generally low and barren; and the country in the vicinity of the strait is high, rocky, and sandy.

Previously to my employment by the Lords Commissioners of the Admiralty, to complete the survey of the coast of this country, the south and a part of the east coasts, as far as the latitude 22°, had been examined with care by Captain Flinders. That officer had also surveyed the shores of the Gulf of Carpentaria, and the greater part of Van Diemen's Land, when the wreck of his ship, and

* Flinders's Voyage to Terra Australis, vol. i. p. 159.

his extraordinary and infamous detention by General Decaen at the Isle of France, prevented his completing a work so ably and indefatigably commenced. During the time of his being engaged in this survey, a French expedition, under the command of Captain Baudin, was employed on the same service. He sailed along the outside of the islands, which fringe a great extent of the north-west coast, but seldom saw any part of the main-land. The completion, therefore, of Captain Flinders's survey was the object of my mission; and in this task I have been employed for the last four years. My instructions have led me "to examine the hitherto-unexplored coast from Arnhem Bay, near the western entrance of the Gulf of Carpentaria, westward and southward, as far as the North-west Cape, including the opening or deep bay called Van Diemen's Bay, and the cluster of islands called Rosemary Islands, and the inlets behind them; the chief object of the survey being to discover whether there be any river in that part of the coast, likely to lead to an interior navigation into this great continent."

In my way to the northward I sailed up the east coast, and commenced a careful examination of its shores from the point where Captain Flinders left it; but as this was contrary to the tenor of my instructions, I could spare but little time to land; and, with few exceptions, merely traced the coast, by which means alone I could investigate whether there were any rivers or openings between the latitude of 22° and Torres Strait, a distance of more than seven hundred miles. For the greater part of this space the sea-beach was seen by me; but nothing like a river or opening of any consequence was observed. Whenever I did land, my visit was confined to the neighbourhood of the sea-coast, and there the soil appeared to be generally very shallow, and the timber small and stunted. But in some parts, particularly about the parallel of 17° of south latitude, the country was well wooded, and bore a verdant and pleasant appearance. To the northward of Endeavour River, in 15° 27′ S., all semblance of fertility ceases; and the remainder of the coast to the North Cape, which is about three hundred miles, is low, sandy, and barren. At this spot also the granite rocks ceased to appear.

In latitude 14° S. is a projecting group of islands, called Flinders Group, to the westward of which is Princess Charlotte Bay, which Lieutenant Jeffrey, who commanded the colonial hired armed brig Kangaroo, describes as having a rich appearance, and very like the country of Van Diemen's Land. I could not see it in so favourable a point of view. The bay is deep, and gave me hopes of finding a river; but, upon examination, I found the bottom shoal and covered with mangroves. It is not improbable that there is a rivulet at the bottom of the bay; but even if there is, it must be of trifling size.

Immediately to the westward of the North Cape, which bears the name of Cape York, is the Gulf of Carpentaria, the shores of which measure a space of nine hundred miles, the gulf itself being four hundred miles deep and three hundred broad. The eastern side is low and sandy; the western has many fine harbours, and is bordered by some large islands; but the land in the vicinity of the coast is low and very barren. Wellesley's Islands, a group at the bottom of the gulf, "abound with iron ore: the soil even in the best parts is far be-

hind fertility; but the small trees and bushes which grow there, and the grass in some of the less covered places, save the larger islands from the reproach of being absolutely sterile *." The principal rock formation in the gulf is of a close-grained sand-stone.

At the north-west head of the Gulf of Carpentaria my survey commenced; but its great distance from Port Jackson, and the inadequacy of the vessel I had to perform it with, have considerably protracted its completion. A brief sketch of the nature of the soil, and productions of the coast, may not be uninteresting to this Society; and, as the subject has been naturally expected from me, I have ventured a few observations upon it, which I now submit to the candour and liberality of my friends.

The north coast, properly so called, is of small extent, and is comprised between Cape Van Diemen and Torres Strait. From Cape Wessel, which is the projection that forms the north-west head of the Gulf of Carpentaria, and is the extremity of a

* Flinders's Voyage, vol. ii. p. 145.

group of islands of low, rocky, and barren character, as far as Cape Van Diemen, the coast is low, and the shore an unvaried sandy beach, occasionally broken by projecting rocky heads. In this place, however, the coast is very much intersected, and is strewed with many very fine ports and harbours. About midway between the capes is a river, which I called Liverpool River, and which I ascended for forty miles, without finding the land at that distance from the sea one atom better than that near the coast. Fresh water, however, was met at the distance of nine miles from the sea; but no hills were seen, from which any large body might be expected to be collected. The country was low and flat, and bore the appearance of being, during the rains, occasionally inundated. In an examination of this river we saw no animals excepting the alligator, which was common. A few birds were seen, and on the banks of the river we observed that called the native companion (Ardea antigone, *Linn.*). Here also we saw a large tribe of natives; but our numbers being few, I did not court an interview. We passed a night near the head of the river, and were tormented beyond description by

the incredible number of musquitoes, which generally abound near mangroves; and with these trees, for the first fourteen miles from its entrance, the banks of this river are impenetrably lined.

To the westward of this river are Goulburn Islands, which I have visited every voyage, from the circumstances of their forming a fixed point of my survey, and offering a convenient place to wood and water at. The natives here, although not numerous, are very hostile; and have, on every visit, attacked us. On one occasion Lieutenant Roe, my assistant-surveyor, had a very narrow escape for his life. He suddenly found himself surrounded by them, but happily succeeded in reaching our party in safety, although the Indians threw many spears at him, and almost compassed the cutting off of his retreat.

Near these islands, in April, 1818, just as I had completed my wood and water, and was making preparations for departure, I was surprised by the appearance of a fleet of Malay proas, which were running along the coast, fishing for trepang or bêche-de-mer. Two hundred of these vessels visit this coast every year, leaving Macassar in the month

of January, and returning in June or July. The particulars of their fishery are described by Flinders and De Freycinet; but the limits of their fishing-ground have not yet been clearly defined. They certainly visit the western side of the Gulf of Carpentaria: I have seen their traces as far to the west as 125° east longitude; but there is a considerable incurvature of the coast between Cape Van Diemen and Cape Londonderry, into which I do not think they penetrate. They are at constant war with the natives, and are frequently attacked by them; but having fire-arms, and being generally the more numerous, they have the decided advantage. This hostility made me very cautious of communicating with the natives of this savage and sterile coast, nor, as it proved, without good reason, for we seldom visited them without some misunderstanding or rupture taking place, from which we did not always escape harmless.

Near the western extremity of the north coast, in the ancient charts, is a deep opening called Van Diemen's Bay. Some Dutch ships entered it without finding its bottom, and therefore merely speculated upon what it was likely to be. I found it an

extensive strait, separating two large islands from the main-land, the north-westernmost extremity of which bore the name of Cape Van Diemen. In this strait is a considerable gulf, trending to the eastward, at the bottom of which I found some rivers, meandering through a vast plain of low level land, bearing the marks of great inundations. The soil is alluvial, but I think generally shallow, and appears to be sprinkled over a stiff tenacious blue clay. Here and there was a group of trees, among which the palm-tree was occasionally seen, towering above the burnt-up foliage of the stunted gum-tree. In the rivers alligators were very numerous; but not so large as those which frequent the islands of the Indian Archipelago. The largest we saw was about fifteen feet long. The outlet of this strait (Clarence Strait) to the south-west appeared to be dangerous and intricate. In the centre of it is a group of low mangrove isles. Hence the coast trends to the south; but continues to bear the same low and sterile character as far as Cambridge Gulf. This is a deep and extraordinary salt-water inlet, extending for upwards of sixty miles through a circuitous channel, which, being narrowed in some

places to the width of half a mile, causes a rushing tide. Here the coast assumes a new appearance: high, bold, precipitous ranges of detached hills suddenly rise from a level plain, which is so low as to be covered occasionally by the high spring tides. These waters are so quickly evaporated by the great heat, as to leave the saline crystallizations encrusted upon the surface of the ground, which gives it the appearance of being covered with snow, and by reflecting the rays of the sun not only oppressed us with the intense heat, but severely hurt and weakened the eyes. This extraordinary gulf terminates in many shallow, muddy, salt-water inlets, which, in the rainy season, would doubtless furnish plenty of fresh water; but at the time of our visit (September) they were as salt as the open sea. An equally extraordinary quadrangular, fortress-like mass of hills, Mount Cockburn, rises abruptly from a low plain about three miles from the bank of one of these streams; this I should have visited, had not the great heat of the weather prevented me. It bore all the appearance of a regular fortification, and would be quite impregnable to any military force. Westward from the gulf the coast assumes altogether a

new feature, and is much intersected by numerous fine ports, bays, and some rivers. One of the rivers (Prince Regent's) runs inland for upwards of sixty miles, and terminates in a fresh-water stream. In this part of the coast the tides are not only rapid, but rise as much as thirty feet on the springs. The country, however, is not a bit better than to the eastward, but rather worse. In the vicinity of Goulburn Islands there were in patches something like soil, and here and there a little grass; but in this part the country is a universal mass of rocks, heaped one upon the other, and the interstices filled with spinifex, a prickly useless grass, of a powerfully aromatic smell.

The geology of this part of the coast consists of a siliceous sand-stone, of a very hard nature and fine grain: much of it was coloured by a ferruginous oxide, and in one part we detected a small quantity of native iron, imbedded on the same quartzose rock, with copper pyrites.

At the west extremity of this projecting part of the north-west coast, in longitude about 123° east, the high rocky land is changed to a low sandy country, and so continues to the North-west Cape.

In many parts it is so low as not to be visible from a greater distance than twelve or fourteen miles.

There is a considerable gulf at the western extremity of the high land, which is not yet determined; but I rather imagine it to be a strait. I penetrated about fifty miles up it, on the inner side of what I suppose to be an island; but I was obliged to leave it, for want of provisions and other reasons. It is sufficiently interesting in appearance to cause me to expect more from it than any other part of the coast that I have yet seen. In some parts of it the tide ran at seven knots, and, where no islands or land contracted its stream, at three knots, and rose from twenty-six to thirty feet. At this place we experienced great heat: on board the vessel the thermometer ranged between 87° and 92° in the shade, but in the boat near the shore the temperature was at 120°.

From the intricate nature of the entrance of this opening, we ran considerable risk in exploring it, both going in and out. The islands and shoals are numerous; and the channel by which we unwillingly entered it was not more than a hundred or a hundred and fifty yards wide, with

the stream rushing through it prodigiously strong. A rock in the middle also increased the danger, and gave us great cause of alarm, since the ship became completely ungovernable; but providentially the current carried us by, four yards clear of the rock. The widest channel is, in some parts, not more than two miles from shore to shore.

From hence to Depuch Island, a distance of about three hundred miles, I have not seen any part of the coast; but De Freycinet describes it to be low and sandy. From longitude 117° to the North-west Cape, in about 114°, the coast is also low and sandy, and in some parts rocky. Dampier's Archipelago, one of the islands of which is the Rosemary Island of that celebrated navigator, is a group more elevated than the main land, and among these islands there are many favourable places for anchoring. In the rainy season they would probably supply abundance of water, but there is no wood. The only tree we saw was a ficus, and that of very small size. It was here that I had my first and most interesting communication with the natives. They appeared to

be warlike and numerous; but, like the rest of the inhabitants of this vast island, naked, black, spare-made, large-headed, with curly hair, and scarred about the body. Their principal weapon appeared to be the spear. We were well received by this tribe, but were driven away by another not far from them. We were doubtless the first European visitors to this part of the coast; for Dampier landed only on the outer island, and did not communicate with the natives hereabouts.

Between this archipelago and the North-west Cape, is a group of low, rocky, barren isles, which the French expedition, under Commodore Baudin, named Montebello Islands; and these are, as I trust I shall be able to prove by the publication of my Journals, neither more nor less than that redoubtable danger in the Indian Ocean—"The Tryal Rocks," which so many ships have searched for, and of which so much has been said and written.

Hence to the North-west Cape the coast is fronted by a range of low sandy islets; and at the back or east side of the Cape, it tends to the south

for upwards of forty-five miles, and forms a deep bight (called Exmouth's Gulf) containing little short of absolute sterility.

Between the North-west Cape and Cape Leeuwin, is the West Coast, which extends for nearly eight hundred miles in the direction of the meridian. It is fronted by a rocky shore, and inaccessible to boats, except in a few places. The only openings in it are Black Swan River and Shark's Bay, both of which are described by De Freycinet. During the examination of this part of the coast, we experienced an almost continual gale of wind, which rendered our approach dangerous. We saw enough of it, however, to satisfy us of its arid and barren nature. The coast about Shark's Bay is high and rocky, and of a reddish colour. At one part, where we landed, namely in Dirk Hartog's Road, at the entrance of the bay, we found the rock to be a calcareous sand-stone.

GENERAL PRODUCTIONS OF THE INTERTROPICAL PART OF AUSTRALIA.

Fish is extremely plentiful in all parts, but not very easily caught with hook and line. Turtle is also abundant within the tropic, and of large size. It is both of the green and the hawk's-bill species; and from the latter, great quantities of tortoise-shell might be procured. Water-snakes were seen in all parts near the coast; but I do not think they are venomous. The longest we saw did not measure more than four feet. The manatee, that Dampier describes, was not seen by us, unless on one occasion, when an animal entirely different from the turtle was seen on the surface of the water, but disappeared so suddenly as to prevent our forming any opinion of what it was like. Shell-fish seemed to abound, from the large quantities of broken shells that are thrown upon the beaches. At Shark's Bay, we found great numbers of various kinds; and on the reefs of the east coast there is also abundance, but not in any great variety. The only land animals seen by us were kangaroos, kan-

garoo-rats, dogs, opossums, and a large vampyre bat. The traces of emues were met with; but the birds themselves were not seen. There are no edible fruits of any importance. The cabbage-palm and the betel-nut were occasionally met with, and the sago-palm is abundant on all parts of the north coast. Two species of nutmeg were found, but they are not fit for use. We saw no trees fit for naval purposes, excepting in the vicinity of the tropic, on the east coast, where the Norfolk Island pines grow, but not to large dimensions. In appearance they seem not worth a trial, but experience has fully proved their value as masts, provided a tree is chosen of the exact size of the spar wanted, for it loses its strength by reducing it.

NATIVES OF NEW HOLLAND.

The coasts of this continent, in proportion to its great extent, are very thinly peopled,—a circumstance that is perhaps occasioned by the enmity and warfare that exist between the neighbouring tribes. Each tribe speaks a different language

from the other; and in a comparative vocabulary of the languages of four different parts of the coast which I formed, the only one of forty words that is similar in all is that for *the eye*. Not thus dissimilar, however, are their weapons. The spear is universal, as is also the throwing-stick; the *boomerang* or *woodah*,—a short crescented weapon, which the natives of Port Jackson project with accurate aim into a rotatory motion, which gives a precalculated bias to its forcible fall,—was also seen at Port Bowen on the east coast, and at Goulburn Island on the north. Some of the natives have been described to use the bow and arrow; but I have never seen any weapon like it among them. The canoes of the several tribes differ both in construction and material. In some parts, particularly about the colony at Port Jackson, they are made of one piece of bark, tied up at each end. Farther north, at the tropic, they are hollowed out of the trunk of a soft-stemmed tree (erythrina indica), and are so narrow as to require an outrigger to prevent their oversetting. On the north coast they are made out of the bark of trees*, neatly

* So at Van Diemen's Land is the catamaran; and Dr.

and firmly joined by strips of the stem of the flagellaria indica, a small climbing plant. Farther to the westward, at Hanover Bay, the natives cross the water upon a raft, made of short logs of dead mangrove trees, which when decayed are very buoyant. At Dampier's Archipelago, instead of a canoe, the natives also use the decayed mangrove, but it is only one log, on which "they sit astride, and move it along by paddling with their hands, keeping their feet upon the end of the log, by which they probably guide its course. Such are the shifts to which the absence of large timber has reduced these simple savages. They show that man is naturally a navigating animal; and this floating log, which may be called the marine velocipede, is, I should suppose, the extreme case of the poverty of savage boat-building all over the world*." *MS. Journal.*

Falconer (On Mankind, p. 287,) says, that the Canadian savages form boats from the bark of trees, in which, however fragile in appearance, they perform long voyages.—EDITOR.

* "Their mode of fishing in the Red Sea is somewhat strange. They throw in the water a part of the trunk of the doomt-tree, perhaps ten or twelve feet long, at each end of which is a piece of wood attached in a horizontal direction, so as to prevent the tree from turning round. At one of the

All the Indians that we have seen on the coast of New Holland have long curly hair, which they dress in various fashions, and often daub it over with the oil of the whale or the seal, by which means it becomes clotted and entangled. Their bodies are also smeared over with this oil, mixed with a red or white pigment, which gives them not only a hideous appearance, but a very disagreeable smell.

The natives of King George's Sound are the only Indians that we have seen clothed; and these wear a mantle of kangaroo-skin over their bodies, leaving the right arm only bare.

The spear-throwing-stick seems a universal weapon, except at Van Diemen's Land; for we have seen it, although differently shaped, in all parts of this continent, namely, on the south-east

ends a small pole is stuck upright to serve as a mast, on the top of which there is a piece of wood horizontally fastened, as that below. A woollen shawl thrown over it, and fastened at each end, and to the piece of wood horizontally fixed below, forms a kind of sail, and the two fishermen mount on the large trunk, like on horseback, and by way of a cord attached to the middle of the sail, they take the wind, more or less, as is required."—*Belzoni's Researches in Egypt and Nubia*, p. 327.

coast at Port Jackson, on the north-east coast at Endeavour River, at Hanover and Vansittart Bays, on the north-west coast, and on the south-west coast at King George's Sound*. The spears also generally differ, and in many parts they are very large and unwieldy. In the southern parts of New Holland, where the grass-tree (xanthorrhœa hastile) grows, the spears are generally made of its flower-stem; but where these plants are not found, the natives make their spears of other trees, which are hardened and straightened over a slow fire.

The savages are very careless and indifferent about presents, excepting in those parts where they are accustomed to be visited; and in some places they have shown themselves neglectful of knives or axes, even after the use of these instruments has been explained to them; and whereas

* The natives of Pumice-stone River, Moreton Bay, with whom, during our stay among them, we were on the most friendly terms, and whose manners and customs we had uncommonly favourable opportunities of observing, form (I believe) another exception; for among them we never saw the throwing-stick; and when shown to them by our Port Jackson native, their attempts to use it were extremely clumsy. Nor did they make use of any contrivance in lieu of it, but invariably threw their spears from the hand.—J. Uniacke.

in other parts they have evinced a great desire to possess those obvious improvements upon sharp stones or shells*. Articles of dress they justly despise, on account of the warmth of their climate; but at King George's Sound they were happy to receive any thing which they could use as clothing. The demand, however, at this place is only of late date; for Captain Flinders found all his presents to these very people thrown away, and left upon the bushes near his tents.

These are all the observations which I have had time to make before my departure from the colony; but I trust that, upon the publication of my charts and journals, I shall have an opportunity of presenting the Society, on my return hither, with a more detailed and satisfactory paper.

* *Ferrum est quod amant,* is the universal character of savages; but the natives of the Marquesas long neglected our iron tools, and they belong to the same race as the Friendly and Society Islands. See London Missionary Voyage, pp. 134, 135. So the natives of Navigator's Islands would barter with La Pérouse for nothing but beads. See his Voyage, chapters xxiii, xxiv, and xxv.—Editor.

ON

THE RIVERS

OF

NEW SOUTH WALES.

BY

BARRON FIELD, ESQ. PRESIDENT.

(*Read 3d July, 1823, before the Agricultural Society of New South Wales.*)

ON

THE RIVERS,

&c.

THAT the two principal interior rivers of New South Wales, namely the Lachlan and the Macquarie, should both terminate in swamps or shoal lakes, instead of finding their way to the sea, has caused as justly the surprise of the physical geographer, as the disappointment of the political economist. The river Lachlan is, with its sinuosities, the longer of the two, and yet it does not receive a single auxiliary stream, after it issues from the mountains, whence it has its source. The Macquarie, in the first place, is formed by the union of the Campbell and the Fish Rivers, and is fed in its course by five or six others; and, although the Campbell can never lay claim to the "very considerable magnitude" that Governor Macquarie assigns to it *, and although the river Macquarie

* ——— E rivo flumina magna facis.—OVID.

itself is scarcely so large as the Fish River, yet a great body of water must run through them all somewhither; and the Macquarie, at about the equal division of its course, is two hundred feet wide. It is certainly very strange that all this running water should end in a vast swamp. Yet a similar flatness of country is found in South America, spreading the rains into shallow lakes, which evaporate before they form rivers. Such is the celebrated lake of Los Xarayes, in the vice-royalty of Buenos Ayres, the length of which is sometimes three hundred and thirty miles, and the breadth one hundred and twenty; but, although it spreads over so large a space, it is not navigable in any part except for canoes and small craft. So too the interior of North America is filled with fresh-water lakes; and there are internal seas, lakes, and marshes in Asia, as well as in Africa and America.

The Lachlan, at about the equal division of its course, instead of displaying its greatest size and vigour, like the Macquarie, is lost in a marsh, as it is again at its termination; so that there is very little probability that that river can ever reach the

sea. But the Macquarie was found to shoal suddenly, and to spread unexpectedly, wherefore the sanguine have not yet given up all hope of its ultimately finding its way to the sea-coast. The country along the banks of the Macquarie being chiefly good pasture, our stock-keepers will, one day, ascertain whether there is any channel out of the shoal-lake, in which Mr. Oxley found that river to terminate, like the Niger, according to Major Rennell. The Quarterly Review says, that "the circumstance of the freshness of the water would decide the question of the termination of the river in a mediterranean sea, or of its course being resumed beyond the expanse of waters." There is no doubt of the freshness of the lake. If it had been salt, Mr. Oxley would have mentioned so singular a change from the waters of the river, and a quality so different from the lakes of Wagara, in which the Niger is supposed to terminate. How could the boat-party, which was victualled for a month's voyage on the lake, have existed, if the water had been salt? But I cannot agree with the Quarterly Reviewer in his criterion, and am rather disposed to adopt the theory of that great practical geographer,

the Baron Humboldt, as propounded in his Personal Narrative, even before the cases of the Lachlan and the Macquarie were known to him: "It is probable (says he) that in the lapse of ages, several rivers of Soudan and of New Holland, which are now lost in the sands, or in inland basins, will open themselves a way towards the shores of the ocean. We cannot at least doubt, that in both continents there are systems of interior rivers, which may be considered as not entirely developed, and which communicate with each other, either in the time of great risings, or by permanent bifurcations *." This is no new theory: the Baron quotes it from Carl Ritter; and it may be found in an excellent article on rivers, in the Encyclopædia Britannica †. "Herodotus, whom Strabo has not

* Vol. iv. 8vo. p. 150.

† "The tracts of country, which are but newly inhabited by man, such as great part of America, and the newly-discovered regions of Terra Australis, are still almost occupied by marshes and lakes, or covered with impenetrable forests; and they would remain long enough in this state, if population, continually increasing, did not increase industry, and multiply the hands of cultivators, along with their necessities. The Author of Nature was alone able to form the ridges of mountains, to model the hillocks and the valleys, to mark out

disdained to follow, relates a tradition that Thessaly was originally one vast lake, without visible outlet,

the courses of great rivers, and give the first trace to every rivulet; but has left to man the task of draining his own habitation, and the fields which are to support him, because this is a task not beyond his powers. It was therefore of immense advantage to him, that those parts of the globe into which he has not yet penetrated, should remain covered with lakes, marshes, and forests, which keep in store the juices of the earth, which the influence of the air, and the vivifying warmth of the sun, would have expended long ere now in useless vegetation, and which the rains of heaven would have swept into the sea, had they not been thus protected by their situation or their cover. It is therefore the business of man to open up these mines of hoarded wealth, and to thank the Author of all good, who has husbanded them for his use, and left them as a rightful heritage for those of after days. The earth had not, in the remote ages, as in our days, those great canals, those capacious voiders, always ready to drain off the rain-waters (of which only part is absorbed by the thirsty ground), and the pure waters of the springs from the foot of the hills. The rivers did not then exist, or were only in torrents whose waters, confined by the gullies and glens, are searching for a place to escape. Hence arise those numerous lakes in the interior of great continents, of which there are still remarkable relics in North America, which in process of time will disappear and become champaign countries. The most remote from the sea, unable to contain its waters, finds an issue through some gorge of the hills, and pours over its superfluous waters into a lower basin, which, in its turn, discharges its contents into another; and the last of the chain delivers its waters by a river into the ocean. The communication was

till an earthquake, rending Olympus from Ossa, formed the colony of Tempe*." The Edinburgh Review says, "it does not appear why Mr. Oxley turned back;" and this just after it has quoted the following words of his Journal: "there was no channel whatever among the ocean of reeds

originally begun by a simple overflowing at the lowest part of the margin. This made a torrent, which quickly deepened its bed; and this circumstance, increasing its velocity, would extend this deepening back to the lake, and draw off more of its waters. The work would go on rapidly at first, while earth and small stones only resisted the labours of nature; but these being washed away, and the channel hollowed out to the firm rock on all sides, the operation must go on very slowly, till the immense cascade shall undermine what it cannot break off, and then a new discharge will commence, and a quantity of flat ground will emerge all round the lake. The torrent, in the meantime, makes its way down the country, and digs a canal, which may be called the first sketch of a river, which will deepen and widen its bed continually. The water of several basins, united and running together in a great body, will have a much greater velocity with the same slope, than those of the lakes in the interior part of the continent, and the sum of them all united in the basin next the sea, after having broken through its natural mound, will make a prodigious torrent, which will dig for itself a bed, so much the deeper as it has more slope and a greater body of waters. The formation of the first valleys, by cutting open many springs, will add to the mass of running waters, and contribute to drain off the waters of these basins."

* Mitford's Hist. of Greece, vol. i. p. 43.

which surrounded us." Our associate, Mr. Oxley, although his health is broken by these two long and unsuccessful expeditions, which make such sport to Reviewers, is anxious to see how the end of the Macquarie may look in a different season; but economy is now the order of the day, and liberal science must bend to national distress and political system. Yet I cannot help thinking, that since money can be found for Arctic and African explorations, and as Great Britain expended no less a sum than 34,296*l.* in making surveys of North America, the labour of a few convicts and spare horses might still be afforded by the Crown, to see what becomes of the last drop of its own singular New Holland rivers, the Lachlan and the Macquarie,—alike in their apparent terminations, but totally different in every other character, not a single auxiliary stream falling into the former, in a sluggish and winding course of four or five hundred miles, whereas the latter is fed by half a dozen other rivers, and its course is less winding: the one spending the rains in flooding a barren country, instead of improving even its own channel; the other running a wide and deep course, as long as

its supplies last, and "ever while it lives flowing between its banks," and fertilizing them, as a river should do.

Supposing the Lachlan to run to the nearest point of the sea, namely at Cape Jervis on the south-west coast, it would give a fall of only a foot and a third per mile for the whole river. Supposing the Macquarie to find its shortest way, namely to near Smoky Cape on the east coast, it would have more than two feet of descent for every mile. One foot for every mile is as great a descent as the Thames has for its last forty miles, and perhaps for its whole course, taking the Isis to be two hundred feet above the sea's level; and it is clearly shown in the Encyclopædia Britannica, that the beds of rivers by no means form themselves in one inclined plane, but that the continued track of a river is a succession of inclined channels, whose slope diminishes by steps, as the river approaches to the sea *. But Mr. Cunningham the botanist

* This being the case, I do not see how the principle of the Edinburgh Review can be true, though sanctioned by Humboldt, namely, that the height of a river above the sea may be determined by approximation, by measuring from time to time

says he has collected ample materials to demonstrate, that the river Lachlan falls in a dip of inland country to the N.N.W. of the granitic hills near Lake George, from which hills it rises, 1400 feet in 120 miles, which is nearly twelve feet per mile. The current of the Macquarie Marshes (as the Edinburgh Review calls them) was still northerly, and it is not probable that a river, the regular course of which has been north-westerly for three hundred miles, should suddenly turn due east*; and Mr. Oxley (if we are to rely upon the Surveyor-General's heights) makes the Macquarie fall 437 feet in little more than fifty miles, namely, from near the head of the Fish River to Bathurst; and 750 in about fifty miles, namely, from the

the velocity of the stream, and the extent of the section in breadth and depth.—*Humboldt, Personal Narrative*, vol. v. p. 637. "Who can pretend to say (asks the Encyclopædia Britannica) what is the velocity of a river of which you tell him the breadth, the depth, and the declivity? If the waters of our rivers, which are two, three, and four hundred feet lower than their sources, ran with the velocity due to that height, they would, in a few minutes, lay the earth bare to the very bones."

* It is true, the Nepean makes such a turn, but that is on this side of the Blue Mountain Range, which runs parallel with the coast, and diverts the river into the sea.

head of the Campbell to its junction with the Macquarie. Sir Thomas Brisbane makes a fall of 1140 feet from the Fish branch to Bathurst, which is impossible in a distance of only thirty miles without cataracts, and must be attributed to some error in using the barometer. So that, as far as the fall of the Macquarie waters has been ascertained, it is highly improbable that either the Lachlan or the Macquarie should ever reach the ocean.

I have now before me a letter, which Mr. Oxley did me the favour to address to me, dated from the banks of the Macquarie, in lat. 31° 49′ 40″ S. and long. 147° 52′ 15″ E., a fortnight before the river was dispersed, and many days before it gave any symptoms of failing, which letter runs in these words:

"I was in great hopes that, at a distance of nearly 250 miles from Bathurst, I should have been enabled to communicate to you some certain information as to the termination of this river; but I am just as much at a loss to conjecture it, as I was the day I quitted Sydney. It has in no respect disappointed me as to its continued magni-

tude and permanency, independently of rain; but its course has been so much to the westward, that I have little hopes it can find its way to any part of the east coast. My present opinion, founded upon a careful examination of the character of the country it waters, is, that it will terminate in an interior sea; for such a stream, running, as it doubtless has run, for ages, would of itself suffice to fill up any vacuum that the sea-coasts of Australia surround."

I know not what is the least average fall that rivers running into the sea require. Great rivers will have a gentle motion, in spite of the obstructions of viscidity, adhesion, and friction, by an almost imperceptible declivity. According to Azara*, the great river Paraguay does not fall a foot per geographical mile of latitude, between the parallels of 16° 24′ and 22° 57′ S. Humboldt found the fall of the Apure and the Lower Oronooko, from San Fernando to the Boca de Navios, only three inches and a quarter to a nautical mile. The Apure itself has a slope of thirteen inches to

* Voyages dans l'Amérique Méridionale, depuis 1781 jusqu'en 1801, tom. i. p. 41.

a mile, and the average descent of the bed of the whole Oronooko is thirteen inches to the mile of 950 toises (6 feet 4·376 inches per toise*). The Ganges was found by Mr. Hastings, in a course of sixty miles, to fall only four inches to a mile, although the mean swiftness of that river is, in seasons of drought, three miles an hour, and in those of rains six or eight†. La Condamine and Major Rennel suppose the mean descent of the Amazon and the Ganges scarcely four or five inches to the mile, which is about equal to that of the Mississippi, according to the most satisfactory estimates Dr. James had been able to make‡. Major Long states 450 feet as the altitude of the head of the Illinois above the ocean, which gives that river and the Mississippi, into which it falls, a somewhat greater descent‖. And the Mississippi, according to Mr. Schoolcraft§, has an average

* Humboldt, Personal Narrative, vol. v. p. 637, and vol. iv. p. 455.

† Ibid. vol. iv. p. 455, vol. v. p. 751.

‡ James's Expedition from Pittsburgh to the Rocky Mountains, vol. i. p. 323.

‖ Ibid. vol. iii. p. 265.

§ Travels to the Sources of the Mississippi in the year 1820.

descent of a little more than five inches to a mile, although the Quarterly Review thinks this considerably over-estimated. The average descent of the Ohio, which also falls into the Mississippi, is nine inches per mile, as estimated by Dr. Drake of Cincinnati*. The descent of the Nile, from Cairo to Rosetta, a distance of fifty-nine leagues, is only four inches in a league†. The head of the Volga, a river which is 2600 miles in length, is not more than 470 feet above the surface of the ocean, but then it falls into the Caspian Sea, which is 306 feet below the level of the ocean; so that, if the Lachlan and the Macquarie should ultimately end in large interior salt-lakes, there is no saying how small an elevation, from the ocean level, the rivers need have. Mr. Oxley had not the means of measuring the height of the rivers either during their courses, or at their apparent terminations—only at their heads,—the Macquarie giving 2669, and the Lachlan 600 feet; but another expedition, barometrically appointed, would perhaps set the question at rest, whether these rivers, from their heights

* James's Exped. vol. i. p. 39.

† Description de l'Egypte Moderne, tom. i. p. 58.

above the surface of the ocean, can possibly fall into the main sea.

If Government decline the honour of these discoveries, some private individual will run away with it, as was the case with the passage across the Blue Mountains; for, in spite of its want of navigable rivers, New Holland seems destined to be one day a great pastoral country; and cattle have a most insatiable curiosity after

"——— fresh woods and pastures new."

EXTRACT FROM THE REPORT

OF THE

PURVEYOR OF THE NAVY BOARD,

ON

THE TIMBER

OF

NEW SOUTH WALES AND VAN DIEMEN'S LAND.

EXTRACT,

&c.

H. M. Store-ship, Dromedary,
at sea, 26th June, 1821.

Honourable Gentlemen,

In compliance with your instructions, bearing date 21st July, 1819, I beg leave to state, that on my arrival, at Van Diemen's Land, in the River Derwent, I took the earliest and every opportunity of inspecting the different woods round Hobart Town, but could not find any mahogany, cedar, or pine; nor could I find any person who had seen any of these woods, within ten miles round that district.

I found the stringy bark (eucalyptus) growing in great abundance, and the best in quality of any timber that came under my inspection, and most easy of access. It is a very hard, straight-grained wood, and very durable, if cut from ten to

twenty inches in diameter. The greater part, above these dimensions, is generally rotten at the heart. It grows from sixty to seventy feet in height, and is used in the colony for lower-masts and top-masts for small vessels, also for plank quarter, and most excellent studding-sail booms for any vessels, and for capstan-bars and hand-spikes. As it grows on land belonging to the Crown, there will be no expense of purchase. The whole expense will be that of cutting down and shipping: a cargo of it, in my opinion, may be obtained in three months.

I found also the red (eucalyptus resinifera of Smith) and blue gum (eucalyptus piperita of Smith, or obliqua of L'Heritier), the Banksia, the black-butted gum (eucalyptus), the iron-bark (eucalyptus), and the beef-wood or oak (casuarina); but they are so scarce and hard of access, and given to be rotten at the heart, that I make no hesitation in saying, that none of these species of wood will ever be of any use to the country for naval purposes.

Having examined the districts about the Derwent, the second master and myself proceeded to

Adventure Bay to inspect the timber, having been informed that the cedar (of the cedreleæ, allied to flindersia) and pine (podocarpus asplenii-folia of Labillardière, qu. dacrydium? *Brown*) were growing there in great abundance. But to our disappointment, after two days' journey by land and water, and a walk of twelve miles through the heart of the wood, we found no more than eight or nine trees of the former and five or six of the latter, and those so difficult to be obtained, that it would be necessary to make a road for each tree before it could be got to the water's edge. We also found the stringy bark here in great abundance, and of equal quality to that of the Derwent, but with the same defect as the before-mentioned trees.

The Huon River pine (dacrydium) is of most excellent quality; but whether in abundance or no I could not ascertain, as all the accounts I received, from the several persons to whom I applied for information, were contradictory, except in this one point, that the river was so shoal that none but small vessels could get up it.

After making inquiry and personal inspection,

the above-mentioned is all I could ascertain of the timber of Van Diemen's Land.

On my arrival at Port Jackson, I proceeded in my inspection into the different species of wood growing there, and which might be of service, and found the stringy bark most abundant throughout the colony—of good quality, and easy of access in the districts about Liverpool, as it could be floated down the river, and taken in at Botany Bay. The mahogany found here (eucalyptus robusta?) is a very hard wood and heavy, but is very scarce.

The blue gum is found in great plenty at Lane Cove, up the Paramatta River, the place from whence the government at Sydney is supplied with timber; and is also found at Middle Harbour, and generally throughout the colony. It is a hard-grained heavy wood, and is preferred to any other for the building of colonial vessels, for timbers and plank. It grows from thirty to forty feet in height, and from one to two in diameter.

The iron-bark is found in great abundance throughout the colony, and not very difficult to be obtained and brought down the river from Liverpool. It is similar to the stringy bark as to

quality, and is used in the colony for pumps, two of which are at this time in use on board the Dromedary. It grows from thirty to forty feet in height, and from one to three in diameter.

The black-butted gum is found in Lane Cove and throughout the colony. It is not a very hard wood, will float in the water, and is used for the different purposes to which timber can be applied. It is not very difficult to be obtained.

The box (eucalyptus) is found abundant throughout the colony. It grows from twenty to thirty feet high, and from one to four in diameter. It is used chiefly for railing: it is very straight. The large trees are always rotten at the heart.

The beef-wood or oak is found at Lane Cove and Middle Harbour. It is used in the colony for shingles, railing, and furniture; but will never be of any service as to naval purposes. It grows from ten to fifteen feet high, and from one to two in diameter.

The cedar, which grows principally at Newcastle (Hunter's River) and at the Five Islands, is generally allowed to be the most valuable wood for

inside work of ships and houses, of any found in New South Wales. It grows from thirty to forty feet high, and from one to three in diameter. It is brought from Hunter's River and the Five Islands in small vessels, as the navigation of these places, being difficult, will not admit large ones.

The rose-wood (of the meliaceæ—trichilia glandulosa?) grows in the forests with the cedar, at Newcastle. It is very hard, and much given to dry-rot. It is ornamental, and fit for furniture only. It resembles the English laurel.

The Hunter's River pine is rather a hard wood, and very much given to dry-rot, and can be obtained in the same manner as cedar.

The flooded gum (eucalyptus) is very lofty and remarkably straight-grained, from two to three feet in diameter, and fit for any kind of work either in ship or house-building. It is to be found at Iron Cove, on the Paramatta River.

The white cedar (melia azedarach) is a very tough and straight-grained wood; it is found at the Five Islands and Port Stephens, and is fit for any purpose.

All the woods growing in New Holland are much given to the heart-rot and shakes, on an average from six to ten.

* * * * * *

I have the honour to be,

&c. &c. &c.

R. MART, Purveyor.

To the Honourable
The Commissioners of H. M. Navy,
&c. &c. &c.

A

SPECIMEN

OF

THE INDIGENOUS BOTANY

OF THE

MOUNTAINOUS COUNTRY, BETWEEN THE COLONY ROUND PORT JACKSON AND THE SETTLEMENT OF BATHURST; BEING A PORTION OF THE RESULT OF OBSERVATIONS MADE IN THE MONTHS OF OCTOBER, NOVEMBER AND DECEMBER, 1822.

DISPOSED ACCORDING TO THE NATURAL ORDERS.

BY

MR. ALLAN CUNNINGHAM,

BOTANICAL COLLECTOR FOR HIS MAJESTY'S GARDENS AT KEW.

A

SPECIMEN,

&c.

DICOTYLEDONES.

I. THYMELEÆ, *Jussieu.*

The plants of this natural family, whose prevalence forms a feature in the Flora of the Cape of Good Hope, constitute at least ten distinct genera; and of these two only have been observed upon our southern continent, viz. *Pimelea*, and the European genus *Daphne*. Although some few of the *Pimeleæ* have been discovered in the equinoctial portions of Australia, the greater number have been found to exist in the parallels of our colony and the southern parts of Van Diemen's Land.

1. PIMELEA *ligustrina*, *Labillardière.*

A tall shrub, found in shaded subhumid situa-

tions. Banks of the Fish River and ravines near Bathurst.

2. PIMELEA *linoides*, allied to P. *linifolia, Smith.*

Involucris 4-phyllis: foliolis laté ovatis acutis glabris capitulo subbrevioribus, perianthii tubo villosissimo: ore 4-punctato, staminibus exsertis stylum subæquantibus, foliis oblongo-lanceolatis apicibus callosis obtusis internodio plus duplo longioribus. Frequent in permanent bogs and margins of cascades, on the Blue Mountains.

II. PROTEACEÆ, *Jussieu.*

It is a remarkable fact in the geography of plants, that nearly the whole of this beautiful order is confined to the southern hemisphere, where it is very extensively scattered, without limitation to any particular latitude, *Embothrium* having been found in the higher parallels of South America; and with respect to situation, it does not simply exist on or near the shores, at a moderate elevation above the sea, for some plants have been traced to a perpendicular height of 4000 feet in Van Diemen's Land; and to a species of the above-mentioned genus, the Baron Humboldt has given its

natural spot of growth a mean height of 9300 feet above the level of the ocean.

The Australian part of this extensive order comprises at least twenty-three distinct genera, of which only *Persoonia* and *Cenarrhenes* (a genus of Labillardière, till very lately imperfectly understood) produce drupaceous fruits, the remaining larger portion bearing dry capsules, more or less woody.

To the species of the several genera already published by Mr. Brown, many new plants, more recently discovered in the interior of our continent, and particularly on its north-western shores during the late voyages of Captain King, remain to be added; and of any individual genus, *Grevillea* has received the most considerable accession of unpublished species, belonging chiefly to Mr. Brown's first and fourth sections, the one having ecostated coriaceous folliculi, containing seeds winged only at the apex, the other remarkable for its round woody capsules, containing two orbicular seeds, winged quite round the margin, "semina undique latiùs alata," as in the section *Cycloptera* of Mr. Brown.

3. HAKEA *propinqua*.

Foliis filiformibus indivisis teretibus mucronatis

fructu vix æqualibus, capsulis subrotundis gibbosis obtusis nodosis, perianthiis glabris, pedunculis incanis. A large shrub, at about eighteen miles on the Blue Mountains. This species is nearly allied to H. *nodosa, Brown.*

4. HAKEA *microcarpa, Brown.*

This species, which was originally discovered on the banks of rivers in Van Diemen's Land, is very frequent, from Cox's River to a very considerable distance around the settlement of Bathurst.

5. GREVILLEA *rosmarinifolia.*

Foliis linearibus strictis acutis mucronatis: margine revolutis: subtus ramulisque cinereis, stylis utrinque glaberrimis, perianthiis extus lucidis; intus basi sericeis, stigmata verticali. A shrub of robust straight growth, and with reddish showy flowers. Banks of Cox's River.

6. GREVILLEA *acanthifolia.*

Foliis pinnatis glabris; lobis suboppositis trifidis, racemis erectis, perianthiis lanuginosis, stylis glabris. TAB. Peaty bogs on the Blue Mountains and banks of Cox's River. Collected on Mr. Oxley's first expedition in 1817.

7. GREVILLEA *sulphurea.*

Foliis linearibus strictis fasciculatis acutis mucronatis: marginibus refractis subtus ramulisque incanis, perianthiis extus tomentosis: barba interiore obsoleta, stylis apice villosiusculis. Allied to G. *tenuifolia, Brown.* A shrub frequent with the preceding on the grassy flats, Cox's River.

8. GREVILLEA *cinerea, Brown.* A beautiful species. Cox's River, and Rocky Hills beyond Bathurst.

9. PERSOONIA *Chamæpitys.*

Diffusé humifusa, foliis lineari-filiformibus acerosis sulcatis minutissimé punctatis mucronatis, pedunculis axillaribus solitariis, floribus in capitulis propè apicem ramulorum, perianthiis pubescentibus, ovariis maturis incanis stylo brevioribus, pedicello glandulis hypogynis duplo longiore. A remarkably long-branched, procumbent plant, extending its ramifications five feet on all sides of the central root. Brushy hills, country north of Bathurst. Flowers in December.

III. DIOSMEÆ, *Brown.*

This natural family, which originally formed a section of M. Jussieu's *Rutaceæ*, until it was de-

fined as a distinct order by Mr. Brown, is a tribe of plants, which, from several striking points of character, uniform in every genus of the order, as well as from its geographical extent (chiefly indeed in the extra-tropical regions of this continent) forms a peculiar feature in the vegetation of Terra Australis. The genera of the colony are seven, viz. *Boronia*, *Corræa*, *Eriostemon*, *Phebalium*, *Zieria*, *Crowea*, and *Philotheca* of Rudge, which last scarcely appears generically distinct from *Eriostemon*. Of all these (*Crowea* and *Philotheca* excepted) Port Jackson furnishes the botanist with several species, even yet for the most part unpublished.

10. ZIERIA *obcordata*.

Pilosa, foliolis obovato-cuneatis retusis emarginatis, floribus axillaribus solitariis. A rare shrub, of humble growth. Hills on the Macquarie River.

11. ZIERIA *revoluta*.

Foliolis linearibus revolutis acutis, racemis axillaribus terminalibusve. Verge of the Regent's Glen, Blue Mountains.

12. BORONIA *anemonifolia*.

Foliis petiolatis trifidis; laciniis angusto-cuneatis apice 2—3 dentatis integerrimisve, petiolis canali-

culatis, pedunculis axillaribus solitariis 1-floris, filamentis apice obtusis glandulosis, antheris calcaratis. Verge of the Regent's Glen, Blue Mountains.

13. ERIOSTEMON *obovale.*

Foliis obovalibus cuneatis: laté spathulatisve retusis: brevé mucronatis concavis petiolatis glabris carnosis, floribus solitariis terminalibus axillaribusve. Verge of the Regent's Glen, Blue Mountains.

14. ERIOSTEMON *cuspidatum.*

Foliis oblongo-lanceolatis acutis glaucescentibus apice uncinato-mucronatis, racemis umbellatis 4—5-floris axillaribus terminalibusve. A shrub of strong growth. Rocky hills, Cox's River. Flowers in October.

15. PHEBALIUM *elatum.*

Foliis lanceolatis ovato-lanceolatisve acuminatis subtus argenteis, corymbis axillaribus divisis pedunculatis: ramulis ferrugineo-squamulosis. A slender arborescent plant, 10—12 feet high. In shaded declivities in the vicinity of Spring Wood.

16. PHEBALIUM *aureum.*

Foliis lineari-oblongis angustis obtusis sub-

emarginatis revolutis: subtus ferrugineo-squamulosis, corymbis terminalibus lateralibusve, pedunculis ramulisque rubiginosis. TAB. A branching shrub, growing in bleak exposed situations. Blue Mountains.

17. PHEBALIUM *lachnæoides*.

Foliis sparsis linearibus lævibus uncinatis acutiusculis margine revolutis: subtus albidis, floribus axillaribus in capitulis propè extremitatem ramulorum dispositis. A tall handsome shrub, found in bare rocky situations. Blackheath, Blue Mountains.

IV. LABIATÆ, *Jussieu*.

I have already observed, in a report upon the herbaria formed during Captain King's respective voyages, and transmitted by me to England, that the mass of this and another order (*Verbenaceæ*) very nearly allied to it, seems, in Australia, to exist on its eastern shores, within and beyond the tropic; and that the species in those herbaria are referable to ten well-established genera. Among these *Premna* and *Vitex* are most remarkable on the north-west coast.

Of the European portion of *Labiatæ*, also indigenous to our colony, are to be found six remarkable genera of plants, confined indeed to Terra Australis, whose characters are formed from the structure of the antheræ, in some of which these organs are in part barren and defective, whilst in *Prostanthera* each has a calcarated appendage.

18. PROSTANTHERA *linearis*, *Brown*. Margins of shaded woods, Blue Mountains.
19. P. *violacea*, *Br*. Blue Mountains.
20. P. *rotundifolia*, *Br*. A twiggy suffruticose plant. Blue Mountains.
21. P. *denticulata*, *Br*. Pine Hills near Bathurst.
20. WESTRINGIA *angustifolia*, *Br*. A suffruticose plant, growing with the preceding.

V. SCROPHULARINÆ, *Brown*.

The plants of this order are inhabitants of the alpine regions of the higher latitudes of Europe, as well as of the shores of every country within the tropics which has been visited by the botanist. Several Linnæan genera of this order exist in the equinoctial parts of Australia, as also at the

southern extremes of Van Diemen's Land, where a species of the genus *Euphrasia* is traced to the summits of its highest mountains.

The order is divided into two sections, comprehending species having two or four antheriferous stamens.

23. EUPHRASIA *paludosa, Br.* Boggy spots on the Blue mountains.

24. E. *scabra, Br.* Plains at Bathurst, &c.

VI. SOLANACEÆ, *Jussieu.*

The *Solanaceæ* have been characterised by a plicated monopetalous corolla, having as many stamens (generally five) as there are divisions of that floral envelope; nor was it until M. J. J. Labillardière, the naturalist who accompanied General D'Entrecasteaux, had discovered his *Anthocercis*, upon the south-western shores of this continent, that there existed any deviation from a corresponding number of the respective parts of the fructification of any genus of the order. The didynamous stamens, with the bare rudiment of a fifth, together with the form of the embryo, now

constitute a section of the order, of which the genera appear to be limited to our Australian continent.

25. ANTHOCERCIS *albicans*.

Incano-tomentosa, foliis ovali-oblongis impunctatis obtusis margine revolutis, corollæ laciniis tubo æqualibus, capsula sphæroidea calycem æquante. TAB. A shrub frequent upon Pine Hills in the interior, being a third and hitherto unpublished species of this interesting genus, originally discovered by me in 1817, and again seen in October, 1822.

The seeds of A. *littorea* and A. *viscosa* *, *Br.* were gathered last year by me on the shores of King George the Third's Sound.

VII. TREMANDREÆ, *Brown*.

A small order in Terra Australis, consisting of two genera of plants only, the one proposed by Mr. Brown, under the title of *Tremandra* (being

* All the three species of this curious and interesting genus are now growing in his Majesty's gardens at Kew.—EDITOR.

the type of this little family) and Sir J. E. Smith's long-established *Tetratheca*, remarkable for the terminal bursting of the four distinct cells of its antheræ.

26. TETRATHECA *rubiæoides*.

Foliis quinatis senisve verticillatis linearibus falcatis supra scabris, ramulis incanis, pedunculis solitariis axillaribus cernuis. Allied to T. *ericæfolia, Smith.* Rocky declivities, Blue Mountains.

VIII. MAGNOLIACEÆ, *Decandolle.*

This important family was first considered, by Mr. Salisbury, as distinct from the *Dilleniaceæ*, with which it had been till recently associated, in the ternary disposition of the several parts of the flower, as well as the want of astringency in its bark, which is highly aromatic and stimulant; and although M. Decandolle has adopted this separation, it was Mr. Brown who clearly defined the extent and affinities of the two families.

The family of *Magnoliaceæ*, although extensive in Asia and America, is limited to two plants in Terra Australis, named in honour of the Dutch voyager Tasman, the one a native of our colony,

and the other of the southern extremity of Van Diemen's Land (which he first discovered), where it occupies the place of the celebrated Winter's-bark, (WINTERA *aromatica, Willdenow*) of a corresponding parallel in South America.

27. TASMANNIA *dipetala, Br.*

A large shrub, frequent in shaded woods, gullies, &c.

IX. POLYGALEÆ, *Brown.*

The *Polygaleæ* are limited in Terra Australis to three genera, of which M. Labillardière's genus *Comesperma* is the most striking; differing from *Polygala* of Linnæus and other authors, in the shape of the capsule, and the tufted villous appendages attached to the seed.

28. COMESPERMA *coridifolia.* Allied to C. *conferta, Labill.* Brushes on the Blue Mountains.

X. DILLENIACEÆ, *Decandolle.*

M. Decandolle, in his learned enumeration of the species of this family, has divided it into two tribes differing from each other, in the apices of the filaments being dilated to receive the antheræ, or narrow, and even sub-attenuated; as well as in

the shape of these organs. To that section, with simple stamens, therefore, the Australian portion of the order has been referred, whose number is no less than seventy, of which the greater part exists in various exposed situations of our colony, and constitutes three genera.

29. HIBBERTIA *saligna, Br.* A shrub among brushwood in several parts of the Blue Mountains, particularly about Spring Wood.

30. PLEURANDRA *Cneorum, Decand.* Brushes on the King's Table Land.

31. PLEURANDRA *stricta, Br.* A suffruticose plant, in barren brushy situations, Blue Mountains.

32. PLEURANDRA *calycina, Br.* Forest land near Bathurst.

XI. EPACRIDEÆ, *Brown.*

Upon comparing the floras of countries lying in the same parallel, it is interesting to observe in several families of two distant continents, so situated, a striking affinity and even an identity of genera, common to both. Where, however, the same genera have not been met with, in two widely

divided countries, situated in the same latitude, the place of a tribe abundant in the one is often occupied by another equally extensive family, having a striking affinity to each other, not only in the structure of their respective parts of fructification, but also in the physiology and physical properties of the vegetables themselves. Thus the Cape of Good Hope (in the parallel of Port Jackson) affords in its *heaths* (properly so termed) a striking as well as a beautiful feature in the flora of the southern extremity of the African continent; and although the genus *Erica* does not exist in Terra Australis, the extensive family named *Epacrideæ* (recently so constituted), which has been referred to the *Ericoideæ* by Jussieu, forms a numerous and nearly-related substitute, occupying a large space in our colonial flora.

Exclusive of several unpublished plants of recent discovery, nearly one hundred and forty species of this order (which are remarkable for the harsh dry nature of their foliage) have been described by Mr. Brown, two-thirds of which bear drupaceous fruits, containing a definite number of seeds, and hence constitute a section of the family named

Styphelieæ, whose maximum is, with the capsular fruited division (the *Epacrideæ* properly so denominated), in the parallel of our colony. The whole tribe is, with the exception of two plants in the Banksian Herbarium, which are natives of the Sandwich Islands, entirely confined to the southern hemisphere.

§. 1. *Epacrideæ veræ.*

33. EPACRIS *apiculata.*

Calycis foliolis lanceolato-acuminatis tubum corollæ subæquantibus, foliis cucullatis venosis sessilibus basi auriculatis; superioribus imbricatis: apicibus callosis obtusis, ramulis pubescentibus. A rare plant, found on moist mossy rocks. Ravines, King's Table Land.

34. EPACRIS *onosmæflora.*

Foliis elliptico-lanceolatis acuminatis cucullato-concaviusculis quinquenerviis mucronatis petiolatis margine ciliatis, ramulis incanis, corollis cylindraceo-ventricosis tubo calycem acutissimam superante. A shrub allied to E. *lanuginosa, Labill.* In boggy moist declivities. King's Table Land.

35. EPACRIS *ruscifolia, Br.* A depressed shrub on moist rocks, &c. King's Table Land.

36. EPACRIS *paludosa, Br.* In permanent bogs. Colony, Blue Mountains, &c.

37. PONCELETIA *sprengelioides, Br.* A rare suffruticose dense-habited plant, adhering to rocks perpetually damp. Margin of the Cascade, King's Table Land.

§. 2. *Styphelea.*

38. MELICHRUS *medius.*

Erectus, corollis urceolatis, calycibus pilosis, foliis lanceolatis attenuatis acutissimis mucronatis concavis multinerviis: marginibus membranaceis denticulatis. An erect shrub, intermediate between the two already described species. Plains at Bathurst.

39. MONOTOCA *albens, Br.* A shrub six feet high, found in rugged ravines. On the mountains.

40. LEUCOPOGON *lanceolatus, Br.* A large shrub on the mountains.

41. L. *setiger, Br.* Arid brushes.

42. L. *appressus, Br.* Frequent on the mountains.

43. L. *collinus, Br.* Brushes on the mountains.

44. L. *attenuatus.*

Pedunculis brevissimis erectis subunifloris, foliis

ovatis ovato-lanceolatisve modice patentibus convexiusculis striatis mucronatis: mucrone setaceo; junioribus imbricatis ciliato-denticulatis. Hills at Cox's River.

45. L. *virgatus*, *Labill.* Barren, rocky situations, Blue Mountains.

46. L. *muticus*, *Br.* A tall, handsome shrub, in rocky situations. Blue Mountains.

XII. LEGUMINOSÆ, *Jussieu.*

Mr. Brown has considered this order, from its extent and wide distribution in almost every country, as a grand class, divisible into at least three principal families; viz. The *Mimoseæ*, as left by Linnæus, now constituting several genera: the *Lomentaceæ*, and the *Papilionaceæ*, the last being in part decandrous, or having ten stamens distinct from each other, and in part diadelphous, with filaments united at their base.

1. *Mimoseæ.*

This leading division of the *Leguminosæ* is so extremely abundant in Terra Australis, as to give a peculiar character to the vegetation. They belong

almost wholly to the genus *Acacia*, as formed by Professor Willdenow, are mostly aphyllous, and generally diffused over every part of the continent that has been examined. A few, indeed, appear to be limited to solitary spots on the north-western shores, and no one species has been remarked so general, as to be common to opposite coasts. Already have upwards of 130 very distinct species been discovered, most of which are unpublished. These cannot be well defined in any Monograph upon the family, unless reduced to sections, characterized by the shape of the foliaceous petioles (at present termed *leaves* by botanists), the capitular or cylindrical inflorescence, and the form of the pod.

47. Acacia *juniperina, Willd.*

A pungent shrub. Colony and mountains.

48. Acacia *asparagoides.*

Foliis linearibus sulcatis rigentibus mucronatis alternis confertisve: propè basin subdilatatis angulatis uniglandulosis, capitulis axillaribus solitariis, stipulis persistentibus setaceis, ramulis glabris diffusis. Intermediate between A. *acicularis* and *juniperina*. Blue Mountains.

49. ACACIA *taxifolia*.

Foliis linearibus falcatis mucronatis 2—3-nerviis sparsis pedunculo duplo longioribus, capitulis pedunculatis axillaribus solitariis, legumine angustissimo elongato. A large shrub, 10—12 feet high. Spring Wood.

50. ACACIA *buxifolia*.

Glabra, foliis ovatis acutis: margine superiore uniglandulifero, capitulis racemosis axillaribus folio duplo longioribus. Pine-ranges, Macquarie River.

51. ACACIA *rubida*.

Foliis ovato-lanceolatis; apice obliquis mucronatis: mucrone innocuo: margine superiore uniglanduloso, racemis pedunculatis (parvis) axillaribus terminalibusve, costæ margineque foliorum rubido-coloratis. A shrub frequent on the edge of mountain-rills, Blue Mountains.

52. ACACIA *verniciflua*.

Foliis lineari-lanceolatis 2-nerviis falcatis basi attenuatis, floribus globosis axillaribus geminatis, ramis junioribus viscidis. Rocky Hills, near Cox's River, &c. Collected first in 1817 by me, during Mr. Oxley's Expedition.

53. ACACIA *lanigera.*

Villosa, foliis lanceolatis acutis rigidis nervosis sulcatis mucronatis: mucrone pungenti, capitulis geminis axillaribus, ramulis superioris leguminibusve lanuginosis. A shrub frequent on rocky barren ranges in the interior.

54. ACACIA *obtusifolia.*

Foliis elongato-lanceolatis obtusis basi attenuatis binerviis venosis, spicis cylindraceis geminatis, legumine teretiusculo intus siccato-pulposo. Blue Mountains. Allied to A. *longifolia, Willd.*

55. ACACIA *doratoxylon.*

Foliis lanceolato-linearibus falcatis striatis basi attenuatis, spicis cylindraceis axillaribus geminatis subsessilibus.

The spear-wood of certain tribes of natives in the interior. A tree twenty feet high. Observed first during Mr. Oxley's Expedition in 1817. Pine-ridges on the Macquarie River.

56. ACACIA *dealbata.*

Pallido-glaucescens, foliis ellipticis ovatisve glabris obliquis mucronatis: mucrone innocuo: margine superiore uniglanduloso, racemis erectis axillaribus, leguminibus albido-pulverulentis furfuraceis. A

slender shrub of recent discovery. Hills on the Cugee-gong River, fifty miles north of Bathurst.

2. *Papilionaceæ.*

57. GOMPHOLOBIUM *glaucescens.*

Foliis ternatis linearibus margine revolutis mucronatis, ramulis angulatis lævibus, carinâ imberbi, calyce longitudine corollæ ante expansionem vexilli. Blue Mountains.

58. PULTENÆA *incurvata.*

Capitulis terminalibus ramulisque villosis, foliis lanceolatis obtusis concavis incurvatis. A slender shrubby plant. Margins of peaty bogs. King's Table Land.

59. PULTENÆA *canescens.*

Capitulis multifloris, bracteis calyce paulo brevioribus, foliis lineari-oblongis suprà concavis glabris; subtùs calycibus bracteisque canescentibus, caulibus cæspitosis. Barren woods, verge of swamps, Blue Mountains.

60. PULTENÆA *polifolia.*

Capitulis multifloris, foliis ovato-lanceolatis oblongo-linearibusve mucronatis: margine revolutis, ramulis capitulisque villosis, bracteis calyce paulo brevioribus. Brushy hills.

61. PULTENÆA *argentea.*

Capitulis terminalibus villosis, foliis linearilanceolatis muticis acutis suprà concaviusculis glabris; subtùs argenteis. Hills, Cox's River.

62. PULTENÆA *procumbens.*

Ramis prostratis stipulaceis, racemis foliatis, foliis ovato-lanceolatis acutis suprà concaviusculis refractis mucronatis; subtùs calycibus ramulisque villosis. Allied to P. *villosa.* A reclining shrub frequent in the western interior, on exposed hills.

63. DILLWYNIA *phylicoides.*

Floribus corymbosis terminalibus pedicellatis, foliis linearibus brevibus mucronatis erecto-patulis: margine reflexis subtortis, calycibus ramulisque villosis, caule reclinato. Allied to D. *ericæfolia.* Hills around Bathurst.

64. DILLWYNIA *sericea.*

Canescens, floribus subgeminis axillaribus, foliis linearibus semiteretibus strictis. Around Bathurst.

65. BOSSIÆA *foliosa.*

Ramulis strictis teretibus villosis, foliis alternis (parvis) orbiculatis retusis scabris revolutis subtùs sericeis, stipulis persistentibus uncinatis petiolo longioribus. Brushy forest-land near Bathurst.

66. BOSSIÆA *buxifolia.*

Ramis foliosis attenuatis procumbentibus, foliis lato-ellipticis obtusis mucronatis villosiusculis margine recurvis; subtùs ramulisque cinereis, stipulis petiolo longioribus. A diffuse reclining plant, upon rocky, brushy hills.

67. HOVEA *rosmarinifolia.*

Foliis linearibus reticulatis revolutis; subtùs leguminibusve ferrugineo-tomentosis. A shrub frequent on rocky pine-hills, north-west of Bathurst.

68. DAVIESIA *acicularis, Smith.* A pungent shrub in the colony.

XIII. MYRTACEÆ, *Jussieu.*

It has been justly remarked that this order is more strikingly modified in Terra Australis than in any other part of the world, forming, in *Eucalyptus* and the genera immediately related to it, four fifths of the forests; but, although so generally diffused, it is remarkable that they are scarcely to be found beyond it. The colony of Port Jackson, and the southern settlements in Van Diemen's Land, appear not only to produce the greater number of the several species of *Eucalyptus*, but also

considerably larger timber, than the equinoctial parts of the continent, where (at least on the east coast) a permanent moisture and a greater regularity of temperature exist, seemingly not genial to their robust growth.

69. BÆCKEA *gracilis* (*Jungia* of *Gærtner*).

Foliis linearibus obtusis quadrifariam imbricatis, caule ramoso erectiusculo, floribus capitatis terminalibus lateralibusve. A slender shrubby plant, in arid rocky situations.

70. BÆCKEA *ramosissima*.

Ramosissima, diffusa, foliis lanceolato-linearibus acutiusculis patulis margine scabris, denticulis calycinis coloratis ciliatis, floribus solitariis axillaribus pedunculatis bibracteatis. Blue Mountains.

71. LEPTOSPERMUM *thymifolium*.

Villosiusculum, foliis ovalibus obtusis planiusculis, floribus axillaribus solitariis geminisve, laciniis calycis deciduis. A shrub growing in swampy forest-land. Macquarie River.

72. LEPTOSPERMUM *multicaule*.

Sericeum, foliis ovalibus ovato-lanceolatisve, dentibus calycis coloratis. Barren, brushy hills near Bathurst.

73. EUCALYPTUS *microphylla.*

Foliis lineari-lanceolatis subfalcatis acutis: margine incrassatis, umbellis multifloris foliisque confertis. Forming brushes upon the more elevated parts of the mountains.

74. EUCALYPTUS *pulvigera.*

Fruticosa, albo-glaucescens, operculo hemisphærico acuto, foliis oppositis sessilibus basi subconnatis suborbiculatis retusis: apice cuspidatis: margine incrassatis undulatis, umbellis axillaribus pedicellatis 3-floris, pedicellis brevissimis teretibus. Near Cox's River.

75. TRISTANIA *persicæfolia.*

Foliis oppositis lanceolatis attenuatis acutis lævibus subtùs glaucis: margine crenulato-undulatis integerrimisve, calycis laciniis ovatis acutis. A slender tree, 12—16 feet high. Allied to *T. nereifolia, Br.* Ravines, Spring Wood.

76. CALYTRIX *ericoides.*

Icosandra, foliis sparsis petiolatis stipulaceis glabris, stipulis deciduis, bracteis tubo calycis dimidio brevioribus. A large shrub, Pine-ridges near Bathurst.

XIV. RHAMNEÆ, *Brown.*

Rhamneæ and *Celastrinæ* were formerly united among the *Rhamni* of Jussieu, but disposed in sections, differing from each other in the relative position of the stamina in respect to the petals, and in the character of the fruit, which (when viewed with other important differences of fructification) induced Mr. Brown to modify and define them as two distinct orders.

The following plants are all of the *Rhamneæ* of Mr. Brown.

77. POMADERRIS *ledifolia.*

Foliis ovalibus ellipticisve glabris subtùs albido-sericeis, corymbis paucifloris terminalibus, caule virgato. A slender shrub upon rocky hills, Cox's River.

78. POMADERRIS *andromedæfolia.*

Foliis lanceolato-ovalibus suprà glabris subtùs niveo-tomentosis, corymbis terminalibus confertis. On rocky parts of the Blue Mountains.

79. CRYPTANDRA *ericæfolia, Rudge.*

A shrub frequent on stony hills near Bathurst.

80. RHAMNEÆ. A genus related to *Colletia.*

Calyx quinquefidus persistens. *Corolla* 5-petala in tubum conniventia decidua. *Antheræ* 5, biloculares subsingulis squamis insertæ. *Germen* bilobum. *Frutex* rigidus ramosus spinescens, folia oblongo-lanceolata pauciserrata sparsa et fasciculata, flores axillares et laterales. Rocky hills, Cox's River.

81. RHAMNEÆ. Another genus of this order related to *Colletia.*

Calyx s. *Perianthium* monophyllum quadrifidum. *Corolla* o. s. squamæ 4-cucullatæ inter segmenta perianthii. *Antheræ* 2-loculares, sub singulis squamis. *Stigma* 3-lobatum. *Germen* 3-loculare. A junceous shrubby plant, with brachiate strong thorns. Cox's River. Bathurst—on the banks of the Macquarie.

82. DARWINIA *taxifolia.*

Foliis linearibus falcatis mucronatis sparsis. Rocky declivities on the Blue Mountains.

XV. CUNONIACEÆ, *Brown.*

This is a small family in Terra Australis, where its three genera appear to be confined to its eastern

shore beyond the tropic. The following solitary individual is of a genus frequent in equinoctial America, where some of its species form large heavy timber.

83. WEINMANNIA *australis.*

Foliis ternis ovato-lanceolatis profundè æqualiterve serratis sessibus, floribus terminalibus. Moist shaded rocks. Spring Wood. Discovered in 1817.

XVI. TEREBINTHACEÆ, *Jussieu.*

Jussieu, in the third section of this balsamic family, has associated several genera, which more recent examinations have proved to belong to Mr. Brown's *Diosmeæ*, a very distinct order, although related to one large natural class. The genus about to be mentioned, as having a species in the accompanying collection, may still be retained in the *Terebinthaceæ*, until a more fit situation be found in the natural arrangement. Its species are numerous and singular in Terra Australis, on every shore of which they have been observed.

84. DODONÆA *attenuata.*

Dioica, foliis lineari-spathulatis punctato-scabris

basi attenuatis: margine revolutis subdenticulatis: apice rotundatis acutis integerrimis, racemis lateralibus terminalibusve. Channel of Cox's River.

XVII. BUTTNERIACEÆ, *Brown.*

This small family has recently been separated from the *Tiliaceæ* of Jussieu, into which it appears nevertheless gradually to pass. It contains several interesting genera, four only being published by Authors*. The present subject, *Lasiopetalum*, is the largest genus of the family, and has been observed not only in the colony, but also at King George's Sound, and Dirk Hartogt's Island off Shark's Bay on the west coast.

85. LASIOPETALUM *rubiginosum.*

Foliis oblongo-cordatis obtusis suprà lucidis minutissime punctatis subtùs rubiginosis. King's Table Land, Blue Mountains.

XVIII. EUPHORBIACEÆ, *Jussieu.*

The greater portion of *Euphorbiaceæ*, which are very numerous, exist in India and the equi-

* M. Gay has made five in his "Monographie des Lasiopétalées, 1821."—EDITOR.

noctial parts of America, nor is the order wanting in Terra Australis, nearly one hundred species having been remarked, for the most part on shores within the tropics. Some genera, however, peculiar to this country are natives of the colony of Port Jackson, where the Linnæan genus *Croton* is indigenous.

86. CROTON *urticoides*.

Dioicum, stellato-tomentosum, foliis lanceolato-cordatis sublobatis inæqualiter serratis subtùs mollibus, racemis axillaribus, caule lanuginoso fruticoso. Cox's and Macquarie Rivers.

87. CROTON *rosmarinifolium*.

Monoicum, foliis linearibus obtusis revolutis subtùs ramulisque cinereis petiolatis, floribus axillaribus solitariis. A handsome shrub, eight feet high, Cox's River.

XIX. PRIMULACEÆ, *Ventenat.*

This European order is limited to six plants in Terra Australis, referable to three Linnæan genera, of which *Samolus* is abundant on the sands of all its shores.

Samolus, although it is allied to the *Primula* family, differs nevertheless in the position of the ovarium and seeds, as well as in the abortive character of one half of its stamina, which are ten in number.

88. SAMOLUS *littoralis*, *Brown*. Arid brushes on the Blue Mountains.

XX. STACKHOUSEÆ, *Brown*.

This very small family, which consists of two genera (one of which still remains unpublished), was formed by Mr. Brown, upon Sir J. E. Smith's genus *Stackhousia*, long since announced to botanists in the 4th vol. of the Linnæan Transactions. The *Stackhouseæ* are peculiar to our Australian continent, over which (as far as has been explored) they are sparingly scattered, being more frequent in the vicinity of the colony.

89. STACKHOUSIA *linariifolia*.

Foliis linearibus crassiusculis basi attenuatis obtusis rectis incurvatisve, floribus 3-gynis, bractea calyce duplo longiore. Plains at Bathurst.

XXI. CARYOPHYLLEÆ, *Jussieu.*

Almost every country beyond the tropic of Cancer in the northern hemisphere abounds in the several genera of this very extensive class of plants, which M. Jussieu has arranged under seven sections, characterized by the number of their stamens and styles.

In the southern hemisphere, the order appears to exist only in about four of the genera of Europe, and these seem to be limited each to a solitary species.

90. LINUM* *marginale.* (Flax.)

Calycibus acuminatis; foliolis margine membranaceis, foliis lineari-lanceolatis acutis, floribus terminalibus subcorymbosis monogynis, stylo apice quinquepartito. Forest-land, interior.

XXII. ROSACEÆ, *Jussieu.*

This order, which has lately been very judiciously relieved by Mr. Lindley of one of its sections as

* M. Decandolle, in his Prodromus, makes a separate class of Lineæ, and indicates another Australian species, viz. Linum angustifolium.—EDITOR.

left by Jussieu, *Pomaceæ* being constituted a separate order, is but barely represented in Australia; the following species, with three or four of *Rubus*, being the only plants of the order whose indigenous existence I am aware of.

91. ACÆNA *ovina*.

Incano-hirsuta, foliolis profundè incisis pinnatifidis; laciniis oblongis obtusis, spicis oblongis; inferioribus remotifloris, caule reclinato subdemerso. Frequent on moist lands, Bathurst, &c.

XXIII. UMBELLIFERÆ, *Jussieu*.

This natural family appears to occupy portions of every country in the temperate climates of the northern hemisphere. Those genera which have been remarked in our southern regions are very few, and found to deviate most remarkably from the usual structure of the order, hence constituting genera peculiar to the country.

92. ERYNGIUM *ovinum*.

Foliis bipinnatifidis; laciniis linearibus spinoso-rigidis divaricatis, capitulis sphæricis pedunculatis, caule erecto sulcato dichotomo, foliolis involucri linearibus mucronatis rigentibus. A plant, when

young, much sought after by sheep. Plains at Bathurst, &c.

XXIV. COMPOSITÆ, *Jussieu.*

The *Compositæ*, like the preceding order, has its maximum in Europe, although about 300 species have already been discovered in Terra Australis, being about one-eighth of the number that has been described of the family generally. In our colony, as well as in Van Diemen's Land, the most interesting genera are *Aster*, *Bellis*, *Calotis*, *Cassinia*, *Cacalia*, and *Eupatorium*, four of which are frequent also in Europe, *Calotis* and *Cassinia* being peculiar to New South Wales.

93. ELICHRYSUM *albicans.*

Herbaceum, lanuginosum, foliis lanceolato-linearibus, ramis unifloris, pedunculis nudiusculis. Allied to E. *scorpioides*, *Labill.* Forest-land, Cox's River.

94. CHRYSOCOMA *squamata*, *Labill.* Cox's River.

XXV. GERANEÆ, *Jussieu.*

95. PELARGONIUM *australe*, var. *minor*. Rocky hills, Macquarie River.

MONOCOTYLEDONES.

XXVI. ORCHIDEÆ, *Juss. and Br.*

It is singular that the parasitical portion of this beautiful family, which abounds in every country within the tropic, on the continents of Asia, Africa, and America, should exist so extremely sparingly in that of Terra Australis, whose extent within that circle exceeds 700 miles of latitude. The observations, however, derived from two years' experience in South America, upon these sumptuous plants, so far as regards their habits and situations of growth, enable me in some degree to account for their partial existence upon our north-west coast. On those shores generally it may be attributed to their geological structure, to the absence of primary mountains, or land above an ordinary elevation, and hence to the absence of lofty dense forests. These are necessary to that shade and permanent atmospheric moisture, which constitute essential requisites to the existence of almost the whole of the tribe.

The terrestrial part of the order may, indeed,

be considered of rather rare occurrence, and the individuals of which they are composed are seldom found abundantly in one spot. Yet we reckon about 100 species, the maximum of which have been observed in the colony and Van Diemen's Land, and constitute genera peculiar to our continent.

96. CALADENIA *dilatata, Br.* Originally discovered by the late Colonel Paterson in Van Diemen's Land. Lately found near Bathurst.

97. C. *Patersoni, Br.* Near Bathurst.

98. C. *gracilis, Br.* Near Bathurst.

99. C. *filamentosa, Br.* Lately found near Bathurst.

100. C. *sulphurea.*

Folio lanceolato plano 5-nervio (s. obsoletè 3-nervio) subtùs glauco, glandulis disci labelli congestis basi biseriatis. Allied to C. *Menziesii, Br.*

ACOTYLEDONES.

XXVII. FILICES.

ASPLENIUM *difforme, Br.* Shaded rocks, Blue Mountains.

Paramatta, 1st January, 1823.

P. S. As a supplement to the foregoing "Specimen" of the botany of Bathurst, I have great pleasure in being able to give an account of a new and highly interesting plant of the natural order *Bignoniaceæ*, which was discovered by me towards the close of the year 1823, in the Blue Mountains. The exact habitat is among shady forests, abounding in the tree-ferns (*Dicksonia antarctica*, Labill.*), about twenty-two miles from the entrance

* This beautiful tree-fern, which was originally discovered at the southern extremity of Van Diemen's Island, where alone it has hitherto been observed, I found also very general in the dark forests on the mountain named by the Aborigines *Tomah*, which is distant from the Hawkesbury ford, at Richmond, about twenty miles. Some of the caudices or trunks of these trees are thirty-five feet in height, and measure from twelve to sixteen inches in diameter at their base. The stupendous size and extraordinary windings of the climbers within these shades, particularly a cissus with quinate leaves, whose supple stems measured from twenty to twenty-four inches in the circumference, the weight of parasitical orchideæ, filices, &c. borne by them, as they swing to the violent winds of these elevated lands, added to the grandeur and magnificent appearance of the tree-ferns, failed not to picture to me and impress me with that exuberance of tropical scenery, which in New South Wales is occasionally to be observed in the higher latitudes (particularly at the Five Islands). Upon entering the dark shades of these forests, the traveller is forcibly struck

of the new route which has recently been traced out by Mr. Bell, junr.

The plant in question appears to constitute a new genus of the order *Bignoniaceæ;* and from the circumstance of its having a berried fruit, it belongs to the division " fructu baccato," and consequently ranges near to *Mitraria* of Cavanilles.

The name now proposed for the genus is intended to commemorate that of a gentleman who has, in his judicial capacity, much aided the advancement of the colony of New South Wales to its present flourishing state; and whose important researches there, in various branches of physical science, will materially tend to confer that interest upon our distant settlement which it so richly deserves, and which yet remains in a great measure to be appreciated.

FIELDIA.

Calyx duplex exterior spathæformis profundè fissus, interior 5-partitus persistens. *Corolla*

with the change of appearance of the timbers, from the eucalypti of the open country, to species of other genera not to be found in situations of dry exposure.

tubuloso-ventricosa, limbo 5-lobo inæquali subbilabiato, rudimentum filamenti quinti inter stamina longior. *Stigmata* bilamellata. *Bacca* (alba) spongioso-carnosa, 1-locularis. *Semina* numerosa, parva, nidulantia.

FIELDIA *australis*. TAB.

Suffrutex: Caulis scandenti-radicans, suprà arborum truncos subparasitica; ramis ramulisque tomento ferrugineo dense obsitis. Folia opposita, petiolata, magnitudine valde variabilia, uncialia, usque ad tres uncias longa, elliptica, acuta, juniora integerrima, adulta plerùmque versus apicem serrata, suprà viridia pubescentia, subtùs ferrugineo-tomentosa, venis lateralibus obsoletis. Petiolus brevis vix duas aut tres lineas longa, ferrugineo-tomentosa. Flores axillares, solitarii, penduli. Pedunculus sesquiuncialis, teres, ferrugineo-tomentosus. Calyx duplex ferrugineo-tomentosus; exterior spathiformis bifidus, laciniis inæqualibus; interior 5-partitus laciniis lanceolatis erectis. Corolla albo-virescens fère duas uncias longa, atque calyx subduplo longior, tubuloso-ventricosa, limbo perbrevi subbilabiato quinquelobo. Stamina 4, didynama, inclusa, cum rudimento filamenti quinti

inter stamina longiora. Stylus staminibus vix longior. Stigma e lamellis duobus. Fructus: Bacca elongato-oblonga, calyce persistente longior, alba, spongioso-carnosa, stylo terminata.

A climbing plant with a rooting stem, which adheres to the trunks of the tree-ferns, and is very generally diffused in moist shady woods, where it also covers the mossy and fallen timber, reminding me much of the beautiful scarlet-flowering parasitical plants, known in Brazil by the name of *Pe de Cobra*. In habit it also much resembles the *Begonia urticæ* of Brazil. It is found likewise at the Five Islands or Red-point of the charts.

JOURNAL

OF

AN EXCURSION

TO THE

SOUTHWARD OF LAKE GEORGE IN NEW SOUTH WALES.

BY

CAPTAIN MARK JOHN CURRIE, R.N.

(With a Map.)

JOURNAL,

&c.

22d *May*, 1823. Set out in company with Brigade-Major Ovens from Bong Bong (Mr. Throsby's farm), taking with us Joseph Wild (a constable of the district of Argyle, well known as a bushman on similar excursions to the one we were about to take), for the purpose of showing us the way to Lake George; and as he was also known and much respected by the natives, we considered he would be an useful attendant beyond the hitherto explored part of the country. Towards evening crossed the Wollondilly River, where we halted for the night—distance twenty miles. Fine clear weather—wind west. Passed through a country partly brush and partly forest.

23d. Weather cloudy. Passed Messrs. H. and C. M'Arthur's stock-station. Diverged from the road to visit the Sugarloaf Rocks—a curious mass,

which, although perfectly firm, has the appearance of heaps of small stones resembling worn gravel. Crossed the Cookbundoon River twice; and rested for the night in a barren brush at the foot of the range of mountains bearing the same name. Distance sixteen miles. Weather squally—hail, snow, and rain. Wind SW.

24th. Heavy squalls of wind, with occasional snow during the night. At daylight, fine weather with sharp frost. Therm. at 10 *a. m.*, on the top of Cookbundoon Range, 34°. Passed through a barren country, and encamped at Mulwarry, the commencement of Goulburn Plains, after again crossing the Wollondilly. Distance fifteen miles. Wind SW. At sunset moderate.

25th. At daylight drizzling rain. Wind west. At noon in the middle of Goulburn Plains. Passed over Goulburn Plains, twelve miles in extent; but they should rather be called downs than plains. Soil partially good and bad—white flint-stone and granite in places. Encamped for the night about four miles to the SW. of the plains. Distance twenty miles. Wind still westerly, and weather unsettled.

26th. Cloudy at daylight. Wind west. At noon drizzling rain. Passed up a valley by a chain of ponds for about five miles, leaving behind the last and most distant stock-station from Sydney in this direction, and then through gulleys and over stony ranges to Lake George, where we encamped on the banks of a creek for the night. Killed three emues on a plain near the lake, which afforded excellent coursing, equal if not surpassing the same sport with the hare in England; and which were very acceptable, for having calculated on them and kangaroos, as the principal part of our food, and the whole of that of our greyhounds, we had provided ourselves with but little salt meat; flour for the purpose of making what are termed *dampers* (*i. e.* a flat cake, being merely a mixture of flour and water, baked in wood ashes) forming our chief stock. Distance sixteen miles. Wind still west, and blowing very hard.

27th. Raining hard at daylight, which continuing with great perversity at 10 *a. m.*, and promising to last throughout the day, induced us to remain stationary. Sent the cart back, it being impossible, from the trackless and mountainous

state of the country, for it to proceed further, and we being provided with three pack-horses to carry our provisions and the trifling luggage we had with us. Latitude of this encampment (which is on the east bank of the lake about eleven miles north of the south end) by sun's meridian altitude, 35° 6′ 1″ south. Both uplands and meadows on this side of Lake George very rotten, and riding bad. Killed two emues and three ducks. Saw an immense quantity of the latter, and black swans, on a lagoon near the lake. Sunset fine; wind still westerly.

28th. At daylight rain—detained all day by the rain. Ceased raining at sunset.

29th. Fine weather at daylight. Longitude of our encampment, by chronometer (the rate of which owing to our detention I have been enabled to ascertain on the spot with its accustomed exercise in the pocket) and simple altitude, 149° 46′ 21″ east from Greenwich, being 0^h 5^m 50^s,6 or 1° 27′ 39″ west from the government-house at Sydney, which differs somewhat from that assigned to the same spot by Mr. Oxley; but as his is probably (from various circumstances) nearer the truth, I

have retained his position of Lake George on my sketch of this tour. Proceeded on our journey. In crossing the creek on which we had encamped, one of our pack-horses was nearly drowned, owing to the bottom being soft: he became frightened, and fell on his side: another was afterwards bogged. Passed through a rotten, boggy country to the SE. corner of the lake, making about a SSE. course ten miles. Whole distance about fifteen miles. Wind west.

30th. At daylight fine weather—calm—sharp white frost. Passed through an inferior country, a little to the southward of the lake, and by a considerable plain—afterwards over stony ranges. Saw an extensive plain to the southward, and the Morumbidgee Mountains to the SW. partially covered with snow. Made about SW. fifteen miles, but from our zig-zag track in all about twenty miles.

31st. Cloudy with small rain. Passed through an indifferent country and over stony ranges, and encamped by the side of the South Fish River (as called by our attendant Joseph Wild), on the edge of Lime-stone Plains, having crossed that river about three miles east of the plains. Killed two

kangaroos on the way with the greyhounds, but they did not show so good a course as the emues, neither are they such good eating. At 8 *p. m.* cloudy. Made about west ten miles—in all about fifteen.

1st *June*. Daylight, foggy. Crossed Limestone Plains, and travelled through a fine forest country to a beautiful small plain, which we named Isabella's Plain, after Miss Brisbane. It is situated about six miles from the others S$\frac{1}{2}$W. per compass, on the right bank of the Morumbidgee. Went up the bank of that river four miles, searching for a crossing-place without success, in doing which we passed through a fine forest country, and encamped for the night on the right bank. Killed an emu. Made about SSW. eighteen miles.

2d. At daylight, cloudy with showers of small rain. Passed through a fine forest country, intersected by stony and lofty ranges; in crossing one of which we observed, considerably to the westward of us, a very singular and remarkable rock, of an oblong form, standing erect and alone on the summit of another range. Saw several pine-trees, of about two feet diameter, growing on stony ranges.

Encamped by a small run of water in a fine forest vale, not being yet able to cross the Morumbidgee. Killed a kangaroo. Made about south eight miles —in all eleven. Latitude of this night's encampment, by meridian altitude of Arcturus 35° 33′ 12″, and by moon's meridian altitude 35° 33′ 13″ south.

3d. Fine weather at daylight. Passed through a forest country, and near several stony ranges, to a rather extensive plain, which proved to be the commencement of a very long chain of down country. Crossed this plain, or rather these downs, and encamped a little more than a mile beyond, on the bank of a gulley. Killed an emu. Made about S$\frac{1}{2}$E. twelve miles, and SSW. one mile, but in all about fifteen miles. Latitude by moon's meridian altitude 35° 44′ 5″ south.

4th. Foggy, with a sharp white frost. Passed through a chain of clear downs to some very extensive ones, where we met a tribe of natives, who fled at our approach, never (as we learned afterwards) having seen Europeans before; however, we soon by tokens of kindness, offering them biscuits, &c. together with the assistance of a domesticated native of our party, induced them to come nearer

and nearer, till by degrees we ultimately became very good friends; but on no account would they touch or approach our horses, of which they were from the first much more frightened than of ourselves. From these natives we learned that the clear country before us was called Monaroo, which they described as very extensive: this country we named Brisbane Downs after (and subsequently by permission of) his Excellency the Governor. The soil was of various sorts, some good and some indifferent—the hills for the most part stony. The country is tolerably well watered. Made about S. by W. ten miles.

5th. Foggy at daylight. Proceeded along the Morumbidgee to a convenient resting-place on its right bank. Killed an emu. Rode to the top of a hill, and observed a continuation of downs to the southward clear of timber. Made about SE. by E. four miles—in all six. Found lime-stone and iron-stone where we encamped, the former in great abundance*.

* It is in about this meridian, that lime-stone has also been discovered in latitudes 31° 15′, 32° 20′, 32° 30′, 32° 48′, 33° 12′ and 33° 35′.—Editor.

6th. Crossed the Morumbidgee. Rode to the southward and observed the same sort of down country to a very considerable extent, say forty miles to the southward of our encampment, bounded on the west by the snowy range of mountains, and on the east by what may probably turn out (when the country hereafter is more explored and better known) to be the coast range of mountains. Found iron-stone in considerable quantities in the neighbourhood of the lime-stone. Caught a considerable quantity of fish in the river, resembling the rock-cod of Port Jackson. Found bullrushes growing on the banks of the river. Day very fine. Latitude of encampment by sun's meridian altitude 35° 58′ 40″ south, and longitude by chronometer 149° 7′ 10″ east from Greenwich, and $0^h\ 8^m\ 14^s,6$, or 2° 3′ 39″ west from the government-house at Sydney, which I feel satisfied is not very wide of the truth, and which will place the northern part of these downs from Port Jackson, south 39° 15′ west, 164 nautical miles. We now regretted much that our provision had become so short as to preclude the possibility of our penetrating further south, to ascertain the real extent of the country

before us, which we were naturally anxious to do, from its interesting nature connected with the subject of sheep-grazing, so essential to the staple produce of the colony. That these downs are very considerably elevated above the level of the sea I have no doubt, and can only regret an accident which prevented Sir Thomas Brisbane's lending me a barometer, whereby that point might have been set at rest.

7th. Hazy morning. Set out (on our return) intending to pass by Lake Bathurst, and persuaded one of the natives to accompany us to show us the way; but he left us in the night, when we had encamped, which we did about four miles to the south of where we lay on 3d June. Distance twenty miles.

8th. Hazy at daylight. Shot four ducks. Proceeded still on our old track; but about half-past 10 *a. m.* we were fortunate enough to fall in with two natives, who, like the others we had met, were much frightened; indeed more so than those, for they fled like deer the instant they saw us, and being pursued by us on horseback, ran with great agility to the tops of trees, whence it required no

small degree of persuasion to remove them; but succeeding at last in getting them down, we compelled one of them to go with us to show us the way to Lake Bathurst, they being invariably well acquainted with the best passes in the hills—the other returned to his tribe not far off in the bush. Passed through a fine forest country, and some scrub, but all well watered, and tolerably good soil. Met with large rocks of limestone. In one place the rock formed a natural bridge of one perfect Saxon arch, under which the water passed. Encamped for the night on the banks of a run of water, which we supposed to be the rise of the South Fish River. Made about eighteen miles NNE.

9th. At daylight, small rain. Passed through a little scrub and some fine forest country, but had innumerable gulleys to encounter near the South Fish River, on which we eventually encamped close to the place where we crossed it in our outward journey. The native, whom we pressed yesterday, contrived to slip away from us, in coming over one of the steep hills. Wind NW. fresh. Made fifteen miles.

10th. At daylight, white frost. Passed over a fine forest country bounded by stony ranges, to the south end of Lake George. Killed a kangaroo and two emues. Made about NE. eighteen miles.

11th. At daylight slight frost. Passed through a rotten forest country to the Mulwarry Creek. It is worthy of remark that all the country about Lake George, and between it and Lake Bathurst, is very rotten, making the riding bad, and unsafe for pack-horses. Distance eighteen miles.

12th. Cloudy at daylight—sharp white frost. Reached Goulburn Plains, and encamped on the same spot as we did going out. At noon, rain. At sunset, heavy rain and strong wind from the west. Distance twenty-four miles.

13th. At daylight rain. At 8 *a. m.* it cleared up, when we proceeded and encamped to the west of Stony Range. Distance twenty-six miles.

14th. Reached Bong Bong again, a distance of twenty-five miles. Reckoning our present distance from Port Jackson at 83 miles, our outward journey hence at 197, and our homeward hitherto at 164, our whole excursion will have been 527 miles.

THERMOMETRICAL REGISTER,

DURING CAPTAIN CURRIE'S EXCURSION.

Date.	Daylight.	Noon.	Sunset.
May 22	42	—	—
23	44	—	35
24	32	34	40
25	43	48	46
26	44	45	46
27	46	—	42
28	40	—	40
29	37	44	40
30	28	48	43
31	42	49	46
June 1	48	48	43
2	45	47	47
3	40	44	33
4	29	38	40
5	35	—	38
6	40	48	34
7	41	54	42
8	42	49	47
9	48	54	45
10	30	48	40
11	35	48	45
12	28	51	—
13	—	52	50

A

METEOROLOGICAL DIARY

FOR

TWELVE MONTHS,

KEPT

IN THE YEARS 1821—2,

AT

SYDNEY IN NEW SOUTH WALES,

BY

FREDERICK GOULBURN, ESQ.

A

METEOROLOGICAL DIARY, &c.

Date.	SIX.			NOON.			EIGHT.		
	Barom.	Therm.	Wind.	Barom.	Therm.	Wind.	Barom.	Therm.	Wind.
1	30·29	63	W	30·17	64	NE	30·10	64	NE
2	29·90	63	SW	29·86	65	SE	29·87	64	SE
3	30·00	60	SSE	30·05	59	SE	30·15	59	SE
4	30·18	58	SW	30·16	60	SE	30·20	60	SE
5	30·20	58	SW	30·17	61	SW	30·20	61	ESE
6	30·30	58	SW	30·30	60	S	30·31	60	S
7	30·34	59	SW	30.30	62	NE	30·25	62	SW
8	30·25	60	W	30·15	64	N	30·15	63	SW
9	30·16	60	W	30·09	64	SW	30·10	64	W
10	30·10	60	W	30·09	63	Calm	30·09	66	N
11	30·10	65	S	30·10	66	NE	30·16	64	N
12	30·19	61	W	30·16	60	ENE	30·06	62	N
13	30·14	59	W	30·14	61	N	30·20	62	N
14	30·24	59	W	30·24	57	NE	30·24	61	NNE
15	30·24	58	W	30·16	60	NE	30·16	61	NE
16	30.15	58	W	30·08	64	NE	30·07	62	NE
17	30·06	59	W	30·00	63	Calm	30·00	63	NNE
18	30·04	60	W	30·00	64	NE	30·00	64	NNE
19	29·96	64	W	29·95	65	NW	29·88	67	N
20	29·88	63	W	29·95	66	NNE	30·07	64	WNW
21	30·10	63	W	30·10	68	SW	30·13	66	ENE
22	30·15	62	W	30·10	64	SW	30·05	63	W
23	30·06	61	W	30·06	64	SW	30·06	63	NE
24	30·09	61	W	30·02	63	NE	29·97	63	W
25	29·99	62	SW	29·97	62	S	30·03	59	N
26	30·09	57	W	30·10	60	NW	30·10	60	SW
27	30·12	58	NW	30·05	60	N	30·07	60	N
28	30·22	57	W	30·25	59	SE	30·27	58	NE
29	30·25	56	SW	29·20	58	NE	30·09	59	NE
30	30·03	57	W	29·93	58	SW	29·78	59	N
31	29·77	59	S	29·70	59	S	29.72	59	SW

JUNE.

	SIX.				NOON.				EIGHT.			
Date.	Barom.	Therm.	Wind.	Weather.	Barom.	Therm.	Wind.	Weather.	Barom.	Therm.	Wind.	Weather.
1	29·80	59	SW	Rain	29·80	59	S	Rain	29·87	57	SW	Rain
2	29·92	54	W	Clear	29·88	57	S	Clear	29·88	57	N	Clear
3	29·86	53	WNW	Clear	29·90	55	W	Clear	30·05	57	NW	Clear
4	30·27	52	W	Cirrostratus	30·27	54	SSW	Cirrostratus	30·29	55	S	Clear
5	30·39	53	W	Cloudy	30·38	56	S	Nimbi	30·38	57	SSW	Clear
6	30·40	54	SSW	Clear	30·20	56	S	Clear	30·36	58	SSW	Rain
7	30·28	58	NE	Rain	30·26	62	ENE	Nimbi	30·10	62	SE	Rain
8	29·84	60	N	Clear	29·83	61	NE	Clear	29·80	61	NNE	Clear
9	29·83	58	W	Clear	29·70	63	N	Clear	29·17	60	NNW	Clear
10	29·80	58	NW	Clear	29·80	61	WSW	Clear	29·94	58	SW	Clear
11	30·09	55	S	Cirrostratus	30·09	58	SE	Cumuli	30·14	58	SSE	Cirrocumuli
12	30·19	55	SE	Cirrostratus	30·19	58	SSE	Nimbi	30·23	58	S by E	Rain
13	30·33	58	E	Rain	30·30	62	SE	Rain	30·37	60	SSE	Rain
14	30·40	59	ESE	Cumuli	30·40	62	SE	Rain	30.42	61	E by S	Rain
15	30·40	60	W	Nimbi	30·36	63	ENE	Nimbi	30·33	61	E	Nimbi
16	30·25	62	E	Stratus	30·15	65	ENE	Rain	30·15	63	E by N	Stratus
17	30·06	62	NE	Stratus	29·96	64	NNE	Rain	29·97	63	N by E	Rain
18	29·97	60	W	Rain	29·96	62	NE	Rain	29·99	61	NNW	Cirrostratus
19	30·09	60	WNW	Nimbi	30·09	63	NNE	Nimbi	30·09	62	SW	Cirrostratus
20	30·10	59	W by S	Cirrostratus	30·00	62	SW	Cirrostratus	29·97	58	NE	Clear
21	30·03	54	WSW	Clear	30·03	56	S	Nimbi	30·03	55	SW	Cumuli
22	30·03	55	W	Cumuli	30·03	58	NE	Cumuli	30·14	57	NEbyN	Clear
23	30·09	55	SW	Cirrocumuli	30·00	58	S	Cirri	30·00	57	S by W	Clear
24	30·13	53	W	Clear	30·14	55	SW	Cumuli	30·23	54	S	Clear
25	30·26	52	W by N	Clear	30·17	56	S	Clear	30·17	56	SE	Clear
26	30·27	53	W	Linear Cirri	30·27	54	S	Linear Cirri	30·40	53	NW	Clear
27	30·50	49	S	Clear	30·46	53	SE	Cumuli	30·50	53	SW	Cumuli
28	30·50	50	W	Clear	30·45	53	NE	Clear	30·36	55	NNE	Clear
29	30·35	52	SW	Clear	30·33	56	S	Clear	30·33	54	SE	Clear

Date.	Barom.	Therm.	Wind.	Weather.	Barom.	Therm.	Wind.	Weather.	Barom.	Therm.	Wind.	Weather.
1	30·28	52	SW	Clear	30·27	54	S	Clear	30·30	54	SE	Clear
2	30·33	50	W	Clear	30·27	53	N	Clear	30·20	55	NE	Clear
3	30·18	52	W	Cirrostratus	30·10	56	NNE	Cirrostratus	30·06	55	NNE	Clear
4	30·06	54	NW	Cirrostratus	30·00	56	NNW	Cirrostratus	29·90	60	N by W	Cirrostratus
5	29·82	60	W	Cirrostratus	30·80	64	NW	Nimbi	30·88	60	WNW	Clear
6	29·95	57	W by N	Clear	29·90	60	NNW	Clear	30·03	59	N	Clear
7	30·15	56	W	Clear	30·11	57	SW	Clear	30·15	55	WSW	Clear
8	30·06	53	WSW	Clear	30·00	56	SW	Clear	29·90	56	SSW	Cirrostratus
9	29·91	54	SW	Cirrocumuli	29·91	56	SW	Cirrocumuli	29·99	55	S by W	Clear
10	29·88	51	S	Clear	29·88	55	SSE	Cumuli	29·96	54	S	Cumulostratus
11	29·99	50	S by W	Cirrostratus	29·95	52	S	Cirrostratus	29·88	52	S by E	Cirrostratus
12	29·88	48	S	Cirrostratus	29·82	51	S by W	Cumulostratus	29·84	52	S	Clear
13	29·92	48	S by E	Clear	29·93	50	SSE	Clear	29·95	52	S by E	Cirrocumuli
14	30·00	48	SW	Clear	29·98	50	S	Clear	29·98	51	SSW	Clear
15	30·05	48	SSW	Clear	30·06	52	SSE	Clear	30·14	52	SE	Cirrocumuli
16	30·18	48	W	Cirrostratus	30·18	52	SW	Nimbi	30·18	53	NNW	Rain
17	30·14	53	WSW	Rain	30·10	54	S by W	Nimbi	30·04	54	N by W	Mist
18	30·10	52	W	Fog	30·10	56	N	Clear	30·10	55	NNW	Clear
19	30·15	54	SW	Nimbi	30·15	56	S	Nimbi	30·15	56	S by W	Rain
20	30·15	55	WSW	Rain	30·15	55	S	Rain	30·10	55	SSW	Rain
21	30·08	53	SSW	Cirrostratus	30·05	55	SSE	Cirrocumuli	30·05	55	SE	Clear
22	30·04	52	S by W	Clear	30·00	55	SSW	Cirrocumuli	30·00	55	SW	Clear
23	29·90	55	WSW	Clear	29·93	55	SSW	Clear	30·06	55	SW	Clear
24	30·13	54	S	Cirrostratus	30·16	54	S by E	Nimbi	30·28	54	S	Clear
25	30·36	52	SW	Rain	30·04	53	SSW	Rain	30·34	54	SW	Rain
26	30·30	54	SW	Rain	30·24	55	SSW	Rain	30·16	54	SSW	Rain
27	30·12	56	S	Rain	30·08	57	S by E	Rain	30·05	57	S	Rain
28	30·19	56	SSW	Nimbi	30·19	57	SW	Nimbi	30·26	57	SW	Rain
29	30·33	56	N	Nimbi	30·30	57	NE	Cumuli	30·30	56	NNE	Clear
30	30·26	53	WSW	Clear	30·24	55	SW	Cumuli	30·05	56	S	Clear
31	30·06	55	SW	Cumuli	29·90	55	SSW	Cumuli	30·05	55	S	Nimbi

AUGUST.

SIX.					NOON.				EIGHT.			
Date.	Barom.	Therm.	Wind.	Weather.	Barom.	Therm.	Wind.	Weather.	Barom.	Therm.	Wind.	Weather.
1	30·07	52	SSW	Rain	30·00	55	S	Nimbi	30·00	56	S by E	Rain
2	29·98	56	WSW	Nimbi	29·89	60	N	Cumuli	29·93	56	NW	Clear
3	30·04	54	WSW	Cirri	30·04	60	W	Clear	30·12	56	WNW	Clear
4	30·15	53	WNW	Clear	30·11	57	W by S	Clear	30·08	57	WSW	Clear
5	30·10	55	WSW	Clear	30·06	57	WNW	Cumuli	30·10	56	W	Clear
6	30·10	54	W by S	Clear	30·10	57	WSW	Clear	30·14	57	E	Clear
7	30·16	53	SW	Clear	30·13	59	SW	Clear	30·09	58	N	Comoid Cirri
8	30·03	54	SW	Clear	30·03	56	W by S	Hail-storm	29·94	57	NW	Nimbi
9	30·04	52	WSW	Clear	30·05	53	NNW	Cumuli	30·15	53	N	Clear
10	30·16	50	SW	Clear	30·09	54	SSW	Clear	30·05	54	SW	Cirrocumuli
11	30·10	52	S	Comoid Cirri	30·10	56	SE	Nimbi	30·18	55	SE	Clear
12	30·26	53	S	Comoid Cirri	30·26	55	SSE	Nimbi	30·25	55	SE	Clear
13	30·20	51	SW	Clear	30·13	57	SSW	Clear	30·13	55	SW	Clear
14	30·13	53	WSW	Linear Cirri	30·07	58	SW	Cirrostratus	30·19	56	SW	Nimbi
15	30·25	52	W	Nimbi	30·22	56	SSE	Clear	30·20	54	SE	Clear
16	30·26	50	WSW	Linear Cirri	30·26	54	SSE	Linear Cirri	30·25	52	SE	Rain
17	30·25	52	SW	Rain	30·26	53	ENE	Rain	30·25	52	NE	Cirri
18	30·19	50	WSW	Nimbi	30·19	52	SSE	Rain	30·19	52	SE	Rain
19	30·20	51	SSE	Rain	30·22	52	SE	Rain	30·24	51	SE	Rain
20	30·27	50	SE	Nimbi	30·28	52	SSE	Rain	30·29	52	SE	Rain
21	30·31	52	SE	Rain	30·30	54	S by E	Rain	30·30	53	SSE	Rain
22	30·26	52	SW	Nimbi	30·30	55	ENE	Cumuli	30·37	54	NE	Clear
23	30·42	51	WSW	Nimbi	30·42	54	NNE	Cirrostratus	30·47	54	NE	Clear
24	30·51	52	SW	Nimbi	30·49	54	NE	Nimbi	30·49	55	ENE	Rain
25	30·46	55	WSW	Nimbi	30·38	56	NNE	Rain	30·30	57	ENE	Rain
26	30·25	56	SW	Fog	30·20	58	NE	Cirrocumuli	30·09	57	NNE	Clear
27	30·04	57	W by S	Cirrostratus	29·93	61	NE	Cumuli	29·83	61	NE	Clear
28	29·83	59	W	Nimbi	29·79	61	WNW	Nimbi	29·78	61	NW	Rain
29	29·71	59	WSW	Nimbi	29·71	61	NE	Cumuli	29·72	60	NE	Clear
30	29·64	57	SSW	Nimbi	29·72	57	S	Nimbi	29·82	56	S by N	Clear

	MORNING.				NOON.				EVENING.			
Date.	Barom.	Therm.	Wind.	Weather.	Barom.	Therm.	Wind.	Weather.	Barom.	Therm.	Wind.	Weather.
1	30·08	56	SSW	Cirrocumuli	30·04	60	SW	Nimbi	30·00	59	NE	Clear
2	29·93	57	SW	Cirrostratus	29·76	64	NE	Clear	29·80	61	NE	Clear
3	29·88	57	SW	Cirrostratus	29·83	62	SW	Clear	29·83	59	NE	Clear
4	29·91	55	SW	Cirrostratus	29·90	61	WSW	Clear	29·89	60	N	Clear
5	29·85	58	W	Cirrostratus	29·76	64	SW	Clear	29·99	61	SW	Clear
6	30·09	57	SW	Cirrostratus	30·09	59	SSW	Cumuli	30·09	60	SW	Hazy
7	30·06	59	SW	Fog	29·99	61	NE	Nimbi	29·89	62	ENE	Nimbi
8	30·00	61	WSW	Rain	30·00	61	S	Cirri	30·14	60	SE	Rain
9	30·20	59	WSW	Nimbi	30·20	59	SW	Clear	30·26	58	ENE	Cirrostratus
10	30·34	58	SSE	Nimbi	30·34	59	ENE	Nimbi	30·34	59	NE	Nimbi
11	30·34	60	WSW	Nimbi	30·25	62	NE	Nimbi	30·25	61	NE	Hazy
12	30·19	60	SSE	Fog	30·10	62	ENE	Nimbi	29·99	63	NE	Cirrostratus
13	29·89	61	ESE	Nimbi	29·85	63	NE	Nimbi	29·85	62	NNE	Cirrostratus
14	29·89	61	NE	Nimbi	29·89	62	SSE	Rain	29·94	63	NE	Rain
15	29·98	62	S	Nimbi	29·98	62	SSW	Rain	39·85	63	SE	Rain
16	29·88	64	SE	Rain	29·88	64	S by E	Nimbi	29·99	64	SE	Rain
17	30·07	63	SE	Rain	30·09	64	SE	Rain	30·12	64	NNE	Rain
18	30·04	65	SW	Nimbi	30·04	65	S	Nimbi	30·04	65	SW	Nimbi
19	29·95	65	NW	Nimbi	29·92	65	SE	Cirrostratus	29·89	64	SSE	Nimbi
20	29·96	63	S	Nimbi	29·96	63	SSE	Nimbi	29·96	63	E	Hazy
21	29·87	62	NE	Rain	29·80	61	SSE	Nimbi	29·90	60	SE	Nimbi
22	30·00	59	SE	Rain	30·08	59	SE	Rain	30·17	58	SE	Rain
23	30·26	56	SE	Rain	30·24	58	SE	Nimbi	30·28	57	SE	Rain
24	30·35	56	SSE	Rain	30·30	57	SE	Rain	30·36	57	SE	Clear
25	30·37	56	W	Comoid Cirri	30·30	59	S by E	Clear	30·30	57	SE	Clear
26	30·30	56	WSW	Cirrostrati	30·20	62	SSE	Clear	30·16	60	NE	Clear
27	30·19	60	WSW	Linear Cirri	30·07	65	NE	Linear Cirri	29·95	65	NNW	Clear
28	29·95	63	WNW	Cirrostrati	29·90	65	NE	Linear Cirri	29·85	65	NW	Clear
29	29·80	65	WSW	Clear	29·78	68	NNW	Cirrostrati	29·71	67	NNE	Nimbi
30	29·66	69	W by S	Nimbi	29·66	67	NE	Nimbi	29·66	63	N	Clear

OCTOBER.

	MORNING.				NOON.				EVENING.			
Date.	Barom.	Therm.	Wind.	Weather.	Barom.	Therm.	Wind.	Weather.	Barom.	Therm.	Wind.	Weather.
1	29·71	64	W	Clear	29·73	67	SW	Clear	29·75	67	SW	Clear
2	29·73	64	SW	Rain	29·76	65	SSW	Rain	29·78	65	SW	Nimbi
3	29·78	63	WSW	Clear	29·79	63	NE	Clear	29·93	61	NE	Clear
4	29·97	65	WNW	Clear	29·93	63	NE	Cirri	29·69	66	NE	Rain
5	29·69	61	WSW	Nimbi	29·69	61	SW	Cirri	29·89	59	SE	Cirri
6	29·86	56	S	Cirri	29·86	57	SSE	Nimbi	29·86	59	SE	Cirrostratus
7	29·92	59	WSW	Clear	29·85	62	E	Clear	29·85	61	E	Clear
8	29·65	61	SSE	Clear	29·60	64	SE	Clear	29·65	64	SE	Clear
9	28·80	62	SE	Cumulostratus	29·84	63	NNE	Cumulostratus	30·04	62	NE	Clear
10	30·08	61	S by W	Cirri	30·02	64	NNE	Cirri	29·95	64	NE	Clear
11	30·02	63	SW	Fog	29·94	62	ENE	Clear	30·03	62	NE	Clear
12	30·00	60	W	Clear	29·93	65	ENE	Clear	29·88	65	NE	Clear
13	29·86	66	WSW	Clear	29·80	73	WSW	Cirri	29·71	73	W by S	Cirrostratus
14	29·79	70	W	Clear	29·70	72	SW	Haze	29·80	71	SW	Haze
15	29·83	69	WSW	Nimbi	29·80	66	W	Rain	29·93	66	SW	Nimbi
16	30·02	64	SW	Cumuli	30·03	66	SW	Cumuli	30·04	66	WSW	Cirrocumuli
17	30·05	64	W	Clear	30·04	67	SSW	Clear	30·06	67	SE	Clear
18	30·12	64	W	Fog	30·02	70	WSW	Clear	30·04	69	SE	Clear
19	29·88	67	W	Clear	29·65	71	NNW	Clear	29·66	70	NE	Rain
20	29·54	67	WSW	Clear	29·43	63	NW	Cumuli	29·52	62	SW	Nimbi
21	29·66	60	SW	Clear	29·74	65	SW	Clear	29·91	65	S	Clear
22	30·03	64	SW	Nimbi	30·02	64	SSW	Nimbi	30·04	63	SSE	Hazy
23	30·06	63	SW	Nimbi	30·00	64	NE	Cirrostratus	30·04	64	NE	Cirri
24	29·97	64	W	Clear	29·85	69	NNW	Clear	29·76	70	NE	Hazy
25	29·64	69	WSW	Nimbi	29·57	69	SW	Nimbi	29·64	69	NE	Clear
26	29·74	64	SW	Nimbi	29·92	64	SW	Nimbi	30·07	64	N	Clear
27	30·18	63	W	Clear	30·24	63	WSW	Cumuli	30·28	63	SE	Clear
28	30·25	62	W	Clear	30·14	64	ESE	Nimbi	30·06	65	SE	Clear
29	29·93	63	W	Nimbi	29·89	67	NW	Nimbi	29·92	68	SSE	Clear
30	29·97	66	W	Nimbi	29·92	67	SSE	Rain	29·88	68	SE	Rain
31	29·85	67	W	Nimbi	30·77	70	S	Rain	29·68	70	SE	Rain

NOVEMBER.

	MORNING.				NOON.				EVENING.			
Date.	Barom.	Therm.	Wind.	Weather.	Barom.	Therm.	Wind.	Weather.	Barom.	Therm.	Wind.	Weather.
1	29·53	68	S	Rain	29·49	61	SSE	Rain	29·57	59	SE	Clear
2	29·52	58	SW	Cumuli	29·56	61	S	Nimbi	29·61	60	SSE	Clear
3	29·62	56	SW	Cumuli	29·65	58	SSE	Cumuli	29·82	59	SE	Clear
4	29·84	56	W	Clear	29·85	60	NE	Clear	29·95	60	NE	Clear
5	29·97	58	SW	Clear	29·75	68	NE	Clear	29·83	65	NE	Clear
6	29·84	62	SE	Foggy	29·67	68	S	Clear	29·53	70	SE	Clear
7	29·50	68	SW	Cirrostratus	29·52	69	SSE	Cumuli	29·78	68	SE	Rain
8	29·81	66	W	Nimbi	29·77	64	NE	Nimbi	29·62	68	NE	Clear
9	29·51	67	W	Clear	29·55	71	NE	Clear	29·57	71	NE	Clear
10	29·52	69	W	Hazy	29·32	70	NE	Thunderstorm	29·43	69	NE	Clear
11	29·64	62	W	Clear	29·53	69	SE	Cumuli	29·92	64	SE	Clear
12	29·91	62	W	Clear	29·94	63	NE	Clear	30·09	64	NE	Cirrostratus
13	29·99	63	W	Nimbi	29·93	64	NE	Rain	29·95	65	NE	Rain
14	29·99	63	SW	Foggy	29·96	66	NE	Clear	29·92	68	NE	Clear
15	29·82	65	WSW	Clear	29·69	71	SE	Clear	29·65	72	SE	Hazy
16	29·82	66	SW	Clear	29·82	67	SE	Nimbi	29·84	65	SE	Clear
17	29·83	64	SW	Nimbi	29·82	65	SE	Rain	29·88	64	SE	Rain
18	29·85	63	SW	Rain	29·92	63	NE	Clear	29·99	62	SE	Clear
19	29·95	61	W	Clear	29·98	64	NE	Clear	30·03	64	SE	Cirrostratus
20	30·02	62	W	Clear	29·92	65	NW	Clear	29·96	64	NE	Clear
21	29·93	63	W	Foggy	29·86	68	NE	Clear	29·82	69	NE	Rain
22	29·68	68	WSW	Rain	29·62	72	NE	Rain	29·66	70	SE	Clear
23	29·68	68	NE	Clear	29·79	73	NE	Rain	29·97	68	SE	Rain
24	30·02	67	NE	Clear	30·24	68	NW	Clear	30·24	68	SE	Hazy
25	30·25	65	NE	Cumuli	30·27	68	NE	Clear	30·26	67	NE	Clear
26	30·32	65	NE	Clear	30·24	67	NE	Clear	30·15	67	NE	Clear
27	30·09	66	NE	Cirri	30·08	69	NE	Clear	30·09	70	NE	Clear
28	30·10	68	WNW	Clear	30·07	72	NNE	Clear	30·09	70	NE	Clear
29	30·10	70	WSW	Cirri	30·13	72	SE	Cirrostratus	30·08	72	NE	Thunder
30	30·09	71	WSW	Clear	30·16	74	NW	Rain	30·32	72	NE	Rain

DECEMBER.

MORNING.					NOON.				EVENING.			
Date.	Barom.	Therm.	Wind.	Weather.	Barom.	Therm.	Wind.	Weather.	Barom.	Therm.	Wind.	Weather.
1	30·26	71	S	Clear	30·21	70	NE	Hazy	30·25	69	SW	Fair
2	30·15	70	SW	Clear	30·08	74	NNE	Clear	30·03	72	SW	Rain
3	29·89	71	SW	Fair	29·89	72	NE	Cloudy & rain	29·92	70	SW	Clear
4	29·93	69	W	Fair	29·91	74	SE	Fair	29·90	71	S	Rain from 5-8
5	29·86	68	SW	Cumuli	29·87	74	SE	Clear quite	29·89	72	S	Clear
6	29·79	71	SW	Mackarel sky	29·71	75	S	Cumuli	29·84	71	SW	Clear
7	30·71	68	SW	Cumulostratus	29·96	69	NE	Clear	30·02	69	SW	Clear
8	30·03	66	W	Clear	29·98	69	NE	Clear	29·97	68	NE	Clear
9	29·93	69	W	Clear	29·83	72	NE	Clear	29·77	72	NE	Rain
10	29·71	72	W	Cloudless	29·70	77	NE	Clear	29·75	76	NE	Clear
11	29·82	74	W	Clear	29·97	73	NE	Clear	29·92	74	NE	Clear
12	29·96	72	W	Cumuli	29·94	76	NE	Cumuli	29·87	75	NE	Cumuli
13	29·78	74	W	Cloudless	29·55	89	NE	Clear	29·58	83	SE	Light. SW
14	29·63	77	SW	Clear	29·57	80	S	Clear	29·71	75	SW	Light. SW
15	29·76	69	WSW	Clear	29·79	73	SE	Clear	29·94	72	SW	Rain
16	29·98	71	SW	Rain at 10-30	30·07	71	SSW	Clear	30·04	70	SW	Clear
17	30·02	69	SW	Clear	29·97	73	SW	Clear	30·09	73	S	Clear
18	30·03	71	SW	Hazy	30·09	69	NE	Rain	30·24	68	S	Rain
19	30·30	67	W	Fair	30·36	69	NE	Clear	30·29	68	SW	Clear
20	30·25	67	W		30·15	70	NE	Clear	30·04	71	NW	Clear
21	30·02	70	W	Clear	29·99	80	NE	Clear	30·04	76	SW	Light. SW
22	30·15	72	WSW	Fair	30·13	74	NE	Clear	30·05	72	NW	Fair
23	29·95	71	SW	Clear	29·86	74	NW	Clear	29·82	75	NW	Fair
24	29·62	74	SW	Fair	29·75	74	NW	Clear	29·82	72	NW	Clear
25	29·93	71	W	Fair	29·98	71	NW	Clear	29·95	69	SW	Fair
26	29·93	70	WSW	Fair	29·90	72	NW	Clear	29·98	70	SW	Light. SW
27	29·92	70	SW	Fair	29·84	77	W	Clear	29·85	75	NW	Fair
28	29·86	73	SW	Clear	29·91	73	W	Clear	29·95	72	NW	Rain
29	29·96	73	SW	Fair	29·93	76	NW	Clear	29·90	75	SW	Fair
30	29·83	75	WSW	Fair	29·94	74	NW	Clear	30·06	73	SW	Fair
31	30·13	70	SW	Fair	30·06	72	NW	Clear	30·08	71	SW	Light. SW

	MORNING.				NOON.				EVENING.			
Date.	Barom.	Therm.	Wind.	Weather.	Barom.	Therm.	Wind.	Weather.	Barom.	Therm.	Wind.	Weather.
1	30·05	72	W	Clear	30·05	76	NE	Clear	30·02	76	N	Clear
2	30·07	75	W	Clear	30·07	75	NNE	Clear	30·02	75	NE	Th. & light.
3	30·08	74	W	Hazy	29·89	74	NW	Rain & th. at 2	29·97	74	NW	Light. NE
4	29·94	71	W	Rain	30·03	74	NNW	Fair	29·98	74	NW	Clear
5	29·93	70	W	Fair	29·88	75	NE	Clear	29·79	76	NW	Clear
6	29·74	74	WSW	Fair	29·86	77	NE	Clear	29·87	75	N	Clear
7	29·94	71	SW	Fair	30·08	70	NE	Clear	30·17	69	NE	Clear
8	30·19	70	W	Fair	30·11	72	S	Clear	30·16	71	N	Fair
9	30·13	70	SW	Foggy	29·98	73	SE	Clear	29·93	71	SE	Fair
10	29·83	70	SW	Clear	29·62	76	SSE	Rain th.&light	29·57	75	SE	Rain
11	29·66	73	S	Fair	29 62	73	SE	Fair	29·82	72	SE	Clear
12	29·98	67	S	Foggy	30·02	68	SW	Clear	30·05	67	SSE	Fair
13	30·03	67	S	Fair	30·18	68	NE	Clear	30·22	67	SE	Rain
14	30·24	67	SW	Fair	30·25	68	E	Clear	30·31	69	NE	Fair
15	30·28	66	SW	Fair	30·28	68	NE	Clear	30·32	69	E	Fair
16	30·31	67	SW	Fair	30·30	70	NE	Clear	30·29	69	NE	Fair
17	30·26	68	SW	Fair	30·28	73	S	Clear	30·22	72	NE	Fair
18	30·14	72	SW	Fair	29·98	78	SSE	Clear	29·91	76	SSE	Fair
19	30·04	72	SW	Fair	30·07	71	NE	Clear	30·14	70	SE	Fair
20	30·13	70	W	Fair	30·05	71	NE	Clear	29·98	72	NE	Fair
21	29·95	71	W	Foggy	29·86	72	NE	Clear	29·87	72	NE	Fair
22	29·95	73	W	Fair	30·03	71	NE	Clear	30·04	71	NE	Rain
23	30·08	71	W	Fair	30·05	72	NE	Clear	30·04	71	NE	Fair
24	30·06	74	W	Fair	30·00	74	NE	Clear	29·96	72	NE	Ra. & th. at 6
25	29·94	73	SW	Fair	29·93	74	NE	Clear	30·02	72	NE	Fair
26	30·07	71	SW	Fair	30·04	72	NE	Clear	29·99	72	NE	Fair
27	30·05	71	SW	Fair	29·98	73	NE	Clear	30·04	73	NE	Fair
28	30·03	72	SW	Foggy till 8	29·88	78	NE	Clear	29·80	77	NE	Fair
29	29·73	75	W	Foggy till 8-30	29·74	77	NE	Clear	29·88	75	NE	Rain
30	30·02	72	W	Foggy	30·08	73	NE	Clear	30·07	72	NE	Fair
31	30·18	71	W	Fair	30·16	71	NE	Clear	30·25	70	NE	Clear

FEBRUARY.

	MORNING.				NOON.				EVENING.			
Date.	Barom.	Therm.	Wind.	Weather.	Barom.	Therm.	Wind.	Weather.	Barom.	Therm.	Wind.	Weather.
1	30·26	71	W	Foggy	30·25	74	NE	Clear	30·22	73	NE	Clear
2	30·25	71	W	Foggy	30·21	77	NE	Clear	30·19	75	NW	Clear
3	30·12	74	S	Foggy	30·23	77	NNW	Clear	30·21	76	NW	Clear
4	30·18	74	SW	Foggy till 8-15	30·14	78	S	Clear	30·15	76	SSE	Clear
5	30·19	74	S	Foggy till 9	30·14	75	SSE	Clear	30·00	75	SSW	Clear
6	29·96	74	S	Foggy till 9	29·94	85	SSE	Clear	29·93	78	SE	Clear
7	29·95	77	SW	Foggy	29·88	89	NE	Clear	29·83	84	NE	Fair
8	29·83	81	SW	Foggy	29·84	85	NE	Rain & th. at 4	29·84	79	NE	Rain
9	29·88	77	W	Rain	29·93	68	SE	Rain	30·06	69	SE	Rain
10	30·22	69	W	Fair	30·30	68	SE	Clear	30·39	68	SE	Fair
11	30·40	66	W	Fair	30·39	68	SE	Clear	30·40	69	SW	Fair
12	30·41	67	W	Fair	30·41	68	SW	Clear	30·42	68	SSW	Rain
13	30·42	69	W	Rain	30·50	69	SSW	Clear	30·45	67	SW	Rain
14	30·12	67	W	Rain	30·05	69	SSW	Rain	29·92	67	S	Rain
15	29·89	66	W	Clear	29·87	70	SW	Clear	29·85	70	ESE	Fair [at 7-30
16	29·88	70	W	Fair	29·88	89	SE	Clear	29·98	79	ESE	strong squall
17	30·07	75	W	Fair	30·08	77	E	Clear	30·08	72	E	Fair
18	30·17	72	E	Rain	30·20	73	ESE	Clear	30·19	72	NE	Fair
19	30·16	72	W	Fair	30·05	75	NE	Clear	30·07	74	NE	Rn. th. & light.
20	30·04	73	W	Rain	30·03	74	NE	Rain	30·04	73	NE	Fair
21	30·08	73	W	Rain	30·10	73	NE	Rain	30·01	73	SE	Fair
22	30·17	73	W	Rain	30·15	73	NE	Rain	30·17	73	SE	Rain
23	30·12	73	W	Rain	30·17	73	NE	Rain	30·06	74	NNE	Showery
24	30·09	73	SW	Cumuli	30·00	78	NE	Clear	29·92	76	SE	Fair
25	29·93	75	SW	Rain	29·85	78	NE	Clear	29·87	76	ESE	Lightn. ESE
26	29·85	74	SW	Fair	29·86	75	NE	Ra. th. & light.	29·97	72	W	Fair, light. W
27	29·91	71	S	Rain	30·01	68	SE	Fair, rain at 4	29·97	67	SE	Rain
28	29·87	65	S	Rain	29·92	66	SSE	Fair	29·95	65	SSE	Fair

MARCH.

	MORNING.				NOON.				EVENING.			
Date.	Barom.	Therm.	Wind.	Weather.	Barom.	Therm.	Wind.	Weather.	Barom.	Therm.	Wind.	Weather.
1	29·96	65	S	Fair	30·09	68	NE	Clear	30·07	68	SE	Fair
2	30·18	65	S	Fair	30·25	66	SE	Rain	30·22	65	SE	Fair
3	30·23	64	SW	Fair	30·26	67	ENE	Clear	30·24	68	NE	Fair
4	30·25	66	SW	Foggy	30·17	78	NE	Clear	30·27	74	NE	Fair
5	30·20	69	SW	Fair	30·18	79	NE	Clear	30·12	76	NE	Fair
6	30·01	73	SW	Clear	29·98	85	NE	Quite Clear	29·91	80	NE	Fair
7	29·99	78	SW	Cloudless	29·98	79	NE	Cloudless	29·99	78	NE	Ra. th. & light.
8	29·97	75	W	Fair	29·98	79	SW	Clear	29·97	77	SW	Clear
9	30·08	70	SW	Fair	30·03	73	NE	Clear	30·08	72	NE	Clear
10	30·01	70	SW	Fair	29·92	75	NE	Clear	29·91	74	NE	Clear
11	30·05	70	SW	Foggy	29·99	72	SW	Clear	30·03	70	SW	Fair
12	30·18	69	SW	Fair	30·19	69	SW	Clear	30·25	68	SW	Fair
13	30·30	67	SW	Fair	30·33	69	SE	Clear	30·30	67	NW	Fair
14	30·29	67	N	Fair	30·32	68	SE	Clear	30·30	67	NE	Fair
15	30·25	66	E	Rain	30·23	69	NE	Rain	30·10	70	NE	Rain
16	29·95	70	NE	Rain	29·84	76	NE	Clear	29·87	75	NE	Fair
17	29·88	71	SW	Fair	29·88	76	NE	Clear	29·80	71	N	Fair
18	29·90	71	S	Fair	30·01	69	SE	Clear	30·19	69	SE	Fair
19	30·28	67	S	Fair	30·28	69	NE	Clear	30·27	68	NE	Fair
20	30·30	67	SW	Fair	30·22	72	NE	Clear	30·25	70	NE	Fair
21	30·24	69	SW	Foggy	30·03	69	NE	Clear	30·39	68	NE	Fair
22	30·39	67	SW	Foggy	30·26	69	NE	Clear	30·26	69	NE	Fair
23	30·19	68	SW	Fair	29·99	75	S	Clear	29·98	74	E	Fair
24	30·15	67	N	Rain	30·19	67	SE	Rain	30·18	66	SE	Rain
25	30·42	64	NE	Rain	30·42	64	NE	Fair	30·43	64	NW	Rain
26	30·35	64	NE	Fair	30·22	65	NE	Rain	30·30	65	SE	Rain
27	30·15	65	SW	Rain	30·14	67	SW	Rain	30·12	65	E	Rain
28	29·96	68	S	Fair	29·94	72	SE	Fair	29·92	70	SW	Fair
29	29·95	68	W	Fair	29·98	70	W	Clear	29·99	68	W	Rain
30	29·98	66	W	Fair	29·99	69	W	Clear	30·01	66	W	Fair
31	30·05	67	W	Fair	30·03	69	W	Clear	30·04	68	W	Fair

APRIL.

	MORNING.				NOON.				EVENING.			
Date.	Barom.	Therm.	Wind.	Weather.	Barom.	Therm.	Wind.	Weather.	Barom.	Therm.	Wind.	Weather.
1	30·07	67	W	Fair	30·04	70	NE	Clear	30·13	72	NE	Clear
2	30·12	71	WSW	Foggy	30·14	75	NE	Clear	30·03	75	NE	Clear
3	30·03	73	SW	Rain	30·10	74	NE	Fair	30·08	73	NE	Fair
4	30·14	70	SW	Fair	30·10	69	NE	Rain	30·18	67	NE	Fair
5	30·20	66	SW	Fair	30·13	68	NE	Fair	30·19	67	NE	Fair
6	30.29	67	W	Foggy	30·19	69	NE	Clear	30·20	67	NE	Fair
7	30·31	66	W	Fair	30·30	68	NE	Fair; Rain at 2	30·29	67	NE	Fair
8	30·37	66	W	Fair	30·41	67	NE	Fair	30·41	66	NE	Fair
9	30·41	66	SW	Rain	30·41	64	SE	Rain	30·35	66	SE	Rain
10	30·35	66	SW	Rain	30·35	66	SE	Rain	30·35	65	SE	Fair
11	30·40	64	W	Rain	30·30	69	SE	Fair	30·38	68	SE	Fair
12	30·36	64	W	Foggy	30·32	68	NE	Clear	30·29	67	NE	Fair
13	30·28	65	SW	Foggy	30·27	68	NE	Clear	30·23	68	NE	Fair
14	30·29	67	W	Foggy	30·16	72	NE	Clear	30·10	70	NE	Fair
15	30·06	66	SW	Rain	30·07	67	NE	Rain	30·07	66	NE	Fair
16	30·27	66	WNW	Rain	30·27	67	NE	Rain	30·28	68	NE	Rain
17	30·30	67	WSW	Fair	30·27	68	NE	Clear	30·26	66	NE	Fair
18	30·25	67	WSW	Foggy	30·19	68	SE	Clear	30·17	67	SE	Fair
19	30·19	68	SW	Foggy	30·18	71	SE	Clear	30·18	70	SE	Fair
20	30·26	68	W	Foggy till 9	30·28	71	SE	Clear	30·30	71	SE	Fair
21	30·38	71	WSW	Foggy	30·29	73	SE	Clear	30·28	71	SE	Fair
22	30·23	71	SW	Fair	30·14	71	NE	Rain	30·15	71	NE	Fair
23	30·12	69	W	Foggy	30·03	73	NE	Clear	30·04	70	NE	Fair
24	29·97	67	SW	Fair	29·98	67	NE	Rain at 4	29·97	66	NE	Fair
25	29.89	63	W	Fair	29·79	66	NE	Rain	29·79	65	N	Fair
26	29·91	65	SW	Rain	30·03	67	NE	Rain	30·07	66	N	Rain
27	30·22	65	SW	Rain	30·23	65	NE	Rain	30·26	65	N	Rain
28	30·30	64	W	Fair	30·31	65	NE	Fair	30·31	66	NE	Fair
29	30·24	64	SW	Fair	30·26	65	NE	Clear	30·29	64	NE	Fair
30	30·27	62	S	Foggy	30·25	66	NE	Clear	30·25	65	NE	Fair

Mean of Twelve Months' Meteorological Observations, in the Years 1822-3, at Paramatta, in New South Wales.

BY MAJOR-GEN. SIR THOMAS BRISBANE, K.C.B. F.R.S. L. & E.

	Thermometer.		Barometer.		Hygrometer.		Rain.
1822. MAY.	highest	72°	highest	30·23			
	lowest	42	lowest	29·50			
	mean	60	mean	29·87			
JUNE.	highest	67	highest	30·20			
	lowest	26	lowest	29·55			
	mean	53,5	mean	30·09			
JULY.	highest	63	highest	30·25			
	lowest	27	lowest	29·50			
	mean	51,5	mean	29·96			
AUGUST.	highest	77	highest	30·20			
	lowest	35	lowest	29·54			
	mean	56,5	mean	29·80			
SEPTEMBER.	highest	93	highest	30·20	highest	60	
	lowest	36	lowest	29·70	lowest	26	3,413 in.
	mean	62	mean	29·92	mean	44,5	
OCTOBER.	highest	106	highest	30·23	highest	87	
	lowest	42	lowest	29·72	lowest	40	0,516
	mean	68	mean	30·02	mean	51,5	
NOVEMBER.	highest	99	highest	30·35	highest	80	
	lowest	48	lowest	29·53	lowest	24	5,235
	mean	72	mean	29·88	mean	50	
DECEMBER.	highest	102	highest	30·30	highest	77	
	lowest	47	lowest	29·60	lowest	35	1,092
	mean	74	mean	30·05	mean	53,5	
1823. JANUARY.	highest	106	highest	30·30	highest	100	
	lowest	52	lowest	29·78	lowest	24	5,261
	mean	73	mean	30·12	mean	49	
FEBRUARY.	highest	97	highest	30·25	highest	78	
	lowest	49,5	lowest	29·62	lowest	24	6,660
	mean	68,5	mean	29·91	mean	40	
MARCH.	highest	98	highest	30·45	highest	48	
	lowest	49,5	lowest	29·77	lowest	12	7,215
	mean	60	mean	30·15	mean	33	
APRIL.	highest	74	highest	30·44	highest	74	
	lowest	40	lowest	29·60	lowest	22	0,556
	mean	59	mean	30·05	mean	44	

0 (Zero) of the Hygrometer the greatest damp; 100° the greatest drought; elevation of Barometer 62 feet above the level of the sea.

APPENDIX.

The following papers (*the second has received very considerable additions*) *have been before published in the London Magazine; but as they were written by one of the authors of this work, and are for the most part* in pari materiâ, *though interspersed with a few statistical and political remarks, it has been thought adviseable to collect them in this more permanent form.*—EDITOR.

CHAPTER I.

NARRATIVE OF A VOYAGE TO NEW SOUTH WALES.

——Quæ fuit durum pati,
Meminisse dulce est. *Seneca.*

The sullen passage of thy weary voyage
Esteem a foil, wherein thou art to set
The precious jewel of thy home-return. *Shakspeare.*

It was on the 28th day of August, 1816, that I embarked at Gravesend; and, sailing the following morning, we soon reached the Downs, where we could not come to anchor, the wind blowing hard on shore. In the evening of the 31st so violent a gale came on, that several coasting vessels were wrecked in the night, and even our own topmasts were damaged. The gale lasted all night, and in the morning it was our lot to pick up from their boat five men and a boy, the crew of a sloop laden with Portland stone from Weymouth. The vessel, which could not be lightened, soon afterwards went down in our sight. We now found ourselves near Cherbourg, and therefore tacked to make for Spithead, to repair our tops. The wind by this time abated; the morning of the 2d day of September dawned calm and fair, and we found ourselves off the Isle of Wight.

It was not till the next morning that we could attain an anchorage in St. Helen's roads, where we eventually waited for a fair wind twelve days, lodging on shore, like Henry Fielding, upon his Voyage to Lisbon, but not like him meeting with so many entertaining adventures, or rather, not like him gifted with so humorous or philosophic a mind to discover or create them.

> "O reader! had you in your mind
> Such stores as silent thought can bring,—
> O gentle reader! you would find
> *A tale* in every thing."

On the 16th day of September we weighed anchor for the last time; and it cost us three or four days more to pass the Land's End. We posted rapidly through the Bay of Biscay in a gale, but not before the abatement of the wind gave us full proof of the heavy swell of this far-famed caldron. The great boil was of course more mountainous after than during the storm; and this must be that misery infernal which Shakspeare meant by the words—

> ——"imprison'd in the viewless winds,
> And blown with restless violence round about
> The pendent world."

On the 26th September we emerged from this eternal sea-quake, and on the 30th made the island of Porto Santo; and soon afterwards Madeira came in sight. We sailed between these islands; and, though we touched at neither, the very neighbourhood had the refreshing effect of the first stage—the first inn. In the morning we lay to in Funchal Bay, with the intention of landing for an hour, but were refused that permission because we had procured no bill of health

for half a guinea from the Portuguese consul in London. We were forbid from a fort on the Loo or Ilheo (Island) Rock. After a sultry row of ten miles back to our ship, we made away from this inhospitable island with a fresh breeze, which continued for the next two days. In the morning of the 3d October we passed the island of Palma—the loftiest land we had yet seen; and it was not till the 6th that we crossed the tropic of Cancer. On this day the first flying-fish (exocœtus volitans) were seen, sparkling from the waves in shoal-flights, and descending into them again as rapidly. They can only fly while their finny wings are wet. A day or two afterwards we first witnessed, in the dark of night, alongside the vessel, that phosphorescent appearance of the sea, which is attributed by men of science to luminous animalcula. On the evening of the 9th the island of St. Jago was in sight (one of the Cape de Verds), and intending to water at Port Praya, we bore up off the land till daylight the next morning, when we unfortunately passed it, mistaking it for Mayo, that which we took for St. Jago turning out to be Fogo. We were therefore fain to pursue our course, there being no convenience for watering at Fogo. Thus were we again disappointed in not landing. This day we saw many bonitoes (scomber pelamis) and albicores (scomber thynnus) leap out of the water to the height of five feet, where they turned in the air, and fell into the sea again. On the next day the island of Brava was in sight; and on the 13th October the thermometer attained its greatest height during the voyage, namely, 83°.

My journal now presents no other record than that

of a calm for a fortnight upon the burning line. A calm is the very bane of a ship. There are few quarters from which the wind can blow, that a sailor cannot make some course upon; but a calm is death. Dr. Donne had felt what it was to be becalmed on the line, before he wrote thus:

> "Our storm is past, and that storm's tyrannous rage
> A stupid calm, but nothing it doth suage.
> The fable is inverted; and far more
> A block afflicts now, than a stork before.
> Storms chafe, and soon wear out themselves on us;
> In calms, Heav'n laughs to see us languish thus.
> As steady as I could wish my thoughts were,
> Smooth as thy mistress' glass, or what shines there,
> The sea is now, and as the isles, which we
> Seek when we can move, our ships rooted be.
> ——————— In one place lay
> Feathers and dust to-day and yesterday."

We were now almost constantly visited by that elegant and companionable little bird, called by the sailors Mother Carey's chicken. It is the procellaria pelagica, or stormy petrel; but we found it by no means the fore-runner of storms. It is black with a white rump, and flies close to the waves like a swallow. Its legs are long like a lark's, and it rests its tired body by literally treading upon the sea, with its wings expanded, whence it is called petrel, after St. Peter. It does not swim. It is delightful to see it evade the rise of every wave, which it never suffers to wet it, closely as it flies to the sea.

On the 26th day of October we fell in with a Spanish or Portuguese insurgent pirate. In answer to our account of ourselves, she gave us something like Scrub's

budget of news: she showed no colours, but said she came "from sea," and was bound "to sea;" which put me in mind of the Devil's answer to the same question (in Job) "from going to and fro in the earth, and from walking up and down in it."

On the next day we were gratified by a sight of the fish, called by the seamen the Portuguese man of war, and described by Captain Cook as the holuthuria physalis of Linnæus. It is a species of zoophyta of the medusa kind.

On the 28th October we met the Millwood of New York, bound from Canton to Europe with tea, which afforded us the opportunity of writing home.

On the 4th November we crossed the equinoctial line, and were afterwards favoured by fair winds to Rio de Janeiro. On the 12th we had the good fortune of another means of writing to England, by meeting two transports from Rio; and on the 18th in the morning, we saw the coast of Brazil, as we stood in the bay of St. Anne.

The next day we saw, for the first time, two large albatrosses (diomedia exulans). This bird had long possessed a great interest in my mind from the conspicuous part it plays in Mr. Coleridge's wonderful ballad of "The Auntient Marinere." The idea of this tale is doubtless taken from the following passage in Captain George Shelvocke's Voyage (1719):

"We had continued squalls of sleet, snow, and rain; and the heavens were perpetually hid from us by gloomy, dismal clouds. One would think it impossible any thing could live in so rigid a climate; and indeed we all ob-

served we had not the sight of one fish, since we were come to the southward of Strait le Maire, nor one sea-bird, except a disconsolate black albatross, who accompanied us several days, hovering about us, as if he had lost himself; till Simon Hatley, my second captain, observing, in one of his melancholy fits, that this bird was always hovering near us, imagined from his colour, that it might be some ill omen; and, being encouraged in his superstition by the continued series of contrary tempestuous winds, which had oppressed us ever since we had got into this sea, he, after some fruitless attempts, at length *shot the albatross*, perhaps not doubting that we should have a fair wind after it."

The poet has certainly worked this hint up into an awful and beautiful poem; but landsmen make a great mistake when they attribute to sea-birds the habit of resting upon the ships they follow. It is only the poor land-bird, accidentally blown off the shore, that is glad to rest "upon the masts or shrouds:" no albatross would "come for food or play to a mariner's halloo." It is out of the albatross's power to rise from a ship's deck: it has always great difficulty in rising from the sea, and begins by scrambling along the waves. Its wing has no fewer than five joints to spread, and get under way:

"Parva motu primo, mox sese attollit in auras."

"As he makes wing, he gets power."

Mr. Wilson has fallen into a similar mistake in the following passage of his "Isle of Palms."

"But sea-birds he oft had seen before,
Following the ship in hush or roar,

The loss of their resting-mast deplore,
With wild and dreary cries*."

On the same day we saw also several dolphins (coryphæna hippurus), one of which we caught with a hook and line, and killed. It was the most beautiful creation I ever saw—its colours shifting into an endless variety of blues, greens and yellows—its back blues and greens—its belly yellows, orange, or gold, spotted with blues and lilacs—its fins like a peacock's neck—in short, it is the "very, very peacock" of fishes. Nothing but the

* I would not be pedantic, and am aware that Mr. Campbell's line—

"Doom'd the long isles of Sydney Cove to see,"

is just as good as ever, after the reader is told that there are no long isles even in Port Jackson, and none at all in Sydney Cove. But merely descriptive

"Authors, before they write, should read,"

if they have not had an opportunity of seeing. Mr. Campbell himself, in his Poetical Specimens, has selected a passage from the late Mr. Headley's poems, in which that tasteful young student undertakes to describe New Zealand. To be sure he calls upon Fancy to conjure up the picture; and a pure fancy-piece it is:—

"Lo! at her call, New Zealand's wastes arise,
Casting their shadows far along the main,
Whose brows, cloud-capt in joyless majesty,
No human foot hath trod, since time began:
Here death-like silence ever brooding dwells,
Save when the watching sailor startled hears,
Far from his native land, at darksome night,
The shrill-ton'd petrel, or the penguin's voice,
That skim their trackless flight on lonely wing
Through the black regions of a nameless main."

Surely Mr. Headley might have learned from Captain Cook that New Zealand is well peopled, if not that the penguin flies not, but swims; and from what book of natural history or voyages did he get "the shrill-ton'd petrel?" The "nameless main" is the South Pacific Ocean.

last scene of a pantomime can approach its brilliancy, and then it is as much superior to that as nature is to art. So died our coryphæna hippurus; and so moralizes the noble poet of our times, in one of his "sullen fits:"—

> ——————"parting day
> Dies like the dolphin, whom each pang imbues
> With a new colour, as it gasps away,
> The last still loveliest, till—'tis gone, and all is grey."

The likeness of this idea occurs in the following weak, cold, wire-drawn passage of Falconer's "Shipwreck;" but the condensation, the application, the point are all Lord Byron's:

> "But while his heart the fatal jav'lin thrills,
> And flitting life escapes in sanguine rills,
> What radiant changes strike th' astonish'd sight!
> What glowing hues of mingled shade and light!
> Not equal glories gild the lucid west,
> With parting beams all o'er profusely drest."

These sights consoled us for the loss of land this day; and on the next, the new world was again in view. On the following morning (21st November) we were brought in sight of the harbour of Rio de Janeiro, and came to anchor there in the evening. It was under a glowing sunset, with a light fair breeze, that we glided into this sublime and beautiful harbour. The hilly points of land, past which we sailed, were covered over with (to us) exotic vegetation; and the wooded mountains in the distance were obviously uneuropean: it was like sailing in a ship of heaven, into a new planet.

It comes not within my plan to copy full, true, and particular accounts of countries, from histories, or voyages and travels. Suffice it to say, that on the follow-

ing morning, I went on shore for nearly a fortnight, during which time I saw enough of America to appreciate its grandeur and fertility, and of the Portuguese, to estimate their pettiness and barbarism, and how unworthy the least enlightened nation of Europe is of colonizing such a fine country. I made one considerable excursion into the interior, namely, to the waterfalls of Tejeuca, distant three leagues. The party was made by my friend the Chevalier Langsdorff, the Russian Consul General. The whole ride lay along narrow passes round romantic mountains, in many parts very steep and precipitous. Magnificent aloes and warm orange-trees, with their fruit,

"Like golden lamps in a green night,"

grew spontaneously; and frequent streams refreshed, and cascades illustrated, the landscape. We took our breakfast under the first, and our dinner under the second, waterfall. The former meal was made before the cottage of two intelligent Frenchmen, who had commenced a coffee-plantation here: the scenery and properties made me fancy myself on the stage of a theatre. A French nobleman, who is building a house in the neighbourhood, came walking down the passes of the waterfall to join our party: it was

——"much like the back scene of a play
Or melodrame, which people flock to see,
When the first act is ended by a dance,
In vineyards copied from the south of France."

We could see him zig-zag towards us ten minutes before he arrived,—I had almost said came on the stage. Our outward journey was performed under 85 degrees of heat in the shade, which seemed to be enjoyed by the monkey,

the snake, the parrot, and the humming-bird; but our homeward took place under a cool moonlight, and was attended by the sparkling of fire-flies and the singing of crickets.

On the evening of the 4th December, we quitted the English hospitality, Portuguese music, and tropical heat of Rio, and returned on board of ship. On the next morning at daylight we got under way, and were towed out of this beautiful harbour: in the evening we lost sight of Cape Frio.

The next morning early we crossed the tropic of Capricorn, and proceeded on our course to Australia with a fair wind. We now came into the principality of whales, and were almost constantly attended by albatrosses and petrels. In the evening of the 21st, a calm, which we attributed to our propinquity to the island of Tristan da Cunha, which the rain prevented us from seeing, brought no fewer than eight albatrosses to swim and feed at our stern*. They bit the bait, but avoided the hook, of lines which were thrown towards them; but on the 2d day of January, 1817, the crew were fortunate enough to catch nine large ones by similar means. One measured ten feet from wing to wing's extremity. On this day we doubled the Cape of Good Hope.

We were now visited by what sailors call the Cape

* The Aleutians assured Mr. Langsdorff that the albatross cannot fly in a calm, and may then be taken by the hand, either by land or by water. (See his Voyages and Travels, part ii. p. 106.) I believe the tale: the bird is the mere creature of storm, and has no more power over itself than a paper kite or an air-balloon: it is all wing, and has no muscle to raise itself with: it must wait for a wind before it can get under way.

pigeon. It is the small blue pintado, mentioned by Mr. Anderson, in his observations on Christmas Island in Cook's Voyages. That great circumnavigator himself, in his Second Voyage, also describes " the brown and white pintado, which we named Antarctic petrel, because it seems to be a native of that region. It is undoubtedly of the petrel tribe, and is in every respect shaped like the pintado, differing from it only in colour. The head and fore-part of the body of this are brown, and the hind-part of the body, tail, and the ends of the wings, are white." In the Edinburgh Elements of Natural History, the only pintado is called the procellaria Capensis (from the Cape of Good Hope), and is described as " white with brown spots," from no later an authority than Dampier's Voyages.

On the 8th day of January we saw a strange sail, being the only vessel, except one whaler, which we had seen since we left Rio de Janeiro. If my meagre narrative has made so much of birds and fishes, how much more interesting is the sight of a ship full of human creatures; especially in a latitude where

> ——————" ships are rare;
> From time to time, like pilgrims, here and there,
> Crossing the waters."

At day-break the next morning, the ship which we saw yesterday was only ten miles astern of us, and another vessel appeared still nearer to us. The wind being very light, we lay to till the first ship came up, and spoke her. She proved to be the Galatea of Boston, from Gibraltar to Calcutta. In the evening, the other ship came near enough to show American colours also.

The next morning both the vessels were considerably

ahead of us, and passed out of sight in the course of the day.

In the evening of the 13th we were near the site of the island laid down in the charts as Necklegel, but did not see it.

We had now reached so cold a latitude, that on the 28th the thermometer's greatest height was 52°, being the lowest degree to which it fell on this voyage.

On the 1st day of February, a gale of wind, from the south-west, afforded me an opportunity of verifying the equal truth of Dr. Donne's "Storm."

> "Then, like two mighty kings, which, dwelling far
> Asunder, meet against a third to war,
> The south and west winds join'd; and, as they blew,
> Waves, like a rolling trough, before them threw:
> Sooner than you read this line, did the gale,
> Like shot, not fear'd till felt, our sails assail."

On the 9th we saw the smaller gull, which I took to be Captain Cook's chocolate-coloured albatross; and on the 11th I counted no fewer than twenty albatrosses about us.

On the next day an innumerable shoal of fish, which the sailors called *black fish*, were rolling along with the ship, like porpoises. I could not find it described in the Edinburgh Elements of Natural History, and was at a loss whether to call it a whale, a physeter, or a dolphin. From its size and bottle-nose, I should take it to be the balæna rostrata; but then some of the crew, who had been whalers, said that it produced spermaceti, as the physeter only does; and its motion more resembled that of a porpoise (delphinus). It was quite black, except that it had a grey patch on the

back: it had one fistula behind the head, and an adipose dorsal fin. It was about fifteen feet long.

On the 15th, a phosphorescent sea and Portuguese men of war betrayed a warmer latitude; and at day-break of the 17th, the south coast of Australia came in sight, being the first land we had seen for seventy-three days. It was cliffy and woody, and had a look of home. It was now calm, and we lay off Cape Bridgewater. Clouds of smoke rose from the shore, supposed to be fires kindled by the native Indians. Captain Cook observed similar fires on this coast.

On the next day the land was out of sight. A single penguin came swimming round the ship, and looking up at us with wonder and pleasure, like a savage man. It was cruelly shot for its curiosity. It is the link between a fish and a bird. It cannot fly: its wings have no feathers, but resemble, and are used like, fins: it swims under the water just like a fish. Its tail has rigid, unplumed feathers, and is wedge-shaped. I could not find this species exactly described in the Edinburgh Elements of Natural History, our only authority on board. The aptenodyta patachonica* comes nearest to it. I describe our penguin as follows: back and throat black; belly and breast white; wings black above and white below; feet black below and white above; nails black; fourth or inner toe very small and detached; bill light brown: a yellow mark behind the ears.

* I have since found from Wood's Zoography that this is the aptenodyta patachonica of Linnæus and Buffon; but I have also seen a very different species of penguin from Macquarie Island, with an aquiline beak, and the yellow, colouring a horned crest, instead of being behind the ears. The irides of this species are brown instead of red.

On the 19th, we passed King's Island barely in sight, and entered Bass's Strait. All this day, greater numbers of porpoises had been sporting along than we had ever seen before. From close observation, I judged them to be the dolphin of the ancients, the delphinus delphis of Linnæus; for what we call the dolphin is of another genus, the coryphæna hippurus. The porpoise appears to roll round, out of the water, as if it were one of the wheels of Neptune's car—I say *appears*, for it does not roll. Ovid's words are right: it leaps out: his description is as correct as it is beautiful:

> Undique dant saltus, multâque adspergine rorant,
> Emerguntque iterum, redeuntque sub æquore rursus;
> Inque chori ludunt speciem, lascivaque jactant
> Corpora, et acceptum patulis mare naribus efflant.
>
> *Metam.* lib. iii. v. 683—6.

The Edinburgh Natural History says that the dolphin is very accurately figured on some ancient coins of Magna Græcia. In the gem of Cupid riding on the dolphin, the fish is a mere chimera; and in the notes to the *Delphin* Virgil (one should not quote any other upon such a subject) it is said (Æn. lib. v. v. 594)—"quem falsò incurvo corpore pinxêre veteres, nisi fortè sic apparet propter impetum ac velocitatem motûs, cùm erumpit e mari*: verè enim dicitur a Plinio (lib. 9. 8)

* I dare say Dr. Franklin never read the notes to the Delphin or any other edition of Virgil, yet my sagacious brother-journalist (ut me collaudem) has made exactly the same remark in his pleasing Journal of a Voyage to Philadelphia in 1726 (See his Memoirs, vol. ii. p. 321): "Every one takes notice of that vulgar error of the painters, who always represent this fish monstrously crooked and deformed, when it is in reality as beautiful and well-shaped a fish as any that swims. I cannot think what could be the original of this chimera of theirs (since there is not a creature in nature that

velocissimum omnium animalium, non solùm marinorum; ocyor volucri, ocyor telo—tanta vi exsilit, ut plerumque vela navium transvolet."

The next night a strong gale blew us through the strait. At daybreak of the following morning Round Island was in sight, and we passed it close on the left, for the sake of avoiding a dangerous sunken rock, called Crocodile, over which we saw the sea breaking, about four miles to the right, near the Slipper Islands. We passed, also on the right, the Twins or Curtis's Islands and the Seal Islands; and, on the left, two or three more rocks called Barren Islands. Behind, on this side, stretched Wilson's Promontory, on the main land of New South Wales. Kent's Island we did not see.

At two o'clock on the following morning we found ourselves close in shore on the east coast of New South Wales, and continued coasting all day with a fair breeze. The land exactly accords with Captain Cook's description: "the sea shore was a white sand, but the country within was green and woody." We again saw columns of smoke. In the forenoon we passed Ram Head, and in the afternoon doubled Cape Howe. On the rocks we saw many seals. In the evening we passed the Green Cape, so called from the turf upon it. The country is thus accurately described by Captain Cook: "it is of a moderate height, diversified by hill and valley, ridge and plain, interspersed with a few lawns*,

in the least resembles their dolphin), unless it proceeded at first from a false imitation of a fish in the posture of leaping, which they have since improved into a crooked monster, with a head and eyes like a bull, a hog's snout, and a tail like a blown tulip."

* It is now ascertained that these are mere marshes.

of no great extent, but in general covered with wood: the ascent of the hills and ridges is gentle, and the summits are not high." *First Voyage.*

The next morning found us off higher hills and a long table mountain. We saw several fires on the coast. At noon we passed Mount Dromedary, off which lies Montague Island. The land was more distant to-day, and showed ranges of higher hills, one behind the other, like the waves of the sea. We passed Bateman's Bay and Point Upright; and in the evening brought the peaked hill, which Captain Cook likened to and called the Pigeon-house, in sight.

Early the next morning we doubled Cape St. George. The land was still distant, but we saw Hat Hill. In the evening, having run our distance by the log, we lay to all night off Botany Bay; and at daylight of the 24th of February, made sail for Port Jackson, and anchored in Sydney Cove in good time in the morning; and thus ends the narrative of a voyage of one hundred and fifty-two days at sea, during which we traversed 15,335 miles by the log.

Thus have I extracted all the honey of my voyage for the reader: the sting remains with me. I am not ungrateful enough to forget all the beautiful sunsets and moonlights of the first half of the voyage, nor the frequent reliefs to the eye which the sight of islands afforded: but no landsman can form an idea of a three weeks calm near the line; and if the first half of the voyage was too hot, the second was too cold and cloudy; so that we had no sunset or moonlight scenes at all; and then we saw not any land for seventy-three days,

nor any ship for forty-four. Thus deserted, the albatross, " the bird that loved the man," took pity on us; and from Rio de Janeiro we were hardly ever without him: we were also visited by sea-hens and Cape-pigeons; and during the whole voyage, I do not think I missed my favourite little petrel for a week together.

Having passed so many months with sight of " nothing lovely but the sea and sky," it might be expected that I should not close my narrative without some observation or reflection upon those kindred immensities. But I have little to add to the facts above recorded, from which it will be abundantly seen how interesting is the sight of the smallest fish or bird, and therefore it may be presumed

> " How like a load on the weary eye
> Lie the sky and the sea, and the sea and the sky!"

As the profound author of this quotation has anticipated my next feeling on board of ship, I had better have recourse to his words:

" I observed a wild duck, swimming on the waves—a single, solitary wild duck. It is not easy to conceive how interesting a thing it looked, in that round, objectless desert of waters. I had associated such a feeling of immensity with the ocean, that I felt exceedingly disappointed, when I was out of sight of all land, at the narrowness and *nearness* (as it were) of the circle of the horizon. So little are images capable of satisfying the obscure feelings connected with words!"

The flat sea (as Milton calls it) can be seen only for five or six miles round; but when a headland is in sight (and the Peak of Teneriffe may be seen one

hundred and eighty miles off) the ideas of vastness and distance are restored.

I have only one or two other remarks to make. The panorama of an ordinary sea is mere sameness; but when there is a heavy swell and the wind blows, it is sport to see the head of a huge wave, as it rises into the wind's sweep, dashed off into atoms like dust, and converted into foam. On ordinary occasions, the only amusement of sailing is to look over the ship's quarter, and watch the recurrent foam that follows the stern, in sight and sound exactly like a water-fall. As the sea settles after each dash, the froth veins and clouds the dark water, and gives it the precise resemblance of marble, whence the epithet in Virgil is peculiarly happy:

Et quæ marmoreo* fert monstra sub æquore pontus.

A beautiful effect is produced by the sun's shining through the spray, at a ship's side: a perfect rainbow is seen in the dark sea, on the other side of the spray, and may be fancied to lie some fathoms deep.

"An Iris sits amidst th' infernal surge,
Like Hope upon a death-bed; and, unworn
Its steady dyes, while all around is torn
By the distracted waters, bears serene
Its brilliant hues, with all their beams unshorn;
Resembling, 'mid the torture of the scene,
Love watching Madness with unalterable mien."

And now I have exhausted all the pleasures of ship-board, which (to my thinking) are few indeed and small, compared with its many and great pains. Some allowance must certainly be made, in weighing this opinion,

* The Carystian marble was sea-green. *Salmas. ad Hist. Aug.* p. 164.

for the wearisome length of this voyage, broken only by one landing, performed in a heavy and uneasy ship, and ushered in by a storm in the Channel. But when all this is done, a cabin is a small room, that serves for parlour and bed-room, and pantry and store-room, never secure from pitching and rolling at an angle of forty-five degrees from nature's level, each way; so that I cannot think that even a pennyless, disabled sailor would live twelve months in a house on shore which should be subject to the same motion—no, not if he were paid a hundred pounds for it, and had a sick wife and large family. He that would go to sea had need have neither ears nor nose; for booms and bulkheads will creak, and provisions will emit their odour. Were a man, like the king of the Black Isles in the Arabian Nights, marble from the girdle downwards, he might with impunity go to sea as a passenger; but he who has the misfortune to have a stomach, and legs unused to balance his body on moving boards, had better stay on *terra firma.*

A sailor does not live *in præsenti,* but only in retrospection and anticipation; his conversation is, "Where was I this time last year?" and "How soon shall we reach such a place?" The bachelor critic in Gil Blas maintained that *the wind* was the most interesting circumstance in the tragedy of Iphigenia; but I am sure it is the only important topic of discussion on board of ship.

Nequicquam Deus abscidit
Prudens Oceano dissociabili
Terras, si tamen impiæ
Non tangenda rates transiliunt vada.

Man was never meant to cross an ocean; and, as Sir Philip Sidney well says of a ship: "That dwelling-place is unnatural to mankind; and then the terribleness of the continual motion, the desolation of the far-being from comfort, the eye and the ear having ugly images ever before it, doth still vex the mind, even when it is best armed against it."

To conclude—the greatest pleasure of a sea-voyage is the end of it; and I may venture to assert that the cry of *Land!* was never yet heard without joy, even by one of so roving a spirit that he would go to sea again the next day. Even such a one does not love the sea for itself, but only as the vehicle of seeing various countries. And truly, the sight of a foreign land or town is, for the first twenty-four hours, enchanting, though a great part of the pleasure must be set down to the account of getting out of shipboard upon dry ground. But no sight can be cheaply purchased by even a month's restless imprisonment at sea; and when all lands are seen, none is like *home!*

CHAPTER II.

JOURNAL OF AN EXCURSION ACROSS THE BLUE MOUNTAINS OF NEW SOUTH WALES.

Monday, 7th October, 1822. This spring month is the fittest to make this excursion in. The winter nights are too cold, and the summer days too hot. In the autumn the flowers are not in bloom.

The difficulties of the travel commence at Emu Ford over the river Nepean, a branch of the Hawkesbury. Crossing this stream is always a work of such time and trouble, and sometimes of such difficulty and danger, that the traveller should send forward his cart or baggage-horses, to overcome it, half a day before he rides or rows through it himself. The ferry is the property of government, who have hitherto delayed* either to provide a punt themselves, or to suffer the stockholders of the colony to build one by subscription. The consequences are frequent losses of cattle in swimming, and injury of sheep in boating, over. Although the river was not unusually high, we were obliged to unload our cart before it could be drawn through the ford; and thus lost several hours in transporting the baggage by one small boat, and in reloading the cart.

On the banks of the Nepean, I saw almost the only deciduous native tree in the territory, namely, the white

* Since this was written, a punt has been established by government at Emu Ferry.

cedar (melia azedarach), the common bead-tree of India*, beautiful in itself, and congenial to me from that singularity. All the other indigenous trees and shrubs, that I have seen, are evergreens; the eternal eucalyptus, with its white bark and its scanty tin-like foliage, or the dark casuarina tall, and exocarpus funeral; all as unpicturesque as the shrubs and flowers are beautiful:—the various, justly called proteaceous, banksia, and the hesperidean mimosa†, the exquisite epacris, the curious grevillea, xanthorrhœa, the sceptre of Flora, telopea the magnificent, and thysanotus the lovely. New South Wales is a perpetual flower-garden, but there is not a single scene in it of which a painter could make a landscape, without greatly disguising the true character of the trees. They have no lateral boughs, and cast no masses of shade; but, in return, it is to this circumstance, which causes so little vegetable putrefaction, that the healthiness of the climate is mainly to be attributed. "A part of their economy (says Mr. Brown the botanist), which contributes somewhat to the peculiar character of the Australian forests, is, that the leaves both of the eucalyptus and acacia, by far the most common genera in Terra Australis, and, if taken together, and considered with respect to the mass of vegetable matter they contain (calculated from the size, as well as the number of individuals), nearly equal to all the other plants of that country, are vertical, or present their margin and not either surface towards the

* I met with this tree also in the Brazils.

† I do not mean that the mimosa belongs to Linnæus's natural order *hesperideæ*, though the eucalyptus does: my epithet is merely classical: I would say *golden*.

stem, both surfaces having consequently the same relation to light*." Can this circumstance be partly the cause of their unpicturesqueness—of the monotony of their leaf? Or is it merely their evergreenness? "In the Indies (says Linnæus), almost all the trees are evergreen, and have broad leaves; but in our cold regions, most trees cast their foliage every year, and such as do not, bear acerose, that is, narrow and acute, leaves. If they were broader, the snow which falls during winter would collect among them, and break the branches by its weight. Their great slenderness prevents any such effect, and allows the snow to pass between them†." But snow is not unknown to the eucalypti and acaciæ of New Holland; and may not the verticalness of the broad leaves of some of them answer the same snow-diverting purpose as the acerose-leavedness of European evergreens? Yet the foliage of the eucalypti is always scanty; that of the acaciæ acerose; and the snow of Australia is apt to melt. Be this as it may, no tree, to my taste, can be beautiful that is not deciduous. What can a painter do with one cold olive-green? There is a dry harshness about the perennial leaf, that does not savour of humanity in my eyes. There is no flesh and blood in it: it is not of us, and is nothing to us. Dryden says of the laurel,

> "From winter winds it suffers no decay;
> For ever fresh and fair, and every month is May."

Now it may be the fault of the cold climate in which I was bred, but this is just what I complain of in an

* Flinders's Voyage, vol. ii. p. 587.

† Sup. to Encyc. Brit., *Art.* Botany.

evergreen. "For ever fresh" is a contradiction in terms; what is "for ever fair" is never fair; and without January, in my mind, there can be no May. All the dearest allegories of human life are bound up in the infant and slender green of spring, the dark redundance of summer, and the sere and yellow leaf of autumn. These are as essential to the poet as emblems, as they are to the painter as picturesque objects; and the common consent and immemorial custom of European poetry have made the change of seasons, and its effect upon vegetation, a part, as it were, of our very nature. I can therefore hold no fellowship with Australian foliage, but will cleave to the British oak through all the bareness of winter. It is a dear sight to an European to see his young compatriot trees in an Indian climate, telling of their native country by the fall of their leaf, and, in due time, becoming a spring unto themselves, although no winter has passed over them, just as their fellow-countrymen keep Christmas though in the hottest weather, and, with fresh fruits about them, affect the fare and sometimes the fireside of old England. "New Holland (says Sir James Smith) seems no very beautiful or picturesque country, such as is likely to form, or to inspire, a poet. Indeed the dregs of the community, which we have poured upon its shores, must probably subside and purge themselves, before any thing like a poet, or a disinterested lover of nature, can arise from so foul a source. There seems, however, to be no transition of seasons in the climate itself, to excite hope, or to expand the heart and fancy*."

Yet let me do justice to the evergreens of New

* Sup. to Encyc. Brit., *Art.* Botany.

Holland. It is to the scantiness of their foliage that the grazier owes the dry wholesomeness of the native grasses, however thin; and it is to the undecaying and aromatic, myrtaceous, perennial leaf that the colonists attribute the healthiness of their climate. No miasmata come from the marshes or fallen leaves of Australian forests. Intermittent fevers are unknown here. An opinion has obtained in North America that evergreens increase cold. In New South Wales the cold is found to be increased by clearing the land of them, although they certainly retain the night air so long in the valleys, that the hills are warmer than those in the winter. In the summer the hills are cooler from the sea-breeze. I should therefore say, build on a hill. The climate of New South Wales is becoming generally cooler, as the colony gets cleared of timber. While I am comparing the trees of America and Australia, it is important to agriculture that I should mention that the stumps of the eucalypti, from the quantity of gum they contain, do not rot in the ground soon after the trees have been cut down, as those of the American and Norfolk Island timbers do. They must be laboriously grubbed up, or burnt out by piling the surrounding sods over them, like a kiln.

At Emu Plains or Island (for it is sometimes insulated by the washings of the mountains, when the Nepean is flooded) there is a government agricultural establishment of 350 men and a few women, with a good brick house for the superintendant, and wooden huts for the convict labourers. Here are grown for the benefit of the crown, wheat, maize and tobacco; but experience everywhere proves the loss at which government raises its own supplies. These plains are not naturally cleared;

but they will very soon be free from stumps by the labour of these convicts, and will then leave a rich tract of arable land for favoured grantees.

It is this river, whether we call it Hawkesbury or Nepean, that is the Nile of Botany Bay: for the land on its banks owes its fertility to the floods which come down from the Blue Mountains, and which have been known to swell the waters nearly a hundred feet above their usual level; and as these floods are uncertain and often destructive of the growing crops, I once thought that government (if it is to farm at all) had better have kept the whole of this precarious garden in its own hands; since it is only public foresight that would provide against the loss of a harvest, and only public wealth that could support it. After the flood of 1817, the government ration was reduced from eleven to three pounds of wheat per week; but since that period so much wheat has been grown in the fine districts of Appin and Airds, and in the island of Van Diemen's Land, that the colony is now almost independent of these flood-farmers; and they are yearly going out of fashion, for the benefit of the state. Nothing can be more uncertain than the heavy rains of the climate. Sometimes (but not of late years) the country is worse afflicted with long droughts, in which the woods take fire and consume the grass, and the cattle have perished for want of water. Often do the rains descend, and the floods come, when the Hawkesbury corn is in the ground, and the colony has sometimes suffered from the improvidence of these farmers, in not building their wheat-stacks out of the reach of the devouring waters. The extraordinary fertility of these flooded lands, which have borne a crop of wheat and a crop of maize in each

year for the last five-and-twenty years, has naturally induced their tenants to rely too much upon this lubber-land sort of farming, just as the inhabitants of Vesuvius cannot be induced to abandon that mountain after a lava-flood from its volcano, and see nothing in present ruin but the prospect of future riches. "So the Ohio (says Mr. Birkbeck), with its annual overflowings, is unable to wash away the inhabitants of Shawnee Town*." But it is surely impolitic to grant away such precarious and hotbed lands. In so indifferent a general soil as that of New South Wales, a better system of agriculture should be taught; and what encouragement is given to the general farmer to bedew his land with the sweat of his brow, when he sees that of his idle neighbour on the banks of the river irrigated by the flood, and producing as good a crop, with no other labour than that of hoeing and strewing? It is only upon the chance of the flood's devouring, instead of feeding, that the general farmer can calculate for occasional remuneration; and when this calamity happens, the river farmer, whose rapid gains induce him as rapidly to spend, is found entirely unprovided, and his whole district is reduced to subscription and beggary. This, in itself, is not one of the least of the political evils of such a system. It is an encouragement to future improvidence, and fosters a disposition too literally to take no thought of the morrow, but to consider and imitate the gigantic lily (doryanthes excelsa†)—a disposition which must be

* Notes on a Journey to America, p. 113.

† My pedantry is sanctioned by the authority of Captain Parry's interesting Voyage, where he begins his scientific researches in his third page in Yarmouth Roads, by catching "several fine cod (gadus morhua)."

supposed to be already too natural among the small settlers, who have emerged from the condition of convicts. Another good reason against granting away this land, and suffering it to be cleared, is, that the floods wash the fallen timber into the channel of the river, and obstruct the navigation. The removal of the trees from its banks has not only contributed to choke the river by their falling in, but has occasioned derelictions on one side and alluvions on the other.

But we shall never get our cart up Lapstone Hill at this rate; and it is so steep and long, that we were obliged to shift our baggage twice in ascending it, notwithstanding Governor Macquarie's Government and General Order of the 10th of June 1815 says, that "the facility of the ascent to Spring Wood excited surprise, and is certainly not well calculated to give the traveller a just idea of the difficulties he has afterwards to encounter." I found Lapstone Hill as difficult as any in the journey, except Mount York; and we did not reach Spring Wood (twelve miles and a half from the river), where alone there is space enough in the forest to encamp upon, till after 9 o'clock at night. There is little or no grass here, and the timber consists principally of those species of eucalyptus called by the colonists stringy and iron-bark. Here is stationed an acting corporal's party of the 48th regiment, in a small barrack.

Tuesday, 8th October. Set forward at half an hour after 9 o'clock, *a. m.* and halted on a mossy sand-hill above Jamison's Valley, two miles beyond the King's Table-land, at 5 o'clock *p. m.*, having travelled sixteen miles this day. This station is now called *The Burnt Weatherboarded Hut,* and was Governor Macquarie's

second depôt for making the road. The timber now became more dwarf, and we were actually crossing the Blue Mountains. We found the pass very alpine and difficult, rocky, sandy, stony, flowery. The views were very grand. The night was stormy, but little rainy—all in the sublime. "The power of hills was on me," as Wordsworth says. I could not sleep for thinking of our situation, and walked forth from my tent. The air was refreshing. All were asleep from fatigue, with large fires of piled wood at their feet, the gleams on which (for they had been suffered to go down) gave a picturesque effect to the tent and cart, and to the tethered horses, which were patiently standing on the bleak and bare hill. A little more than thirty years ago, this land was inhabited by savages only, and these hills had, from the beginning of time, formed an impassable barrier between their tribes. The spirit of British government had now come from the antipodes, and, with nothing but a colony of convicts, had, in that short time, penetrated upwards of a hundred miles into the interior of the country, and established a township there, to which the unarmed might travel as safely as from London to Bristol. The very sleeping grooms beneath me had been thieves and robbers, and the blasted heath looked like New Hounslow; but our persons and property were inviolate.

Wednesday, 9th October. Moved at $8\frac{1}{2}$ *a. m.*, and arrived at the bottom of Cox's Pass down Mount York at $5\frac{1}{2}$ *p. m.* (twenty-one miles and a half). The ridge of mountains (or rather rocks), along which this passage could alone be effected, is very difficult and desolate. The trees (still eucalyptus) are stunted and burnt, with

the exception of one light species called the ash, of which good white-coopers' work might be made, and perhaps ships' smaller spars. The King's Table-land is as anarchical and untabular as any His Majesty possesses. The Prince Regent's Glen below it (if it be the glen that I saw) is not very romantic. Jamison's Valley we found by no means a happy one. Blackheath is a wretched misnomer. Not to mention its awful contrast to the beautiful place of that name in England, *heath* it is none. *Black* it may be when the shrubs are burnt, as they often are. Pitt's Amphitheatre disappointed me. The hills are thrown together in a monotonous manner, and their clothing is very unpicturesque—a mere sea of harsh trees; but Mr. Pitt was no particular connoisseur either in mountain scenery or in amphitheatres. Mount York (as Governor Macquarie named it) redeems the journey across the Blue Mountains, for it leads you to the first green valley. The earliest burst of the Christian transalpine country, as seen from the beginning of this mountain, is very beautiful. The sight of grass again is lovely. The view from the commencement of Cox's Pass down to it, is finer still. This *Big Hill*, as it is alone called, should have been named Mount Pisgah, for it affords the first view of the promised land of Australia, after the wilderness of the Blue Mountains. In Van Diemen's Land they have a river Jordan, and plains of Jericho; but the river is so called (I suppose) because it may be occasionally passed over on dry ground; and the plains are not equal to Bathurst Plains. After three days' starving among the mountains, your cattle now get plenty of green grass. Encamp then at the first bite;

for there is water enough, and the station under Mount York is very picturesque into the bargain, *que ne gâte rien*. This valley, which leads to Cox's River, is called the Vale of Clwydd, but (like all colonial Windsors and Richmonds) does not at all resemble its godmother in Old North Wales.

> ——— Parvam Trojam, simulataque magnis
> Pergama, et arentem Xanthi cognomine rivum
> Agnosco.

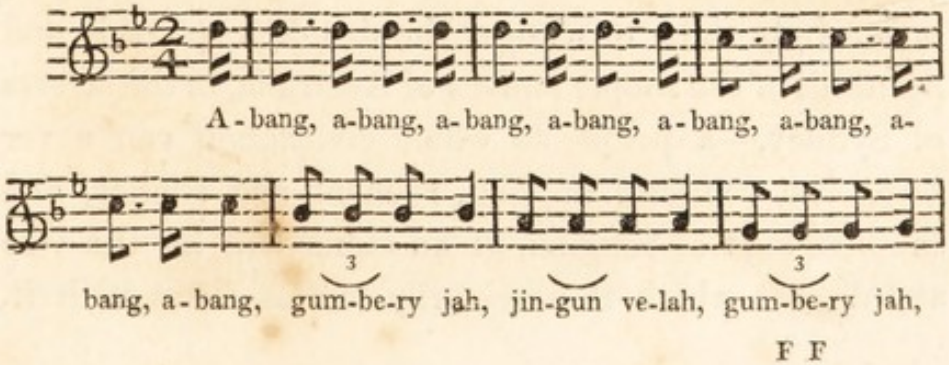
Henceforward, the country being perfectly open, the road is little more than what they call in North America a *trace*, made by chipping a *blaze* of bark off each side of a line of trees.

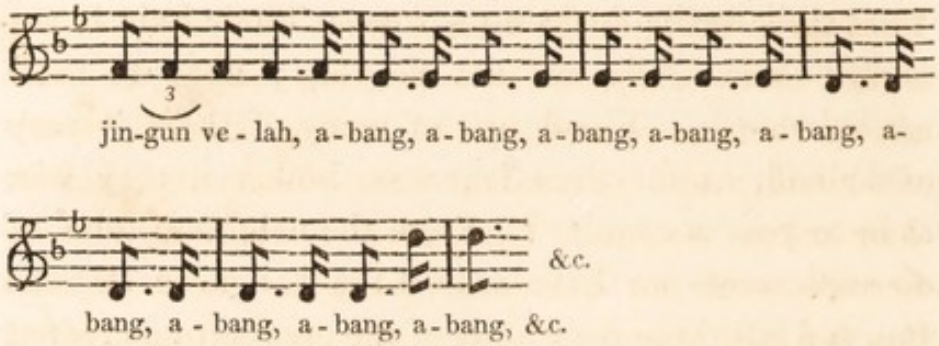
Thursday, 10*th October*. Did not proceed till half past nine o'clock, *a. m.*, but performed twenty-one miles this day, and encamped on the banks of the Fish River at 7 o'clock, *p. m.* This is the first stream that flows westerly, Cox's River falling into the Nepean. The journey to-day was all beautiful. Cox's River (five miles from his pass down Mount York, which might be avoided by an easier and shorter road to the north of it) is worth going to spend a few days at, of itself. It is a pretty stream, and rich in the botanical and picturesque. Here the first granite is seen, though (I am told) there is granite at the Five Islands; and here I saw four new and beautiful grevilleæ, viz. the cinerea, rosmarinifolia, acanthifolia and sulphurea. From the over-hanging rocks of Cox's Pass, I had before gathered the epacris ruscifolia, and an elegant epacrideous flower, called dracophyllum secundum.

Here we met a few Indian natives of Bathurst. They resembled the natives of the coast in appearance, but

did not speak the same language. They seem, however, to have advanced towards civilization one degree further than the poor forked animals of the warmer climate, inasmuch as they possess the art of very neatly sewing together, with the sinews of the kangaroo and emu, cloaks of skins, the hide of which they also carve in the inside with a world of figures. They use these cloaks for the sole purpose of keeping themselves warm, and have as little sense of decency as the natives around Sydney; for in the middle of the day, when the weather is warm, they throw back their cloaks across their shoulders. They appear to be a harmless race, with nothing ferocious in their manners or countenance. They are perfectly cheerful, laughing at every thing they see, and repeating every thing they hear. For the rest, little can be added to Captain Tench's and Colonel Collins's accounts of the natives of New South Wales. Their numbers are diminishing. Not that they retreat before the settlements of Europeans: this they cannot do: the different tribes (few as their numbers are) would resist the invasion of each other's territory. Thirty or forty miles will reach the circumference of each family's peregrinations. The tribes about our first settlements are as ignorant of the country beyond the mountains as the colonists were; and such is the sterility of the greater part of Mr. Oxley's first interior route, that he met with only twenty-two Indians in a journey of five months. Of the persons of the natives of New South Wales, I think Colonel Collins has given too unfavourable a picture. Their faces have generally (in my opinion) too much good-nature to be absolutely hideous, and (to my taste) they do not imitate humanity so

abominably as the African negroes. Their hair is not woolly; their heads are not dog-like; nor are their legs baboonish. The figure of many of them is very good; and, as for their leanness, how can they wax fat in so poor a country? From the neighbourhood of our settlements we have scared the kangaroo and the emu, and left these poor lords of the creation no created food but a few opossums, and a tenancy in common with us of fish. Together with their numbers, their customs and manners are in a state of decay. The ceremony of extracting one of the right upper front teeth from the jaw of adults (so fully described by Colonel Collins) is nearly obsolete in the neighbourhood of our settlements, and the custom is by no means universal in the island. But the *corrobory*, or night-dance, still obtains. This festivity is performed in very good time, and not unpleasing tune. The song is sung by a few males and females who take no part in the dance. One of the band beats time by knocking one stick against another. The music begins with a high note, and gradually sinks to the octave, whence it rises again immediately to the top. I took down the following Australian national melody from Harry, who married Carangarang, the sister of the celebrated Bennilong; and I believe it to be the first that was ever reduced to writing:





The dancers breathe in chorus like paviours, and the general step consists in opening the knees with a convulsive shake to the music; but occasionally they thread the mazes of each other, without any confusion. They stripe themselves down the waist, and paint their faces with white clay and red ochre, and in compliment to European delicacy, wear boughs round their loins. The glare of the large fires gives a picturesque effect to the savage scene, and the dance works up the performers to a sublime enthusiasm. I have been thus minute, because in a few years, perhaps, even the corrobory will be no more, so sophisticated do the Indians become from their pernicious association with the convicts, who sow the seeds of drunkenness in the prolific soil of savage indolence. A rum, or even sugar-cask, filled with water, furnishes these poor creatures with an intoxicating liquor; and the invasions of civilization are reproached with the introduction of a new vice, which operates as an inflamer of all their old ones. It is a melancholy sight to witness the drunken quarrels and fightings of the simple natives of Australia, in the streets of Sydney,—a people to whom civilization can never bring the comforts of food, raiment and shelter, and the blessings of religion, as an atonement for the vice and disease which it necessarily carries along with it.

That these unfortunate beings were comparatively ignorant of the crime of evil-speaking before we came among them, is proved by the broken English words of scurrility and execration with which they pollute their native tongue. The effect of this would be ludicrous, were not the cause pitiable. Truly Botany Bay is a bad school for them; but they have not learnt of the convicts to lie or to steal. Perhaps it is better that their name should pass away from the earth. They will not serve, and they are too indolent and poor in spirit to become masters. They would always be drones in the hive of an industrious colony. Nevertheless they are not without the stamp of their Maker's image, cut in ebony (as old Fuller says) instead of ivory. They bear themselves erect, and address you with confidence, always with good-humour, and often with grace. They are not common beggars, although they accept of our carnal things in return for the fish and oysters, which are almost all we have left them for their support. They are the Will Wimbles of the colony; the carriers of news and fish; the gossips of the town; the loungers on the quay. They know everybody; and understand the nature of everybody's business, although they have none of their own—but this. They give a locality to the land, and their honest naked simplicity affords a relief to the eye from the hypocritical lour of the yellow-clad convict. The warlike features of the tribes which surround our settlements are now quite effaced. The savages are forbidden to enter the towns with their spears, and they cheerfully comply with this requisition. They have a bowing acquaintance with everybody, and scatter their *How-d'ye-do's* with an air of friendliness

and equality, and with a perfect English accent, undebased by the *Massa's*, and *Missies*, and *me-no's* of West Indian slavery. They have been tried to be brought up from infancy as servants, but they have always run away to the woods. Our government has also instituted a small school for the education of native black children. Some of their parents (particularly of half-casts) have no objection to their being clothed, and fed, and taught; but they cannot endure the thoughts of their being made servants. The children learn almost as readily as Europeans; but their parents will steal them away when they grow up, and they will not willingly return among us. A few pairs have been married and housed out of the school, but they will not settle*. Their instinctive relish for the vermin and range of the woods cannot be eradicated. "Sir (said Dr. Johnson, holding up a slice from a quartern loaf), this is better than the bread-fruit;" but the savages of Australia, although extremely fond of bread, will never lose their more exquisite relish for a fine fat grub. "Poor Tom! that eats the swimming frog, the toad, the tadpole, the wall-newt and the water; swallows the

* The Sydney Gazettes used to make a great puffing about Governor Macquarie's Native Institution. Since his departure the school has been very properly removed from the town of Paramatta, to a remoter situation in the interior, on the Richmond road; but when I visited it in 1823, there were but four children in the school of the whole Indian blood, and four tenants of the settling-huts erected for them by government; and of these last (although it was the day of the committee's quarterly meeting) only one was at home; but I was told they attended more numerously once a fortnight to receive their ration from the government store. The few children of the half blood are the results of "casual fruition." Great as is the disproportion of white women to men, there is no instance of even a convict permanently living with a black woman; so that there will be no class of creoles in Australia.

old rat, and the ditch-dog; drinks the green mantle of the standing pool. But let us talk with this philosopher." If he is the most independent who has the fewest wants, the houseless Australian is certainly our superior: "he owes the worm no silk, the beast no hide, the sheep no wool, the cat no perfume:" he looks upon us as "sophisticated:" but he always treats our persons with respect, although he holds our servants very cheap, and looks down with a kind of stoical pity upon the various articles of comfort to which we have made ourselves slaves. He has no notion of that inferiority to us, the oppression of which feeling reduces the New Zealanders and South Sea Islanders almost to despair; and he despises the comforts of civilization, although he has nothing of his own but his "hollow tree and liberty," without even the "crust of bread." What then must be his opinion of our servants? men and women, who sacrifice their liberty and independence for the second-rate comforts of civilization, which they earn by submitting to perform menial offices for those who enjoy the first-rate, and by ministering to their artificial wants; for even which first-rate comforts the naked native has a contempt. With us masters, all he contends for nevertheless is equality. He acknowledges the British government, and even accepts from the governor grants of his own patrimonial land. Some of the Indians have also seriously applied to be allowed convict-labourers, as the settlers are, although they have not patience to remain in the huts which our government has built for them, till the maize and cabbages that have been planted to their hands are fit to gather. So the Spaniards succeeded at length in domesticating many of the negroes of the Philippine Islands, and con-

verting them to Christianity, to which they made no objection as long as they received subsistence; but when they were obliged to labour for the maintenance of their family, they returned to the mountains. We have now lived among the Australians more than thirty years; and yet, like the North American Indians, or the negroes of the Philippine Islands, they have adopted none of our arts of life, with the exception of exchanging their stone hatchets and shell fish-hooks for our iron ones. They will never become builders, or cultivators, or mechanics, or mariners, like the New Zealanders or the South Sea Islanders, nor indeed till they cease to be at all, will they ever be other than they are.

When all thy simple race is extinct, thy name, gentle and well-bred Harry! shall be recorded, at least, in the pages of this journal.

"Our courtiers say all's savage but at court,"

but of this, at least, I am sure, that thou wert the most courteous savage that ever bade good-morrow. Compliments are difficult things to an unpractised tongue, but thou wert naturally polite; and I owe thee at least this poor return for the grace and dignity of thy compliments. And thou too, Cogy! never shall I forget thy intoxicating laugh; and the recollection of thy good-humoured face will come across me in other climes and at distant days, like a picture that will never lose its interest. Very pleasant wert thou to me, Cogy, when pleasures with me were very rare.

After leaving Cox's River, we ascended a very steep hill called Mount Blaxland, and saw Wentworth's and Lawson's Sugar-loaves, as Governor Macquarie called them. They are mere hummocks,—lumps of sugar.

These three gentlemen, namely, Messrs. Gregory Blaxland, William Wentworth (the author of the inflated and convict-party Description of New South Wales, though, by the by, his discovery of the transalpine country is the only thing it does not mention), and Lieutenant Lawson of the Royal Veteran Company, are exclusively intitled to the merit of exploring this pass over the barrier mountains of the colony, and therefore ought to have been more substantially rewarded, than by a mere grant of one thousand acres each of the country they discovered, and the sugar-plum of a name. In this attempt Lieutenant Dawes, Captain Tench, Hacking, Ensign Barrallier of the 102d regiment, the enterprising Mr. Bass, and Mr. Caley the botanist, had successively failed. When Messrs. Blaxland, Wentworth and Lawson returned home only for want of provisions, then Governor Macquarie sends forth Mr. Deputy Surveyor Evans, who very naturally sees the next high hill, and calls it Evans's Peak or Crown, and pushes on to Bathurst Plains; and the journals and geographies talk of the discoveries of Mr. Evans and Governor Macquarie.

A change now takes place in the botany of the country. The banksia integrifolia reappears; and we took leave of the banksiæ serrata and ericæfolia, in a very stunted state, on the mountains. Henceforward, the anguillaria dioica is the most common flower all the way; but the most universal on both sides of the mountains is a species of euphrasia.

The quiet of a beautiful night on the banks of the Fish River led me to remark on " rural sounds." The notes of the birds of New Holland are rather cries than songs, but many of them are pleasing and plaintive.

Some are harsh and vulgar, like those of the parrot-kind, the cockatoo, the coachman's whip-bird, the bell-bird (which I call the creaking-wheel-bird), the razor-grinder, and the laughing jack-ass (a species of kings-fisher*); but a sort of cuckoo-noted bird sings at night, something between the voice of the English cuckoo and the bark of the watch-dog. The river treated us with a frog-concert all night,—a constant common croaking, κοαξ, κοαξ, timed by bass-notes, like a deep sheep-bell, or the human voice. The Fish River is not so picturesque as Cox's; but it is a full and rapid stream, with rippling falls, and equally rich in flowers. The fish would not bite, but we shot a wood-duck for breakfast. Here we killed a brown snake, about six feet long.

Friday, 11*th October*. Having rested till noon, we proceeded to a settler's farm at O'Connell Plains, also on the Fish River (fourteen miles). The country is now very open, lightly timbered with dwarf trees, clothed with good grass, and well watered. Passed Sidmouth Valley, now granted to a cisalpine settler,—a pretty stock-farm. O'Connell Plains is the first naturally-cleared land that the New South Wales traveller sees, and it strongly reminded me, both in its brown soil and tufty grass, of the "High Plains" of Van Diemen's Land, only it is much better watered.

It is singular that the geology and botany of Australia should run in parallels of meridian; but such is the fact, within reasonably isothermal latitudes. This was constantly observed by Mr. Oxley, in his expeditions

* To which I would have given the name of alcedo onocrotalus; but I am informed that it is the dacelo gigantea of Dr. Leach, or the great brown kingsfisher of White.

into the interior of this country. The eucalyptus cordata, the mimosa derwentea, the hakea microcarpa, and the epacris ruscifolia of Van Diemen's Land, I found perpetually recurring on this side of the Blue Mountains of New South Wales, being, more than Cumberland county, in the longitude of the river Derwent. How came the world planted and animalled, to say nothing of manned? Why planted in longitudinal furrows? Are the artificial measurements of the globe by man recognised by Him "who hath weighed the mountains in scales, and the hills in a balance?" The evisceration of passage-birds cannot account for the transportation of seeds. Nonsense. As well might the roc of the Arabian Nights convey beasts and men from one country to another. "The distribution of organic beings on the globe (says Baron Humboldt) depends not only on very complicated climatic circumstances, but also on geological causes, with which we are entirely unacquainted, because they are connected with the original state of our planet*." "New Holland contains about forty European phænogamous plants, and the greater number of those plants, which are found equally in the temperate zones of both hemispheres, are entirely wanting in the intermediary or equinoctial region, as well in the plains as on the mountains. How can we conceive the migrations of plants through countries of such a different climate, and which are now covered by the ocean? How have the germs of organic beings, which resemble each other in their appearance, and even in their internal structure, unfolded themselves at unequal distances from the poles and the surface of the seas, wherever places so distant present some analogy of

* Edinburgh Philos. Journal, vol. vi. p. 280.

temperature*?" "The more we study the distribution of organised beings on the globe, the more we are inclined, if not to abandon the ideas of migration, at least to consider them as hypotheses not entirely satisfactory. I am inclined to think that these problems cannot be solved, and that the task of the philosopher is fulfilled, when he has indicated the laws according to which nature has distributed vegetable forms†."

This farm is a beautiful English-looking spot—meadow and river. Here the fish bit readily. They consist, both in the Fish River and in the Macquarie, into which it runs, of only two kinds,—the one a fresh-water tasted, perch-like fish, and the other more cod-like, and sometimes growing to the size of twenty pounds weight.

A bird is frequent here, called the spur-winged plover. It has a dull yellow lappet-like hood, and is armed with a claw of the same colour, on the shoulder of each wing. It is a species of jacana (parra, *Latham*).

Saturday, 12th October. Rain, which came on last evening, set in to-day, and detained us at this farm till noon, when the weather cleared up, and the evening proved beautiful. Our road now lay over a succession of plains, still more clear and fine than O'Connell Plains. These are called Macquarie Plains and Bathurst Plains. In the former, the Fish River joins the Macquarie. Arrived in good time at the township of Bathurst. Here we set up our rest, and pitched our tent for the Sabbath, on the naturally cleared land of the winding banks of the Macquarie, which are here and there

* Humboldt, Personal Narrative, vol. iii. p. 491.

† Ibid. p. 495.

edged with a few swamp-oaks (casuarina paludosa). I could hardly believe I was travelling in New Holland this day; so different—so English—is the character of the scenery—downs, meadows and streams in the flat—no side-scenes of eucalyptus: but by "the white daisy of the sod," I suppose Mr. Evans must mean either the gnaphalium or the aster, for I did not observe the bellis of Australia here. The scarcity of wood now takes away the American log-appearance of the cottages; they build of turf here, and roof with straw or reeds, instead of wooden shingles. You may see as far as the eye can reach. Stockmen, cattle and sheep occasionally form your horizon, as in Old Holland—a Paul Potter or Cuyp effect rare in New Holland. At sunset we saw wooded hills, distant enough to display that golden blue or purple which landscape-painters love. The smoke of the little village of Bathurst is seen for miles off, which that of no other town in Australia is. These things may seem trifling to an English reader; but by an American or Australian, accustomed to travel through the eternal valley of the shadow of monotonous woods, the charm of emerging into any thing like European scenery will be duly appreciated.

At Bathurst, saw what is called the native turkey. It is the New Holland vulture of Dr. Latham; and is one of the most remarkable birds found in Australia, appearing to form a connecting link between the rapacious and gallinaceous orders. Quartz pebbles now form the surface of the geology.

Sunday, 13th October. An English sabbath-morning:—heavy mist slowly rolling away, lingering with a light cloud across the tops of the hills. The principal chaplain of the colony (the Rev. Samuel Marsden)

who happened to be here on a visit, performed divine service in the government granary (a large brick building) to about sixty people, including soldiers and convicts. After service, I visited a few of the small settlers' huts, and found the parents cleanly, and the children even expensively, drest. Rum, the bane of colonies, has scarcely yet found its way over the mountains; and happily the town of Bathurst is not yet large enough to support a public-house. The afternoon proved stormy, and the night rainy.

Monday, 14*th October*. Cloudy morning, with constant rain all day, which confined me to my tent from my intended excursions round Bathurst. The river is rising rapidly.

Tuesday, 15*th October*. Morning windy and cloudy, but the day proved fair. The Macquarie very high, and still rising. Left Bathurst at half-past ten o'clock for the stock-location of a cisalpine settler at King's Plains, twenty-five miles to the south-west, through Queen Charlotte's Valley, and arrived there before sunset;—a beautiful ride through fertile plains (Evans's), or thinly and dwarfly wooded grazing-land, richly watered with creeks and swamps (which horned cattle love), emptying themselves into the Macquarie River. These (after the late rains) assumed the appearance of rapid streams or boggy land; but the spring grass promised all the better, and the water soon drains off the undulations of this beautiful country. The waters abounded with fine black ducks, two of which formed our supper; and we saw a pair of that species of bittern, called by the colonists the native companions (ardea antigone), fly elegantly over our heads.

Procured a cod-fish from a creek of the river Mac-

quarie, which we crossed in our way, weighing nineteen pounds. This is truly a land flowing with milk and honey.

> "Here we behold the large sleek neat,
> Unto the dewlaps up in meat."

The settlers' convict-servants (stockmen and sheep watchmen) do little but drone about their filthy turf-huts, and have as much milk, fish, mutton and flour, as they can eat and drink. The stockmen do not see their cattle once in six months perhaps; and the shepherds are proportionally negligent. The settler, who would live on his own farm, could not fail to thrive in a country like this.

Wednesday, 16*th October*. The day perfectly fine. Rode completely over this stock-location. These occupations (with the exception of a reserve of ten miles on the south side of the river*) are freely accorded by the present government of New South Wales to cis-alpine settlers, whose grants of land are surcharged by the increase of their cattle and sheep, and whose home-runs are now hemmed in by neighbouring grantees. They consist of a ticket of occupation, at six months' notice to quit, of two miles of pasturage each way from a centre. This is a most liberal feature in the administration of Sir Thomas Brisbane. In Governor Macquarie's time, although the cattle and sheep, to the eastward of the mountains, were dying from drought, and there were grass and water in abundance across the mountains, no settler was permitted to take his cattle over the Nepean, or even to cross it himself on a visit, without a written pass from the governor. The follow-

* Since this was written, the whole of the south side has been reserved.

ing order upon the subject was issued by Major-General Macquarie:

"The military guard, stationed at the first depôt on the mountains, will receive full instructions to prevent the progress of any persons who shall not have obtained regular passes to visit the country only. The necessity for the establishing and strictly enforcing this regulation is too obvious, to every one who will reflect on it, to require any explanation here."

I have reflected, but I cannot see the necessity. If the intention of the regulation was to prevent the escape of convicts, the Report of the Commissioner of Inquiry into the colony records only one instance of such an attempt, and that was by a party of fifteen, in search of a supposed Dutch settlement on the west coast, who overpowered the guard, and wandered in the ravines of the mountains for five days, having nothing to eat but the provisions they had brought with them, till they were taken. Fugitives for the purpose of bush-ranging would not have crossed the mountains where there were no settlers to plunder. The fact is, that the transalpine country was treated by Governor Macquarie like a gold or diamond mine, and reserved till government should be pleased to use it itself. Some of the wild ill-bred cattle of the crown were sent into the manger to play the part of dog; and the consequence is, that many have now strayed away hundreds of miles on the Lachlan River and to the north of Bathurst, and will spoil the improved breeds of the transalpine settlers for ever, just as the two bulls and five cows, which strayed away from the Port Jackson camp in the year 1788, and were discovered at the Cow Pastures

in 1795, have, in the persons of their innumerable wild progeny, adulterated the fine breed of Mr. M'Arthur. It is high time that effectual measures should be taken to eradicate these animals from the face of the country. Some from the Cow Pastures have been caught for the government stores; but as they lose all their flesh in taming for the slaughter-house, they had better be shot in the woods, and salted down on the spot, if that will pay the expenses of men and horses to hunt them. They used to be preserved politically, under a notion that they would always be a resource against famine; but the colony has long got beyond all danger of that kind, and they now merely serve to seduce away some and debase the breed of others of the settlers' better stock, and to hold out a temptation to the many convicts, who have a passion for a bush-ranging life, to commit a capital crime by stealing the calves.

The country which I rode over to-day is of the same description as that of yesterday. Saw hundreds of ducks in the streams, black, musk and wood-ducks; also another pair of native companions; and quails, snipes, cockatoos, parrots and parrakeets, without number.

Thursday, 17*th October*. Still settled fine weather. Rode to the stock-locations of two more cisalpine settlers, ten miles to the westward, and back. All fine grazing country for both cattle and sheep, but more swampy than this station, from the circumstance of the waters not being drained by creeks.

Saw this day the first and only kangaroo. These stock-settlements are great enemies to this beautiful and unique species of game. The stockmen hunt them,

and the cattle and sheep supplant them. In a few years, the kangaroo will be as rare as "the native burghers of this desert city" themselves. So the beaver and wild deer of North America are becoming extinct; and thus is man necessarily advanced from the hunter to the pastoral state. And these stock-keepers will be the best and cheapest explorers of the country. The great graziers are obliged each to go beyond the other*; so that, in no long time, the land on the banks of the Macquarie being chiefly good pasture, it will be certainly known whether there is any channel out of the shoal-lake, in which Mr. Oxley found that river to terminate†.

* Mr. Cox has already formed a station seventy miles to the north of Bathurst, and Mr. Cunningham, the botanical collector for Kew Gardens, has discovered and ably laid down a fine tract of country, abounding in well-watered plains and good-timbered land, still further to the north of that settlement, and a pass, through a ridge of mountains which stretch east and west, to Liverpool Plains, discovered by Mr. Oxley in 1818. This latitudinal dividing range is situated on the other side of a stream, named by Mr. Lawson, who last year failed in his attempt to make Liverpool Plains, the Goulburn, and in many parts the mountains resemble the Blue Mountain ranges. The pass will be found to the NW. of the Goulburn; and Mr. Cunningham has marked trees from his last encampment, twelve miles north, through it, to the southern large link of the chain of Liverpool Plains, which extend NNW. forty-five miles at least, being bounded only by a faint blue horizontal line at that bearing. Thus has Mr. Cunningham effected a clear, interesting, well-marked route for the grazier to Liverpool Plains from Bathurst, which he estimates at 140 miles throughout its course, in the discovery of which the spring heads of the Coal River streams, as well as the country above Mr. Howe's track W. and NW. have been examined.

† Government has, since this was written, formed a small establishment of convicts at Wellington Valley on the river Macquarie, eighty miles beyond Bathurst; but nothing can be expected from the incapacity of its commandant.

Returned by the huts of a sheep-location, and found them deserted by reason of a recent plunder on the part of the native Indians. These, and a few accidents more serious, will happen till the natives become more domesticated among the settlers themselves (their servants don't know how to treat them); but their thefts are generally confined to a tomahawk or an axe, the temptation of possessing which is too irresistible for black human nature. But the aborigines of this new country very rarely appear in combined numbers; and are easily scared by guns, horses, or even English dogs*.

Friday, 18*th October*. Cloudy and windy morning, but the rain kept off for the day. Returned to Bathurst, by a shorter route, through another of Evans's Plains, to the westward of Queen Charlotte's Valley. The first half of this division was highly romantic, the creek winding at the base of hills through large, scattered

* By the latest intelligence from the colony (16th August, 1824) it appears that the natives of Bathurst have been for more than two months in a state of hostility with the settlers, insomuch that martial law was about to be proclaimed. Temporary quiet (says my reverend correspondent) may thus be restored; but in order to establish a permanent peace, a missionary is necessary. In this opinion I entirely concur, and earnestly recommend the measure to the Church Missionary Society. The natives would gladly receive one, and would be flattered by his constant communion. I do not promise that they would be civilized or christianized, but they would certainly be conciliated and humanized: and, at least, a right understanding would be brought about between the savage hunter and the half-savage stock-keeper.

"This child but half knows it, and that not at all."

It will be to be regretted if the local government adopt violent measures. One of my letters attributes the commencement of these hostilities to a similar mistake on the part of the new commandant of Bathurst, who imprisoned one of the chief savages in irons for a month, for some offence, and then turned him loose to his revenge.

and piled masses of rock, forming little falls and strong ripples. The second half lay over Evans's clear plain; —a fine country, but not so well watered or so beautiful as Queen Charlotte's Valley. Dined at a large settler's farm, on the other side of the Macquarie River, near Bathurst. There was an English air of neatness about the homesteads and paddocks. Some of these were matted with English grasses, and stocked with fine-woolled sheep, and lambs as big as sheep.

Saturday, 19*th October*. The rain came on to-day, and kept me under canvas.

Sunday, 20*th October*. Still rainy and windy. The principal chaplain again performed divine service, to a congregation of about an hundred people, and preached an excellent extempore sermon.

Monday, 21*st October*. Cloudy, windy and cold, with squalls of hail. Departed from Bathurst, on my homeward journey at nine o'clock, *a. m.* and arrived at Sidmouth Valley in good time (twenty-four miles). The hills, which shut this valley in, are really picturesque in their outline and shadows,—lightly wooded to the top, showing there like a fringe. This farm is watered by a swampy creek from the Fish River. I returned hither by a different and longer route than through O'Connell Plains, namely, without crossing the Macquarie River, over the Campbell River (Governor Macquarie's seventh encampment). This is a rapid stream, running through a beautiful country, on which Lieutenant Lawson, the present commandant of Bathurst, has a farm. The Campbell and Fish Rivers together form the Macquarie; but (strange to say) the latter is scarcely so large as the Fish River alone. The Camp-

bell can never lay claim to the "very considerable magnitude" that Governor Macquarie assigns to it; but a great quantity of water runs through them all somewhither. Stranger still that it should all end in a vast swamp!

Tuesday, 22d October. Fine weather again—clouds passing away. Proceeded at nine o'clock, *a. m.*, and arrived at six, *p. m.* at Cox's River (twenty-three miles) —a delightful botanical and picturesque encampment. Found the stream pretty full and rapid, from the late rains, as was also the Fish River, which we passed on this day. There is a corporal's party of the 48th regiment stationed here, as well as at Spring Wood.

Wednesday, 23d October. Clear night, with heavy dew, hoar-frosted in the beautiful morning. Found a fifth creeping grevillea here. Rode to a waterfall a mile up the river; but there is no height for the water to fall from, and the fresh was not so great as the hollow rocks seemed to indicate it sometimes is. It was late before I proceeded, and we were obliged to unlade the cart in ascending Mount York, so that the sun set when we arrived at about the thirty-seventh mile-tree from the Nepean (eighteen miles and a half), and encamped at a place called Marsden's Valley, from the circumstance of that gentleman's having lost some cattle here, as they were being driven over the mountains.

"And lose a substance to preserve a name."

I found the grevillea acanthifolia in the swamp at Blackheath, and also at the watering-place in this valley. Admired the view of Pitt's Amphitheatre from this side of Blackheath much more than before. The sun was

declining at the back of it; and the shade softened its monotonous harsh bosom ("stern, rugged nurse") into misty blue or mountain grey. There is a bold rocky hill for the fore-ground; and Cox's River was seen winding in the arena of the amphitheatre in several places. This river has been traced into the Nepean by the Warragumba. Altogether the effect of this day's journey, on a clear afternoon, was much finer than I thought it, when I was outward bound on a sultry day. Thomas Moore may be of a different opinion, but (for me) I prefer "evening's best light" to the "wild freshness of morning."

A mild, calm, moonlight evening.

The telopea speciocissima, xanthorrhœa hastile, the common banksiæ, and many other Port Jackson plants, end exactly at Mount York, the last of the Blue Mountain Range; and there is a visible change in the botany and geology from cisalpine to transalpine.

Good water, but little grass at this encampment: but there is no grass on the whole road over the mountains, whatever Governor Macquaire may say about "the traveller's assuring himself of good grass at all *his* encampments"—nothing but rocks, and stones, and trees, and flowers:—yes, there is water enough. The traveller must therefore take corn for his horses with him.

Thursday, 24th October. Last night the wind rose high and roared among the trees, till I thought some of them would fall upon the tent. Morning cloudy and windy—afternoon calm and close. Set out in good time, and arrived at Spring Wood considerably before sunset (twenty-four miles and a half). Made two diversions from the road: one to Pulpit Hill (by which

the old road passed), a hill crowned by a rock, more like an elbow-chair, a cathedra than a rostrum; and the other along the stream, through the swamp called Jamison's Valley, to a small cascade below the King's Table-land. The fall was not worth seeing;—a falling off even from Cox's fall. The water, being small now, only slid down a sloping rock; and even after rains, the step is so short that nothing can be made of it. The scenery is very barren, and the ground very boggy. The most curious thing is the red, shealing, cylindrical, honey-combed nature of the sandstone-rock in the cliffs above and along the stream. But I am since told, that I did not go far enough to see the chasm or fissure in the rock, down the precipice of which there is a slender waterfall of great height (a thousand feet, according to Governor Macquarie's notions), which he called Campbell's Cataract; and that the whole of the table-land next to this chasm appears as if it had undergone a violent volcanic eruption; the stones seem to have been once in a state of fusion, are formed into masses, and have the appearance of melted sand and iron-stone. I found the grevillea acanthifolia in this stream also. The King's Table-land should be called the Mountain-pass Ridge. It is the only passage that Messieurs Blaxland, Wentworth and Lawson could have effected. This day was not clear; and though Pitt's Amphitheatre had the benefit of a mist, yet the fine distant view from this elevation of Windsor, Prospect Hill and the Colony, was lost in the hazy horizon.

Spring Wood, which I was too late in my outward journey to see, appeared to-day a fine forest of tall trees, with some little grass between, after the barren dwarf-

treed, underwooded, shrubberries, to which I had been accustomed on the mountains. The spring runs at the foot of a picturesque rocky dingle, about a mile off.

The telopea was now in even finer bloom than on my outward journey; and I should not have omitted to mention the many large ant-hills of small ants which occur on the mountains. They are built of fine clay, and, like hay-cocks, are five or six feet high *. If you damage one on your way out, you will find the industrious society will have repaired it by your return. They are perfectly different from the iron-stone gravel formicatories of the large ants of the country on the other side of the Nepean. By the way, some of these cisalpine ants, which make their nests under ground, frame little round clay lids to their entrances, with which they close the holes in wet weather.

Friday, 25th October. The rain came in the night with wind. Took my final departure this morning, and reached home soon after noon, having travelled 300 miles in less than three weeks. It now only remains for me to express my thorough satisfaction, that this fine transalpine country will be the making of the colony of New South Wales, and will give it a decided superiority over that of Van Diemen's Land. "The general description of these heretofore unexplored regions (says Governor Macquarie) given by Mr. Evans (himself the deputy surveyor of Van Diemen's Land), is, that they very far surpass in beauty and fertility of soil any that he has seen in New South Wales or Van

* My friend Mr. Swainson, who is master of almost every branch of natural history, informs me that this is doubtless a new species of termes, and that the white ants of Africa build their nests precisely in the same way.

Diemen's Land." If they had not been discovered, grazing, from which alone the state can derive an export, must have come to a stop. Here is an opening for English emigrants for centuries; and I have not a doubt that, in spite of the want of navigable rivers, New Holland will be a second America. True the mountain road is very difficult, but the track to Bathurst, to the southward, by way of the cow-pastures, is much longer, and in many parts (I am told) as bad. Mr. Cox's original road, across the mountain-ridge, has been already greatly improved in many places by Mr. Lawson; and a man, who has been long the overseer of the road-gang at Cox's Pass, and whose name ought to be mentioned (George Palmer), offers to avoid that pass, and save ten miles, with the twelve months labour of forty convicts. It is also said, that a shorter road has been projected from Richmond*;

* Since this was written, Mr. Archibald Bell, jun. of Richmond Hill, has, after one unsuccessful attempt, effected a passage from that part of the country to Cox's River, which as the pass across the mountains trends so much to the northward, will not only be the readiest route from the Hawkesbury and Hunter's River, but will be as near from Paramatta, as the old road over the mountains by way of Emu ford, and infinitely less difficult and sterile. Mr. Bell is entitled to the sole merit of this discovery, and the route has since been surveyed by a gentleman from the surveyor general's office. Mr. Bell travelled N. W. from Richmond, about 14 miles to Picture Hill, and thence due W. to Tomah, which is a round hill seen on the right from the Burnt Weather-boarded Hut on the Bathurst road. On going W. about half-way up this mountain, he turned to the S. and after proceeding about a mile in that direction, found an excellent passage down it. He then proceeded round the side of an opposite hill, about a mile and a half in a W. S. W. direction, and then bore W. for the remainder of the day, and N. W. the next day, till he reached Cox's River. He found no rocky ground till after leaving Tomah, and the whole distance of it did not then exceed eight or nine miles. The greatest difficulty he had to contend with was the

and, after all, if the sheep be brought to be washed and shorn at Cox's River, and a canal of twenty miles be cut from Emu ford to the head of the Paramatta river, there will be only 56 miles of land-carriage, which the wool will well repay; and, in the opinion of some well-informed colonists, such a junction-canal would drain off any future flood in the Hawkesbury and Nepean rivers. It is fervently to be hoped that the present local government will feel the real value of this new country, and the public importance of improving every access to it.

If this matter were put into the hands of the surveyor-general, and two or three commissioners, of whom Mr. Lawson should of course be one, the expense to the crown of the labour required from convicts might be greatly lightened; and individual subscription, or toll, would be cheerfully contributed to so good and great a public work. It is quite clear, from his shutting it up, that Governor Macquarie never saw this country in its proper light, but was only vain of the sound of it, as connected in all possible changes, with every branch of his name. From the physical science and

thick brush in the first part of his way to Tomah, so much so, that in one place he was forced to cut his way through three miles. He left a good track all the way he went, and was never obliged to unlade his baggage-horses. The whole of Mount Tomah is covered with ash and sassafras trees, of a prodigious size. It is only after leaving Tomah that the country assumes, for five miles, the appearance of the Bathurst road in point of grass; but even for that space, the feed is better than near the Weather-boarded Hut on that road. After that distance, excellent grass continues with little variation for the rest of the way; and there is plenty of water the whole way. The distance of this route from Richmond to Cox's River may be estimated at about 35 miles.

political economy of the present local government, better things are expected. If free emigration is to be encouraged hither, at Bathurst the settler may immediately live upon the fat of the land, and in time export his fine wool. But then the wool of New South Wales must, upon its importation into England, be exempted from the duty on foreign wool*. The policy of this exemption is, at least, as old as Bacon, who in his Essay upon Colonization, says, "Let there be freedom from custom, till the plantation be of strength; and not only freedom from custom, but freedom to carry their commodities where they may make the best of them." If Great Britain wishes her colonies to consume her manufactures, she must not drive them, by heavy duties on the export of their raw material, to manufacture for themselves.

If convicts are still to be transported hither, the only chance of their reformation consists in scattering them widely over the country, and giving them pastoral habits. Convict transportation is but a bad system of colonization; and Governor Macquarie, by his preference of the convict to the free, made it worse for the plantation, and totally inoperative as the penalty of felony, or the penitentiary of vice. "It is a shameful and unblessed thing (says the wise man just quoted) to take the scum of people, and wicked condemned men, to be the people with whom you plant; and not only so, but it spoileth the plantation; for they will

* Since this was written, the duty on Australian wool has been reduced for ten years to one penny per lb. by statute of 3 Geo. IV. c. 96, s. 6. but as other foreign wool has been since put on a level with it, the argument is still good for the abrogation of this penny.

ever live like rogues, and not fall to work, but be lazy and do mischief, and spend victuals, and be quickly weary, and then certify over to their country, to the discredit of the plantation." The evils and expense of the transportation-system would certainly be lessened, by placing the convicts more in the service of farming and grazing settlers, out of the reach of the temptations and evil communications of great towns, the establishment of which was too much the policy of the late governor. The solitary life of a shepherd, or a stockman, would gradually soften the heart of the most hardened convict; but instead of this, Governor Macquarie's system was to keep them congregated in barracks, and employed at a ration of a pound and a half of meat, and the same quantity of flour, *per diem*, upon showy public buildings, many of them works of mere supererogation. Of wretches possessed of no better means of reformation than these, it could not be expected that industrious colonists should ever be made. When their period of transportation expired, or was remitted by favour, they would, therefore, take their grant of land, and allowances for settling, and sell them the next hour for spirits. It is true that this was abuse, but it was an abuse inseparable from such bad policy; and, perhaps, the best criterion for estimating policy is to say that that is good which is open to few, and that bad which is exposed to many, abuses. If government will encourage a better system of colonization, New Holland will soon be a happy and thriving province; for, with such a climate and soil, and so many Englishmen as it contains already, thriving and happy it will be sooner or later. Eventually, no doubt, from

its distance from the parent country, and its extent in itself, it will be an independent state; and the same mountains, which now obstruct the passage of the colonists, will be an impenetrable barrier to a foreign foe, should such an one ever cast an envious eye upon the colony of New South Wales. Of a parent foe, after the warning of America, I will not suffer myself to contemplate the possibility; and I am sincere and sanguine in my hopes, that the enlightened eye of that parent will see the public policy of encouraging free emigration to the fine country beyond the Blue Mountains of New South Wales.

It may give weight to the above observations to add, that the writer of this journal has himself no intention of occupying land or settling in that country, and is possessed of no more sheep than a pastoral poet. Non hic colonus domicilium habeo; sed, topiarii in morem, hinc inde florem vellico, ut canis Nilum lambens.

CHAPTER III.

JOURNAL OF AN EXCURSION TO THE FIVE ISLANDS AND SHOAL HAVEN, ON THE COAST OF NEW SOUTH WALES.

Saturday, October 18*th*, 1823.—Rode from the neighbourhood of Liverpool, through the district of Airds (in which are the small church and court-room of Campbell Town), to Appin, to breakfast; and thence to Illawarra, or the Five Islands, to dinner, a distance of sixty miles south of Port Jackson. The range of the Blue Mountains, which divides the east coast from the western interior of New South Wales, terminating with the cliffs of the Five Island coast and Shoal Haven, the road from Appin presents the same rocky, sterile country, as the Blue Mountain pass, and the same flora, with the additions of the doryanthes excelsa, or gigantic lily, and the crinum australe: on the Five Island beach is also found granite, as at Cox's River. Passed the source of the Nepean River, forming a small cataract, under which the stream hides itself in a picturesque glen; and, indeed, it afterwards finds a subterraneous passage through the sandy rocks to the Cow Pastures. The descent from this range of mountains to the sea-shore is very precipitous, grand, and even tropically luxuriant in point of vegetation. Here may be seen, for the first time in this colony, the cabbage palm (corypha australis) towering above all the trees of the forest, to the height sometimes of

100 feet, with its bunches of leaves only at the top, flabelliform, peltate, round, and fan-like. These trees once also characterized the neighbourhood of Port Jackson; but they have long been exhausted, the spungy trunks having been used for splitting into hut-logs, and the large leaves for thatch; for thus simply were even the officers of the first fleet, the Romuluses of the colony, lodged. The absence of these trees has taken away much from the tropical character of Sydney, which can only be restored by the garden-cultivation of them, together with the banana and the New Zealand bamboo, for the climate is not hot enough for the cocoa-nut. The jungle sides of this Illawarra Mountain were also enriched with the arborescent fern (alsophila australis), the trunk of which, not growing so tall as the palm, lifted none of the beauty of its large feathery leaves out of the reach of our sight.

These rare productions of the vegetable kingdom are, in all other countries, strictly tropical; and these "weeds of glorious feature" have no business beyond the latitude of $23\frac{1}{2}^{0}$ from the equator, and yet here they are in $34\frac{1}{2}^{0}$. But this is New Holland, where it is summer with us when it is winter in Europe, and *vice versâ;* where the barometer rises before bad weather, and falls before good; where the north is the hot wind, and the south the cold; where the humblest house is fitted up with cedar (cedrela toona, according to Mr. Brown); where the fields are fenced with mahogany (eucalyptus robusta), and myrtle trees (myrtaceæ) are burnt for fire-wood; where the swans are black and the eagles white; where the kangaroo, an animal between the squirrel and the deer, has five claws

on its fore-paws, and three talons on its hind-legs, like a bird, and yet hops on its tail; where the mole (ornithorhynchus paradoxus) lays eggs, and has a duck's bill; where there is a bird (meliphaga) with a broom in its mouth instead of a tongue; where there is a fish, one-half belonging to the genus raia, and the other to that of squalus; where the pears are made of wood (xylomelum pyriforme), with the stalk at the broader end; and where the cherry (exocarpus cupressiformis) grows with the stone on the outside.

At the foot of this range of mountains is scattered the red cedar tree, of which the colonists make their furniture, and with which they fit up the insides of their houses. It is a genus of cedreleæ, allied to flindersia, according to Mr. Cunningham. The procuring of this timber occupies many sawyers and boatmen from Port Jackson. The cedar planks, as they are formed by sawyers at the pit, are carried on men's backs up to the mountain summit, whence carts (approaching by a narrow road cut through the forest on the ridge) convey the planks to all parts of the colony, or they are carted to the shores of Illawarra, and navigated to Port Jackson in large open boats. The government has not (by reason of its ample supply from Hunter's River and Port Macquarie) secured any portion of these cedar grounds to itself, simply compelling each person to take out a permit from the colonial secretary's office, which must specify the number of feet of timber required, and without which protection, the horse and cart, or boat, and the cedar, are liable to seizure by any constable. In a new run in the wild forest, the sawyers have to perform the preparatory labour of clearing their path, and a fall

for the trees, which would otherwise be prevented from reaching the ground by amazingly strong vines (scandent or volubilous plants). They then pit the stem, cut into short cylinders of from eight to twelve feet in length, and saw them into planks of one or two inches thick. For these they receive of the cartmen *22s.* for every 100 feet, from which sum is to be deducted 6*s.* per 100, paid to the carrier from the pit to the cart, leaving 16*s.* to be divided between the pair of sawyers. The cartmen, after carrying an average load of 300 feet in the plank upwards of 60 miles to Paramatta, over a road, in part very rocky and difficult, obtain 45*s.* or 50*s.* per 100 feet, from builders, carpenters, &c. It is to be regretted, that so few of the timbers that grow on this mountain are known. Excepting the red cedar, the wild apple (achras australis), the plum (cargillia australis), the sassafras (cryptocarya glaucescens), the rosewood, so called from its scent, not colour (a genus of meliaceæ*), and the turpentine tree (tristania albicans), the wood-cutters had no names for the many trees of gigantic growth which cover this mountain.

Illawarra is a fine district of good grazing, and some excellent arable, land, close to the sea-shore; insomuch that, though distant and difficult from Sydney by land, it was settled in Governor Macquarie's time, when he refused to let anybody go on the other side of the Nepean. As a marine situation, it is very beautiful. The Five Islands show like one large and two small ones, and look picturesque seaward, while the back ground presents a line of hills, among which the Hat Hill of Captain Cook and Mount Molle are conspicuous.

* Quære, trichilia glandulosa ?

Sunday, 19*th October*.—Rested, or only walked over the miles of Illawarra farm, the property of David Allan, Esq. late commissary-general of the colony, who had the merit of setting the example of settling the Five Island district. The creek ravines still presented a tropical luxuriance of vegetation—palms, ferns, and vines, or parasitical trees, the last festooning and twining their branches in all directions, and greatly relieving the tall leafless monotony of the gum-trees. Epidendra also built their nests among them, the asplenium nidus, the acrostichum alcicorne, and the dendrobium æmulum. There is also a large-leaved tree, the slightest touch of which brings away hairs like cowhage: it is an undescribed species of urtica.

Monday, 20*th October*. Rode to Shoal Haven, thirty-six miles still further to the south, six or seven of which were through a mass of vegetation, requiring pioneers to penetrate it. The vines or lianas wreathed the trees, like the boa constrictor, and festooned the way, as if they were placed for one of Astley's equestrians to leap from the horse over them, or hung dangling like the ropes in a belfry. The valley reminded me of Humboldt's descriptions of South American vegetation. The ground was unequal, to boot; so that travelling through the jungle was extremely difficult and fatiguing. Here we first saw the seaforthia elegans, a palm equal in size to the cabbage-tree, with pinnate, ferny, or cocoa-nut leaves, from whose broad membranous leaf-stalks, or the spathæ of the flowers, the natives make their water-buckets, simply by tying up each end, like their bark canoes; in the same manner the dairy farmers make milk-pails and cream-pans; and of the leaves they

make hats and thatch;—the cedar, both white and red; and another smaller fern-leaved palm-tree, yet undescribed, of great beauty, its trunk more ligneous, and its leaves more palmy than the common arborescent fern. Our way through the dark dingle crossed the same fresh-water creek fifteen times. The crinum here re-appeared, together with a large arum.

In the first part of our journey this day, we crossed the shallow entrance from the sea of Illawarra Lake, a large opening a little to the south of the Tom Thumb's lagoon of Captain Flinders. The lake was illustrated by natives in their canoes, looking very characteristic and beautiful, now that the progress of English civilization has disarmed this part of the coast of those savage dangers with which it threatened Captain Flinders and Mr. Bass, when they were here in the Tom Thumb open boat. The view was so picturesque—the lake, the hills, and the Indians, "the spirit of them all,"—as to deserve a painter. Our route admitted of two or three long gallops along the sands, which afforded great reliefs to the tedium of the forest-paths and the fatigue of the jungle. Although we set out almost at sun-rise, yet it was nearly sun-set before we arrived at Shoal Haven, where Mr. Alexander Berry has taken his grant of land on either side of the Shoal Haven river. This is the gentleman who first learnt at New Zealand the fate of the ship Boyd, which was cut off by the savages in the year 1809, and who brought away the very few survivors of that massacre*. He has, since his final settling in this colony, explored the geology of this coast with great ardour, from Port Stephens to Jervis's

* Constable's Edinburgh Magazine, vol. ii. p. 403.

Bay, and read before the Philosophical Society of the colony an excellent paper upon the subject.

Tuesday, 21st October. Ascended with Mr. Berry the mountain called by the natives Coolingatta, under which he is building his house. From this considerable, but well-grassed eminence, we saw, as in a map, the sea, the river, and the coast, from Cape George, which is the south head of Jervis's Bay, to Black Head or Point Bass of Captain Flinders, a fine point of grazing land (some of it naturally clear), which we had passed in our way the day before, including Bowen Island off the bay, Crook Haven (the Shoal Haven of the charts) and Shoal Haven River. The mist prevented us from seeing the Pigeon-house Hill of Captain Cook, still further to the southward. The entrance of Shoal Haven River from the sea is dangerous even for boats, and that of Crook Haven, three miles to the southward, or the real Shoal Haven of Flinders, is not very safe. One of the arms of Shoal Haven is separated from Shoal Haven River by an isthmus not a hundred and fifty yards broad; and across this Mr. Berry has cut a canal, being the first canal in Australia. "The land at the back of Shoal Haven (says he), and south of the river, is low and swampy, so as in some places to be incapable of producing trees. There is, however, a more elevated border along the immediate bank of the river;" and this he has cultivated. He has been up the river more than twenty miles, when he was stopped by a long rapid. At this place the river was about a hundred and fifty yards wide, and was flowing perhaps double that distance over small water-worn stones, which it hardly covered. The tide flows thus far, which may

be considered the termination of the inland navigation. So much for Shoal Haven River. Although I am afraid that these grants of land will hardly ever repay Messrs. Berry and Wollstonecraft for their out-lay upon them, yet whoever extends the settling of New South Wales further than any body has gone before him is a benefactor to the colony. I am afraid, in this case, that man has taken possession before Nature has done her work. Immense swamps and lagoons have only been just left by the sea, and the forest land is yet indifferent for grazing; but, though the cedar grounds end before Shoal Haven, the sea is open for any exportable produce that can be raised on patches of alluvial soil, on the alternate projecting points of the river; and Mr. Berry need not be alarmed lest any occupation of the immediate back country should shut in his cattle-run.

Returned to Illawarra this day, though very rainy and stormy. Overtook some natives, the women (as is usual among all savages) carrying the children and baggage, and the men nothing but a spear and a fire-brand. The men led our horses through the difficulties, while we dismounted, and both men and women kept up with our horses a whole stage, upon the promise of sharing our luncheon at the end of it.

Wednesday, 22d October. Rested this morning, and in the evening went to see the natives fish by torch-light. They make torches of bundles of bark, beaten and tied up, and with the light of these scare the bream into motion that lie among the rocky shallows, when they either spear them with the fiz-gig, or drag them from under their hiding-places with the hand, bite their heads, and throw them high and dry on the shore. The

sight is very novel and picturesque—the torch being flashed in one hand and the spear poised in the other—though there were but few natives here at this time, the majority being absent feasting upon a whale which chance had thrown upon the coast. The Indians, however, by no means attribute this to chance, but to the kind providence of the spirits of their fathers, whom they believe to be transformed into porpoises (dolphins) after death, like Bacchus's pirates in Homer, and who, in that shape, drive the whales on shore. With this view, the natives obsecrate the porpoises by songs, when they see them rolling. I found also that the aborigines of New Holland were strictly divided into two classes, the hunters and the fishers; and that they did not dare to encroach upon each other's mode of gaining a livelihood. Red Point of Captain Cook was the scene of our torch-fishing. Much of the rock was flat, and veined in squares, as if it had been paved, seemingly the effect of iron and fusion. Captain Flinders says, the cause of its being named Red Point escaped his and Mr. Bass's notice, but it was plain to us that the iron gave it a reddish appearance.

Thursday, 23d October. Returned to the neighbourhood of Liverpool this day, though very showery. The ascent of the Illawarra Mountain was very steep and difficult, the worse for the rain that had fallen. We were obliged to climb dismounted. The hill appeared to me worse than the pass up Mount York on the Bathurst road; but the route that avoids it is not preferred.

So much for the country of Camden, which contains the celebrated Cow Pastures of New South Wales, and

is full of excellent grazing land, at the back of the mountain ridge, and well watered, which Governor Macquarie's good agricultural districts of Appin and Airds are certainly not. The country at the back of that is called by Mr. Berry "the verdant, well-watered, and very desirable pastoral district of Argyleshire."

CHAPTER IV.

NARRATIVE OF A VOYAGE FROM NEW SOUTH WALES.

I embarked for England on the 4th of February, 1824, and sailed from the heads of Port Jackson with a south-esst wind, which continued more or less foul till the evening of the 12th, when it came round to the north-west.

On the two following days we saw flying-fish, though our latitude on the last of them was 37° 22′, which is a higher southern parallel than this tropical animal was perhaps ever seen in before. We had the wind now from the southward, and next from the westward, as it prevails in these latitudes at this season, and as we wished it to be for the purpose of making an eastern passage home round Cape Horn. But the wind being right aft, with a heavy sea, caused a great rolling of the ship.

On the 18th Captain Cook's Strait between the two islands of New Zealand was in sight, and we passed Cape Farewell in the course of the day, and were at night off the Brothers. It was calm in the night, and the strait being so narrow that we could see the land on both sides, the sea was smooth and the ship steady in the day. The land we saw consisted of barren hills or sand. We observed no signs of inhabitancy. These are not the fertile parts of New Zealand. The mountains were even topt with sand, which we at first took for snow.

The next day Entry Island was in sight, and we passed through the strait; and on the following day, we left New Zealand out of sight. Having cleared the land, the sea ran high, and the ship's rolling became heavy again.

On the 21st we crossed the longitude of 180°, and entered the western hemisphere, as it may strictly be called, though the maps do not divide till 20° more; but having lived more than seven years in the eastern hemisphere, one is anxious to forestal a change.

On the 25th albatrosses were numerous, and on the 26th stormy petrels. On the 28th we saw eight of the former swimming, which they seldom do, and on the 29th the latter were in great variety.

From this time to the 17th March the weather was generally wet and windy, and the vessel being very deeply laden and uneasy, shipped the salt water almost constantly; so that we were imprisoned in our cabins, which were necessarily darkened. This was the worst of doubling Cape Horn; for on the 28th of March, the day on which we actually passed the longitude of it, and left the Pacific for the Atlantic ocean, the weather was fine, and the ship steady; and the next day the sea was calm and the sky beautiful, with Staten Island in sight twelve leagues to the north, looking even green. So was it fine weather for the three following days, but on the last of these the wind came foul.

On the day we doubled Cape Horn, we met a ship about five miles off: the thermometer at this time stood at 44°, being the lowest fall on the voyage.

On the 25th came heavy rain with a squally night, and the sea being against the wind caused a great roll-

ing and pitching of the ship. So the deck was generally wet and our cabin dark again till the 4th day of April, when the dead lights were removed for good; and the worst of our passage was over.

This week we made two Thursdays—in order to accommodate our reckoning to that of this hemisphere, having gained a revolution of the earth, by going back to the sun round the world—two first days of April; so that this being leap-year, I shall have lived 367 days in one year, a thing which few people can understand, and still fewer say. If the Emperor Titus had been up to this, he might have indemnified himself for his celebrated loss.

On the 5th day of April, the thermometer stood at 75°, being a change of 30° in a fortnight.

On the 12th we were so fortunate as to meet his Majesty's ship Tamar, Captain Bremer, bound from England to New South Wales: this was the only vessel we visited during the whole passage, we being bound from New South Wales to England, and a man of war not having sailed from England to New South Wales for twenty years before. An old acquaintance of mine, an officer of the ship, boarded us, and gave us a few newspapers of January and February last, which we should not have seen in New South Wales for three months more. Here be fruits! first profits of the voyage home!

The Tamar was bound to New South Wales on secret service; but on my arrival in England, I found the secret very well known to be the intended establishment of a commercial factory at Port Essington, a discovery of Captain King of His Majesty's surveying

service, on the north coast of Australia. The treaty with Holland having shut us out of all the islands of the Indian Archipelago, into which British goods are not admitted by the Dutch without payment of a very high duty, our government has, by assisting in the formation of this factory, anticipated any foreign occupancy of this part of the Australian coast, from whence the Malays, who visit it every year from Macassar to fish for trepang for the China market, may be supplied with our manufactured goods. It is hoped that the Malays will soon induce Chinese emigrants to settle at Port Essington, and keep up this trade in British goods. The port lies very handy, not only for the Moluccas, but for the Caroline and Philippine Islands, and even for China.

On the same day on which we met the Tamar, we crossed the tropic of Capricorn; and I saw the Great Bear again for the first time for more than seven years:—

> ——— The northern team,
> And great Orion's more refulgent beam,
> To which around the axle of the sky
> The Bear revolving points his golden eye,
> Who shines exalted on th' ethereal plain,
> Nor bathes his blazing forehead in the main.

On the 15th we met a brig ten miles off, and on the 17th another standing to the south-west. These were proofs of our drawing towards the coast of Brazil; and on the 20th the land was in sight, the city of St. Salvador in the Brazilian province of Bahia, latitude 12° 59′, longitude 38° 28′, according to one reckoning; 38° 21′, according to another. Two ships were in sight,

also standing for the harbour of Bahia; and in the afternoon we came to anchor there.

We found Bahia in the possession of the Brazilians, and the Portuguese either expelled or hiding themselves. The Brazilians of the coast are not such finely made men as the negroes of this province, who are celebrated for the beauty of their figures; but the South Americans, notwithstanding the diminutiveness of their forms, will be a great people,—

"A little body with a mighty heart."

The very children in the streets are singing *Liberty*.

The imperial flag was hoisted on the fort, and flying on the ships of war. I wish they had chosen a prettier mixture of colours. They are light green and yellow, with an unmeaning coat of arms.

I went on shore this evening, and called, as is the etiquette, upon the British consul, who lives at Vittoria, in the upper or new town, on Cape St. Antonio, on which is another fort. This is almost entirely an English settlement, and delightfully situated, with lanes, at least clean, if not trim, and gardens, or rather shrubberies, to each house, down to the sea. The mango, and other tropical trees, struck me with their rich leafiness, after the barrenness and dryness of Australian foliage. I found the white cedar, the melia azedarach, or common bead-tree of India, growing here, as well as at New South Wales; and I particularly admired the splendour of that species of acacia, called poinciana pulcherrima, or the Barbadoes flower-fence.

The lower town of Bahia, in which the English mer-

chants have only compting-houses, is very close and disgusting, rather from filth and the manners of the Portuguese, than from the mode of building; for narrow streets ensure shade, and declivity of ground commands the sea-breeze every where by its nature, and would command cleanliness with a very little art. There are many British merchants and shop-keepers settled here, corresponding principally with Liverpool. They are, as they are all over the world, the wealthiest and most respectable people in the place, and in favour with all parties, royalists, imperialists, and republicans.

The next afternoon, I went on shore till my ship should sail, to enjoy the hospitality of my countrymen at Vittoria; for I had no other claim to it than that of common country, but that was enough. Mrs. Graham, in her late Voyage to Brazil, repays the hospitality of the English at Bahia, by saying that "society is at a low, very low scale here among the English," and that "the ladies are quite of the second rate even of colonial gentility." Now, though there are about twenty English merchants here, there are but six married English ladies, and one single one; and when Mrs. Graham was here, there was, in exchange for one of these, the consul's daughter, whom this genteel authoress has the indelicacy to name at full length. It does not appear that Mrs. Graham meant to include Miss P—— in her criticism, but the number of six is too small to scatter censure harmless among; and one of those six must have been Miss P——'s married sister, whom Mrs. Graham also mentions. I can only say that I had the good fortune to be either more grateful or less fastidious. But I should have thought that a very small

share of gratitude, and a very considerable one of fastidiousness, might still have left the guest of Mrs. J—— entirely satisfied of her unaffected good-breeding, and of the perfect politeness of such of her few countrywomen as I had the pleasure of meeting under her roof.

At our consul's house I saw an Indian of the Botocudi (from the interior of the country) who had been to Vienna to see the world, and was staying at the consulate, on his way back to his own tribe. He had a large, round, cake-shaped piece of wood, inserted in a long slit in his under lip, something like the natives of the Port des François on the northwest coast of North America, figured in the Atlas to La Pérouse's Voyage; and a similar piece in a slit in each ear. I have since learnt that there was a Botocudi with his wife and child exhibited in London in the year 1822.

The weather favoured our little *relâche;* and our ship completed her watering on the 23d of April. I had therefore no time to visit the interior of the country, to which, indeed, there are no good roads; but I perambulated the city of Bahia with great diligence, both in caderas, and on horseback. The streets are too steep for carriages, although the hill on which the town is built is not 600 feet high (as the books say), but a little more than 200, *teste* Captain Sabine. The caderas, or curtained chairs, which are used as much by gentlemen as by ladies, are carried obliquely, with only one pole, from the top of the chair, on the shoulder of each of two negroes, so that each may see his way before him, and the sitter enjoy the thorough breeze and see before him too, if he chooses to open the curtains.

As it was the season of the carnival, and this city was once the ecclesiastical metropolis of Brazil, we expected to witness the masquerading holydays of the Roman Catholic religion. But the revolution had left priests at a heavy discount. We found the saint-cupboards in the streets shut up; and the carnival was forbidden by the governor, for fear of political riot.

On Sunday the 25th, I visited the public garden in the fort of St. Peter, presenting a fine terrace to the sea. I found the garden neglected, probably in consequence of the late siege of Bahia by the Brazilians. The remains of an earthwork, thrown up by their troops, are in the neighbouring square. I copied the following inscription from an obelisk in the garden, commemorative of the Prince Regent of Portugal's first landing here, on the emigration of the royal family from the mother country. I wonder the Brazilians have not pulled it down.

Joanni
Priore Reg. P. F. P. P.
huc primum appulso
xi. cal. Februar.
A. D. MDCCCVIII.
Bahiæ Senatus
Monumentum
posuit.
MDCCCXV.

In the afternoon, I re-embarked, refreshed with oranges and limes (though they kept not long), and pleased with Bahia, although I did not find it so musical and romantic as Rio de Janeiro. To be sure, the Portuguese were either away or shut up; and the indolent guitar was silenced by the trumpet of freedom.

There is a large opera-house here, and there was to be a performance that night; but our countrymen did not speak highly of Brazilian taste, or of the ripeness of the revolutionists for elegant amusement.

The climate of Bahia is not oppressive to a visitor; but it must be tiresome to a resident to have the thermometer all the year round from 75° to 85°. Winter rains induce the lower degree, and the higher is always relieved by a sea-breeze.

The oranges of Bahia are particularly fine. When the king of Portugal lived at Rio de Janeiro he would eat no other. They are seedless in the main core. The seeds are in a little perfect sub-orange at the top of the other, which gives the fruit somewhat of a pear-shape, with the seed-chamber divisions indicated in the rind of this little top-orange. The ant is the great enemy of this fruit-tree. Its armies will strip an orange-tree in a night—

> Shake down its mellow hangings, nay its leaves,
> And leave it bare to weather.

I saw some of these little animals walking away with large bits of leaves. No remedy of girthing the trunk with any thing, however poisonous or offensive, has yet been discovered. They surmount all difficulties. Fire at night is the only thing that drives them away for a time.

The only manufactory at Bahia, except that of leather, is of red pottery. The various water-vessels are peculiarly adapted to this warm climate, from the porousness of the clay of which they are made; and the excellent water that is poured from them, after they have

been placed in the sea or land breezes, drinks deliciously cool.

We sailed from Bahia in the afternoon of the 26th of April with a south-east wind and showery weather; and so the wind and weather continued, and prevented us from clearing the land till the 3d day of May. In addition to this foulness of wind, we now found a foul ship; for the vessel having been some days stagnant in harbour, an infernal sulphuric stench came from the hold, and from the bilge-water, which, attracting the lead from the salt-water-stained cabin-paint, rendered the between decks, which were always wet and dirty, perfectly uninhabitable. Was it the hides of the cargo that generated this horrible smell, and produced this sulphuretted hydrogen, which, combining with the oxygen of the paint, formed sulphate of lead? In Mr. White's Voyage to New South Wales, I find that a similar nautical misery on board of one of his convict-ships (containing no cargo), is attributed solely to "the bilge-water, which had risen to so great a height, that the pannels of the cabin, and the buttons on the clothes of the officers, were turned nearly black by the noxious effluvia. When the hatches were taken off (he says, as in our case), the stench was so powerful, that it was scarcely possible to stand over them." But this evil was cured by pumping, whereas, in our ship, the leaky oil-casks seemed constantly to renew the offensiveness of the bilge-water. The wind being no longer aft, this odour was blown into the stern cabins for the rest of the voyage, and rendered the ship more disagreeable in the trade-winds, than in rounding Cape Horn. Scouring was useless; the black-lead was soon

afterwards reproduced; and without going so far as to feel a stain (as Burke says) like a wound, it is not to be conceived by the ladies and gentlemen of England, who live at home in ease, how distressing is the constant sense of uncleanness on board of ship. I am told that this stench and these stains are the consequences of many cargoes, particularly of sugar: and yet masters of ships (from pure indifference to every thing but navigation) take no measures to prevent them, either by the use of unpainted cabin-linings, or by ventilating the holds. He that cannot eat and drink any thing, drest in any way, at any time, out of any thing, touched by any thing, mixed with any thing,—and this under the sight of any dirt, the smell of any stench, the sound of any discord, and the feeling of any motion, should not go to sea. I write this while I am at sea, because the touch of shore is apt to put to flight the memory of all these miseries, however keen at the time; and I am determined to have my revenge of shipboard; and to tell landsmen what truth will utter, and what sailors will not. I said I would write a pamphlet against the sea. I am in a mood to chide the tempest, to rebuke the waves, like King Canute. If my outward ship was heavy and uneasy, my homeward was heavy, uneasy, wet, and filthy.

On the day after we left Bahia, the French merchant-ship, which sailed with us, and the Dutch one, which left the harbour the day before, were close in sight; and on the next day a brig was near us, supposed to be an English merchant vessel that sailed from Bahia on Sunday. On the following morning, the French ship was close in sight again; and on the next day, a vessel was still visible.

On the 5th of May, we saw a Portuguese man-of-war, not a ship, but a species of zoophyta of the medusa kind; and in the evening we passed the high pyramidical peak of the island of Fernando Norhonha, distant six or seven leagues to the eastward, rising like a spire.

On the 8th we crossed the line in the longitude of 32° 30′, and were becalmed for only two days, with rain for only one, after which we got the north-east trade-wind till the 2d of June, when we were in the latitude of 35° 55′, and in the Florida Gulf Stream. On the 13th of May the wind was light, with heavy rain all day; and on the next evening, which was showery, we saw a lunar rain-bow, a phenomenon which I have witnessed only once before, and which many people die of old age without seeing.

On the 22d, being in latitude 20° 7′, the sun was vertical at noon, but the thermometer was only 75°. This is a wonderful sight, and yet thousands, who visit the tropics, notice it not. Shine, but no sun, till you look over head; and, what is more awful, like the goblin in the Lay of the last Minstrel,

> Your form no darkling shadow throws
> Upon the vessel's deck.

A vertical sun is as much a miracle to an extra-tropical inhabitant, as snow and ice to an inter-tropical one.

On the next day, at evening, we met a brig; and much sea-weed was seen all day, supposed to have drifted from the Gulf Stream. It seemed to be all of one sort, namely the fucus natans.

On the 24th of May, we crossed the tropic of Can-

cer; and on that and the three following days the sea-weed was very abundant. When gathered, small crabs and shrimps came up among it.

On the 30th of May, the wind being light and the weather fair, we saw half a dozen dolphins, with their ultramarine-blue bodies, and their orange-green tails; but they would not bite a bait. We also passed a brig.

Eight weeks have now elapsed, during which we have had the thermometer standing from 75° to 83°, both night and day. From this time the heat fell to a common English summer temperature.

On the next day, which was rainy and cloudy, instead of dolphins, stormy petrels were very numerous under the stern of the ship; and on the following day came a strong breeze and a high sea, producing heavy rolling. We passed a schooner, showing English colours. The day after, the sea was still high and the wind fresh at north-west, with heavy rain in the evening, which latter continued the next day. With the exception of one day we had now a fair wind, till we entered the English Channel. On the 4th of June we passed a brig, which afterwards overtook and spoke us; namely, the Nocton Packet, from the island of St. Thomas to England. On the next day, the wind was stronger, and the ship more uneasy and wet than ever: we were out of the Gulf Stream, and on the following morning we passed the islands of Flores and Corvo, the two north-westernmost of the Azores, or Western Islands. Flores looked verdant; but Corvo is little better than a lofty rock: both however are inhabited.

We were now drawing near home, and the converging of outward and homeward bound vessels. On the 9th day of June we passed a ship, and on the next day met a large one; on the 13th we met a brig, and saw two or three other small vessels in the chops of the Channel. The next day, a vessel was in sight, and the sea was green, the ship being in soundings. We were out of blue water. The following morning several vessels were in sight: in the afternoon we saw the land, Start Point, in Old England; and late at night we discerned the Portland Lights. On the next day, we were off Portland and St. Alban's Heads; but the wind was foul; a mortifying circumstance with home in sight. An Isle of Wight pilot came on board; and we had that island in sight all day. The next morning the weather was wet, and the land out of sight. At noon of the 17th of June we tacked towards England, and made St. Catherine's, on the Isle of Wight, at three o'clock *p. m.;* when the wind continuing obstinately foul, I went on shore in a pilot-boat, and landed at Portsmouth at the same hour the next morning. The sea was smooth and the sail pleasant. We came round the Needles, and up the Solent or West Channel of the Isle of Wight, and as we kept close in shore all the way, the transition from a sea-voyage to my land-journey up to London was broken by thus coasting along this beautiful island. And so ends this tedious journal of a voyage of 131 days at sea!

The boundless ocean! If it be meant to give the effect of a view of "sea without shore," it is quite a mistake to describe it as the boundless ocean. It appears to be completely bounded; and that too at the

very short distance of three or four miles, all around. The *melancholy* main is in my mind the happiest epithet that poetry has ever applied to the sea.

Where all above is sky, and ocean all around,

sounds very sublime till you get on board of ship; and then reality gives you a small circle of a dozen tiers of waves all around, capped with a low dome of sky, about the size of St. Paul's cathedral; for it is a very just observation of Dr. Reid, "that when the visible horizon is terminated by very distant objects, the celestial vault seems to be enlarged in all its dimensions*." It must therefore follow that when the horizon is bounded by a circle of waves three miles off, the zenith shuts down over our heads into a smaller segment of a sphere than that of an apparent hemisphere. But enough of the sea.

* Reid's Inquiry into the Human Mind, ch. vi. § 22.

FIRST FRUITS

OF

AUSTRALIAN POETRY.

I first adventure. Follow me who list;
And be the second Austral harmonist.

Adapted from Bishop HALL.

De conducendo loquitur jam rhetore Thule. JUV. *Sat.* XV.

The following Poems have hitherto been only privately printed in New South Wales. In consequence of the approbation which some of them have received from several of the first poets and critics of our times, they are now published.

EDITOR.

BOTANY-BAY FLOWERS.

——— " juvatque novos decerpere flores,
Insignemque meo capiti petere inde coronam,
Unde priùs nulli velârint tempora Musæ."

LUCRETIUS, lib. i.*

" And as for me, though that I can but lite,
On bokis for to rede I me delite,
And to hem yeve I faithe and full credence,
And in mine herte have hem in reverence
So hertily, that there is game none
That fro my bokis maketh me to gone,
Save certainly . . . .
Whan that the flouris ginnin for to spring;
. . . . . .
Than love I moste this floure white and rede—
So glad am I whan that I have presence
Of it, to doin it all reverence,
As she that is of all flouris the floure,
Fulfillid of all vertue and honoure,
And ever ilike fair and freshe of hewe,
As well in wintir as in summir newe;
This love I ever, and shall until I die.
All swere I not of this, I woll nat lie."

CHAUCER, *Leg. of Good Women.*

" Fairies use flowers for their charactery."

SHAKESP. *Merry Wives.*

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* ——— " But the love
Of Nature and the Muses bids explore,
Through secret paths erewhile untrod by man,
And shade my temples with unfading flow'rs,
Cull'd from the laureate vale's profound recess,
Where never poet gain'd a wreath before." AKENSIDE.

" But as he that passeth by
Where in all her jollity
Flora's riches in a row
Doth in seemly order grow,
And a thousand flowers stand,
Bending as to kiss his hand,
Out of which delightful store
One he may take, and no more,
Long he pausing doubteth whether
Of those fair ones he should gather.

. . . . . .

As if half fearing to be seen,
Prettily her leaves between,
Peeps the violet; pale to see
That her virtues slighted be,
Which so much his liking wins,
That to seize her he begins.
Yet before he stoop'd so low,
He his wanton eye did throw
On a stem that grew more high,
And the rose did there espy;
Who, beside her precious scent,
To procure his eyes content,
Did display her goodly breast,
Where he found at full exprest
All the good that nature showers
On a thousand other flowers.
Wherewith he affected takes it,
His beloved flower makes it,
And, without desire of more,
Walks through all he saw before.

. . . . . .

Thus I fondly far'd, till Fate
(Which I must confess in that
Did a greater favour to me
Than the world can malice do me)
Show'd to me that matchless flower,
Subject for this song of our,
Whose perfection having eyed,
Reason instantly espied,

That desire which ranged abroad,
There would find a period.
And no marvel if it might,
For it there hath all delight;
And in her hath Nature placed,
What each sev'ral fair one graced."

WITHER, *Fair Virtue.*

GOD of this planet! for that name best fits
The purblind view, which men of this "dim spot"
Can take of THEE, the GOD of suns and spheres!
What desert forests, and what barren plains,
Lie unexplor'd by European eye,
In what our fathers call'd *the great South Land!*
Ev'n in those tracts, which we have visited,
Though thousands of thy vegetative works
Have, by the hand of Science (as 'tis called)
Been murder'd and dissected, press'd and dried,
Till all their blood and beauty are extinct;
And nam'd in barb'rous Latin, men's surnames,
With terminations of the Roman tongue;
Yet tens of thousands have escap'd the search,
The decimation, the alive-impaling,
Nick-naming of GOD's creatures—'scap'd it all.
Still fewer (perhaps none) of all these flowers
Have been by poet sung. Poets are few,
And botanists are many, and good cheap.
When first I landed on Australia's shore,
(I neither botanist nor poet truly,
But less a seeker after facts than truth),
A flower gladden'd me above the rest,
Shap'd trumpet-like, which from a leafy stalk
Hangs clust'ring, hyacinthine, crimson red
Melting to white. Botanic science calls
The plant *epacris grandiflora*, gives

Its class, description, habitat, then draws
A line. The bard of truth would moralize
The flower's beauty, which caught first my eye;
But, having lived the circle of the year,
I found (and then he'd sing in Beauty's praise)
This the sole plant that never ceas'd to bloom.
Nor here would stop:—at length first love and fair,
And fair and sweet, and sweet and constant, pall,
(Alas, for poor Humanity!) and then
The new, the pretty, and the unexpected,
Ensnare the fancy. Thus it was with me,
When first I spied the flowret in the grass,
Which forms the subject of this humble song,
And (treason to my wedded flower) cried:—

Th' Australian "fringed violet"
Shall henceforward be my pet!
Oh! had this flow'r been seen by him
Who call'd Europa's "violets dim
Sweeter than lids of Juno's eyes*,"
He had not let this touch suffice,
But had pronounc'd it (I am certain)
Of Juno's eye the "fringed curtain"—
Pick'd phrase for eye-lid, which the poet
Has us'd elsewhere; and he will know it,

* SHAKESPEARE, *Winter's Tale*.—Ιοβλεφαρος, violet-coloured eye-lids were attributed by the Greeks to the Goddess of Beauty, as none of Shakespeare's commentators have remarked. This charm was artificially created. The first who practised it was Jezebel (2 Kings, ix. 30). The margin of the Bible reads, "she put her eyes in antimony." To effect this (says Mr. Gifford), an impalpable violet-coloured powder was taken up with a silver needle, and applied to the inner surface of the lids. This was supposed to give the eye a lascivious lustre altogether irresistible. From the east, the practice travelled to Greece and Rome. Anacreon, Ovid, and Juvenal allude to it. At this day the women of Syria, Arabia, and Babylonia paint their eyes black.

Who in his dramas is well vers'd:
Vide The Tempest, act the first.—
But I am wand'ring from my duty,
First to describe my fringe-ey'd beauty.
'Tis then a floss-edged lilac flower,
That opens only after rain,
Once, and never blows again;
Shuts too at early ev'ning's hour,
Soon as the sun has lost its power,
Like a fairy's parasol
(If fairies walk by day at all);
Or, it may quicker gain belief,
To call it her silk neckerchief,
Dropt before she blest the place
With her last night's dancing grace:
For surely fairies haunt a land,
Where they may have the free command
Of beetles, flowers, butterflies,
Of such enchanting tints and dyes:
Not beetles black (forbidden things),
But beetles of enamel'd wings,
Or rather, coats of armour, boss'd,
And studded till the ground-work 's lost:
Then, for all other insects,—here
Queen Mab would have no cause to fear
For her respectable approach,
Lest she could not set up her coach.
Here 's a fine grub for a coach-maker,
Good as in fairy-land Long Acre;
And very-long-indeed-legg'd spinners,
To make her waggon-spokes, the sinners!
And here are winged grasshoppers;
And, as to gnats for waggoners,

We have musquitoes will suffice,
To drive her team of atomies *.
If therefore she and her regalia
Have never yet been in Australia,
I recommend a voyage to us,
On board the paper nautilus;
But I incline to the opinion
That we are now in her dominion;
Peri or fairies came from th' east,
D'Herbelot tells us so, at least;
And we dream all those self-same dreams,
Which (from Mercutio) it seems
We owe to Mab's deliv'rancy,
As midwife and queen faëry.
Puck talks of putting round the earth,
In forty minutes' time, a girth:
Ob'ron, though he "the groves may tread
Till th' eastern gate, all fiery red,
Open on Neptune with fair beams,
And turn to gold his salt-green streams:"
Yet chooses he, "in silence sad,
To trip after the night's shade:
He the globe can compass soon,
Swifter than the wand'ring moon †:"

* "She is the fairies' midwife, and she comes
Drawn with a team of little atomies—
Her waggon-spokes made of long spinners' legs,
The cover, of the wings of grasshoppers;
Her waggoner a small grey-coated gnat;
Her chariot ——————————
Made by the joiner squirrel, or old grub,
Time out of mind the fairies' coach-makers."

SHAKESP. *Romeo and Juliet.*

† SHAKESPEARE, *Midsummer Night's Dream.*

And Queen Titania 's made to say
That she had been in India;
And had a mortal vot'ress there,
As I hope too, among the fair
Of this young land of Shakespeare's tongue,
That she has here:—I 've else judg'd wrong.

Enough then of the fairies and the flower;
And, as mistaking Puck must sure have squeez'd
The juice of that same little purple flower,
(Why may it not, ye botanists, be call'd
A species of *Love in Idleness?*
Only because perhaps Jussieu would say
It is no violet*), and dropt the liquor
Into my sleeping eyes, to make me change
My love, as erst Lysander did to Helen
From Hermia: so may the fairy king,
Just Oberon, see good to break the spell
With the epacris' juice, more med'cinal
Than moly or than hæmony—that moly
That Hermes once to wise Ulysses gave
To disenthral his crew from Circe's charms,
Or than that hæmony of sovran use
'Gainst the enchantments of her son, great Comus†,
Th' epacris, whose least dew-drop has the virtue
To take from eyes all error, that when next
They wake, all this may seem a fruitless dream.
" My heart with that but as guest-wise sojourn'd,
And now to this flow'r is at home return'd,
There to remain.

* It is of the order *asphodeleæ*—the *arthropodium fimbriatum* of Brown. Mr. Brown, however, doubted, from the absence of pilosity in the filaments of this plant, whether it did not constitute a genus by itself; and it has lately been figured in the Botanical Magazine, as *thysanotus junceus*.

† Milton.

Be as thou wast wont to be;
See as thou wast want to see:
Dian's bud o'er Cupid's flower
Hath such force and blessed power *."
Dian that 's lady of the leaf,
As Love is of the flower chief.
The flower lives for half a day,
" The life is in the leaf †" for aye.

THE KANGAROO.

——" mixtumque genus, prolesque biformis." VIRG. Æn. vi.

KANGAROO, Kangaroo!
Thou spirit of Australia,
That redeems from utter failure,
From perfect desolation,
And warrants the creation
Of this fifth part of the earth,
Which should seem an after-birth,
Not conceiv'd in the beginning
(For GOD bless'd his work at first,
And saw that it was good),
But emerg'd at the first sinning,
When the ground was therefore curst:—
And hence this barren wood!

Kangaroo, Kangaroo,
Tho' at first sight we should say,
In thy nature that there may
Contradiction be involv'd,
Yet, like discord well resolv'd,

* SHAKESPEARE, *Mid. Night's Dream.*
† DRYDEN.

It is quickly harmoniz'd.
Sphynx or mermaid realiz'd,
Or centaur unfabulous,
Would scarce be more prodigious,
Or labyrinthine minotaur,
With which great Theseus did war,
Or Pegasus poetical,
Or hippogriff—chimeras all!
But, what Nature would compile,
Nature knows to reconcile;
And Wisdom, ever at her side,
Of all her children 's justified.

She had made the squirrel fragile;
She had made the bounding hart;
But a third so strong and agile
Was beyond ev'n Nature's art.
So she join'd the former two
In thee, Kangaroo!
To describe thee, it is hard:
Converse of the camélopard,
Which beginneth camel-wise,
But endeth of the panther size,
Thy fore half, it would appear,
Had belong'd to "some small deer,"
Such as liveth in a tree;
By thy hinder, thou should'st be
A large animal of chase,
Bounding o'er the forest's space;—
Join'd by some divine mistake,
None but Nature's hand can make—
Nature, in her wisdom's play,
On Creation's holiday.

For howsoe'er anomalous,
Thou yet art not incongruous,
Repugnant or preposterous.
Better-proportion'd animal,
More graceful or ethereal,
Was never follow'd by the hound,
With fifty steps to thy one bound.
Thou canst not be amended: no;
Be as thou art; thou best art so.

When sooty swans are once more rare,
And duck-moles* the museum's care,
Be still the glory of this land,
Happiest work of finest hand!

ON READING THE CONTROVERSY BETWEEN LORD BYRON AND MR. BOWLES.

Anticipation is to a young country what antiquity is to an old.

Whether a ship's poetic?—Bowles would own,
If here he dwelt, where Nature is prosaic,
Unpicturesque, unmusical, and where
Nature reflecting Art is not yet born;—
A land without antiquities, with one,
And only one, poor spot of classic ground,
(That on which Cook first landed—where, instead
Of heart-communings with ancestral relics,
Which purge the pride while they exalt the mind,
We've nothing left us but anticipation,
Better (I grant) than utter selfishness,

* The *cygnus niger* of Juvenal is no *rara avis* in Australia; and time has here given ample proof of the *ornithorhynchus paradoxus*.

Yet too o'erweening—too American;
Where 's no past tense; the ign'rant present 's all;
Or only great by the *All hail hereafter!*
One foot of future's glass should rest on past;
Where hist'ry is not, prophecy is guess—
If here he dwelt, Bowles (I repeat) would own,
Except the native maidens and the flowers,
The sky that bends o'er all, and southern stars,
A ship's the only poetry we see.
For, first, she brings us "news of human kind*,"
Of friends and kindred, whom perchance she held
As visitors, that she might be a link,
Connecting the fond fancy of far friendship,
A few short months before, and whom she may
In a few more, perhaps, receive again.
Next is a ship poetic, forasmuch
As in this spireless† city and profane,
She is to my home-wand'ring phantasy,
With her tall anchor'd masts, a three-spir'd minster,
Vane-crow'd; her bell our only half-hour chimes.
Lastly, a ship is poetry to me,
Since piously I trust, in no long space,
Her wings will bear me from this prose-dull land.

SONNET,

ON VISITING THE SPOT WHERE CAPTAIN COOK AND SIR JOSEPH BANKS FIRST LANDED IN BOTANY-BAY.

HERE fix the tablet. This must be the place
Where our Columbus of the south did land;
He saw the Indian village on that sand,
And on this rock first met the simple race
Of Austral Indians, who presum'd to face

* THOMSON.

† This was written before the erection of St. James's church. The other epithet will not become obsolete so soon.

With lance and spear his musket. Close at hand
Is the clear stream, from which his vent'rous band
Refresh'd their ship; and thence a little space
Lies Sutherland, their shipmate; for the sound
Of christian burial better did proclaim
Possession, than the flag, in England's name.
These were the *commelinæ* Banks first found;
But where 's the tree with the ship's wood-carv'd fame?
Fix then th' Ephesian* brass. 'Tis classic ground.

SONNET,

ON AFFIXING A TABLET TO THE MEMORY OF CAPTAIN COOK AND SIR JOSEPH BANKS, AGAINST THE ROCK OF THEIR FIRST LANDING IN BOTANY-BAY.

I HAVE been musing what our Banks had said
And Cook, had they had second sight, that here
(Where fifty years ago the first they were
Of voyagers, whose feet did ever tread
These savage shores)—that here on this south head,
Should stand an English farm-hut; and that there
On yon north shore, a barrack tow'r should peer;
Still more had they this simple tablet read,
Erected by their own compatriots born,
Colonists here of a discordant state,
Yet big with virtues (though the flow'ry name,
Which science left it, has become a scorn
And hissing to the nations), if our great
Be wise and good. So fairest Rome became†!

* The Ephesians were the first who erected brazen trophies. The Greeks and Romans preferred wood, as not perpetuating hostility.

† Scilicet et rerum facta est pulcherrima Roma. VIRG. *Georg.* ii.

VERSES,

IN ANSWER TO THOSE OF MR. MONTGOMERY ADDRESSED TO GEORGE BENNET, ESQ. ON HIS VISIT TO THE SOUTH SEAS, DEPUTED BY THE LONDON MISSIONARY SOCIETY.

"No permanent mission could have been established in New Zealand, or in any other island of the South Seas, had not GOD's over-ruling Providence led the British nation to plant a colony in New South Wales."

Rev. S. Marsden's Journal of his Second Visit to New Zealand.

WELCOME to Southern Seas!
Thy poet's spirit greets thee hence,
In echoes from th' antipodes,—
Answ'ring intelligence.
Welcome! his spirit comes with thee!
Welcome! his spirit sings in me!

Sings? rather say, that one
Chord of my poor harp, willow-hung,
Vibrates with his in unison,
Who "Songs of Zion" sung;
And trembles to his Hebrew hand
The Lord's song ev'n in this strange land *.

Relax then here thy toils;
And may'st thou not find cause to say,
That, having preach'd to heathen isles,
This land's a castaway †;—
That the Tahitan knoweth Christ
Better than th' Austral colonist.

* Ps. cxxxvii. 4. † 1 Cor. ix. 27.

To us the keys are giv'n
Of these south archipelagoes.
Oh, may they prove the keys of heav'n,
To bind on earth and loose*,
Though now we, Peter-like, deny
Him who conferr'd their custody!

Base things, which men despise,
To God were chosen to belong;—
The foolish to confound the wise,
The weak to mock the strong.
With things which are not, He hath brought
Of old time, things that are, to nought†.

Many shall be outcast,
Who say, "Lord, with thee we 've convers'd."
Lo! there are first which shall be last,
And last which shall be first.
And many from the south, 'tis writ,
Shall come and in His kingdom sit‡.

A calling high is ours;
But if thy missionary host
Here fix the fulcrum of their pow'rs,
Its prize shall not be lost;
And double blessing shall attend
Means sanctified for glorious end.

* Mat. xvi. 19. † 1 Cor. i. 27, 28.
‡ Luke xiii. 27—30.

A

GLOSSARY

OF THE

MOST COMMON PRODUCTIONS

IN THE

NATURAL HISTORY

OF

NEW SOUTH WALES AND VAN DIEMEN'S LAND.

VEGETABLES.

Red gum tree	Eucalyptus resinifera
Blue gum tree	Eucalyptus piperita
Brown gum tree or mahogany	Eucalyptus robusta
White gum tree	Eucalyptus ———
Black-butted gum tree	Eucalyptus ———
Flooded gum tree	Eucalyptus ———
Stringy-bark tree	Eucalyptus ———
Iron-bark tree	Eucalyptus ———
Box tree	Eucalyptus ———
Ash tree	Eucalyptus ———
Apple tree	Metrosideros cordifolia Angophora lanceolata
Yellow gum tree of Phillip Yellow resin tree of White Grass tree	Xanthorrhœa hastile
She-oak tree Swamp-oak tree Forest-oak tree	Beef-wood: Casuarina stricta Casuarina paludosa Casuarina torulosa
Honey-suckle tree	Banksia integrifolia

White cedar or common bead-tree of India	Melia azedarach
Red cedar tree	Allied to Flindersia, *Cunningh.* Cedrela toona, *Brown.*
Light wood tree	Ceratopetalum gummiferum
Turpentine tree	Tristania albicans
Rosewood tree	Trichilia glandulosa
Black wattle tree	Acacia melanoxylon
Green wattle tree	Acacia decurrens
Norfolk Island pine tree	Araucaria excelsa
Cypress tree	Callitris pyramidilis
Sassafras tree	Cryptocarya glaucescens
Castor-oil tree	Ricinus ———
Tea tree	Melaleuca linariifolia
Currijong or Natives' cordage tree	Hibiscus heterophyllus
Cabbage palm tree	Corypha Australis
Arborescent fern tree	Alsophila Australis, and Dicksonia antarctica
Fern root	Pteris esculenta
Coal River apple tree	Achras Australis
Cherry tree	Exocarpus cupressiformis
Currant shrub	Leptomeria acerba
Pear tree	Xylomelum pyriforme
Plum tree	Cargillia Australis
Cape gooseberry-bush	Physalis edulis? pubescens?
Cape cotton-shrub	Gomphocarpus fruticosus
Gigantic lily	Doryanthes excelsa
Waratah or tulip-tree	Telōpea speciocissima
Rose	Boronia serrulata
Fringed violet	Thysanotus junceus

Peculiar to Van Diemen's Land.

Huon River pine tree	Dacrydium ——
Adventure Bay pine tree	Podocarpus aspleniifolia, *Labil.* Dacrydium? *Brown.*

ANIMALS.

Forest kangaroo	Macropus major
Brush kangaroo	Macropus elegans
Flying opossum or Hepoona roo of White	Petaurus, *Shaw.*
Jabiru	Mycteria Australis
Water or duck-mole	Ornithorhynchus paradoxus
Emu or cassowary	Rhea Novæ-Hollandiæ
Emu-bird or catchfly	Malurus malachura, *Vieillot.*
Native companion	Ardea antigone
Black swan	Cygnus atratus
Turkey or bustard	See page 443
Goose	Anas semipalmata
Pheasant or bird of paradise	Menura superba
Swamp pheasant	Cuculus phasianus?
Spur-winged plover	Parra
Regent-bird or King honey-sucker	Sericulus chrysocephalus, *Swainson.*
Rifle-bird	Ptiloris paradiseus, *Sw.*
White hawk	Astur Novæ-Hollandiæ, *Bechst.*
Satin-bird	Ptilinorhynchus, *Temminck.*
Superb warbler	Malurus superba, *Vieil.*
Laughing jackass	Dacelo gigantea, *Leach.*
Green pigeon	Ptilinopus magnificus, *Sw.*
Wonga-wonga	Columba picata, *Latham.*
Bronze or golden-winged pigeon	Columba chalcoptera, *Latham*
Green dove	Ptilinopus purpuratus, *Sw.*

King parrot	Platycercus scapulatus, *Vig.*
Blue-mountain or blue-bellied parrot	——— hæmatodus
Rose-hill or nonpareil parrot	——— eximius
Macquarie Island parrot	——— Pacificus
Lory	——— Pennantii
Ground parrot	Pezoporus formosus, *Illiger.*
Black cockatoo	Psittacus funereus, *Lath.*
White cockatoo	——— galeritus, *Tem.*

Peculiar to Van Diemen's Land.

Devil	*Dasyurus ursinus*
Hyæna opossum	Thylacinus cynocephalus.

THE END

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Liverpool Plains
Bathurst
Fish Riv.
Macquarie Riv.
Richmond
King's Table Land
Vale of Clwydd
Map
of the Country between
BATHURST
and
LIVERPOOL PLAINS.
Published as the act directs Feb.y 6th 1824 by John Murray Albemarle Street London.
J.Walker Sculpt.



PHEBALIUM AUREUM.



FIELDIA AUSTRALIS.

Published by John Murray, London, April 1823.



ANTHOCERCIS ALBICANS.

Published by John Murray, London, April 1823.



GREVILLEA ACANTHIFOLIA.