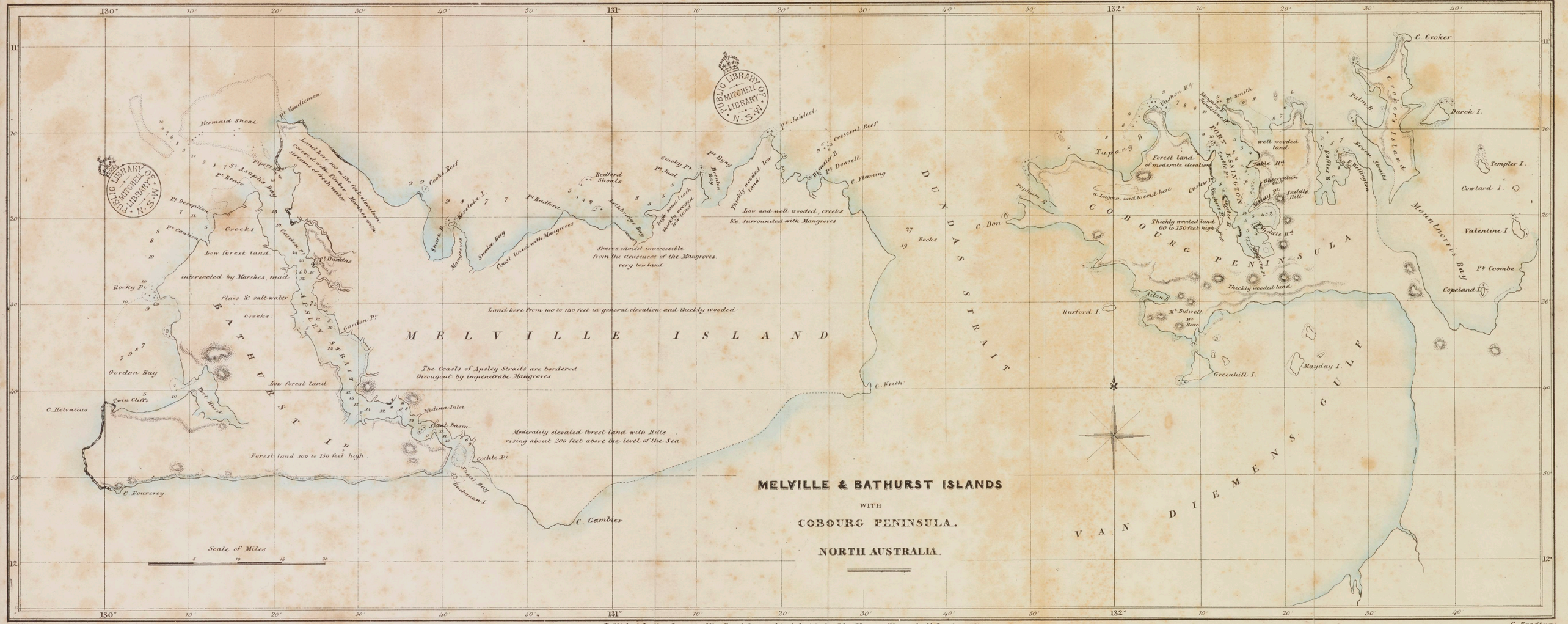

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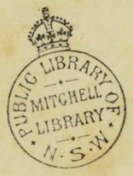
C. Bradbury



VI.—*Geographical Memoir of Melville Island and Port Essington, on the Cobourg Peninsula, Northern Australia; with some observations on the Settlements which have been established on the North Coast of New Holland.* Accompanied by a Map of Melville and Bathurst Islands, and a Plan of Port Essington. Communicated by Major Campbell, 57th Foot, formerly Commandant at Melville Island. Read 12th and 20th May, 1834.

Very little correct local information on a most interesting part of the northern coast of New Holland and its neighbouring islands has yet been laid before the public, arising probably from the little attention that has hitherto been paid to this distant and not thoroughly explored portion of our British dominions, as well as

from the few opportunities that navigators or others have had of minutely examining its shores or interior. Many exaggerated, contradictory, and erroneous accounts have thus from time to time appeared, conveying but confused and unsatisfactory intelligence respecting that part of the world. And I have been induced, therefore, at the request of several friends interested in geographical science, to furnish what information on the subject I can, resulting from a residence of two years on this coast.

Experimental Settlements.—Two settlements were formed on the north coast of New Holland between 1824 and 1828, and subsequently abandoned. One of them was placed in Apsley Strait, in 1824, the other in Raffles Bay, in 1827; and the intention of their formation, with the causes which led to their being ultimately abandoned, being either little known or misunderstood, I shall first explain these points.

Previous to 1824, some masters of small trading vessels, who had been carrying on a traffic with the islands in the Indian Archipelago, found the trade they had thus embarked in of a description that promised a profitable market for European goods; and they also observed that several articles of traffic amongst these islands were obtained on the northern coast of New Holland, "such as *bêche la mer* or tripang, and pearl and tortoise-shell." They therefore naturally concluded that a British settlement on that coast might materially facilitate a commercial intercourse, not only with the inhabitants of the numerous islands in the Indian Archipelago, but also with the Chinese; and these observations, on being represented, meeting with a favourable consideration in the Colonial Department at home, and Government evincing an anxious desire to extend our trade in the Indian Seas, arrangements were soon afterwards entered into for carrying the views founded on them into effect.

Captain Bremer, C.B., (then commanding H. M. S. Tamar, and about to proceed from England to New South Wales on his way to India,) received instructions to take charge of an expedition which would be fitted out at Sydney, to proceed with it to the north coast of New Holland, and to establish a settlement on such part of that coast as he found would be most likely to answer the intentions of Government. The settlement established on Melville Island was the result, of the formation of which I shall now give a short account.

The materials being prepared at Sydney, Captain Bremer sailed from Port Jackson on the 24th August, 1824, having under his command (besides his own ship) two vessels, in which were embarked two officers and fifty soldiers of the third regiment, a surgeon, two gentlemen of the Commissariat Department, and forty-five convicts, with cattle and various stores. The expedition proceeded by the inner passage, through Torres' Strait, and

crossing the Gulf of Carpentaria on the 20th September reached Port Essington, where they came to anchor. They remained three days, but after searching in several directions for water, and being unable to discover any, except by digging holes in the sand at Point Record,* this circumstance induced Captain Bremer to look for a more convenient place more to the westward. On the morning of the 24th September, accordingly, Melville Island was seen from the mast-head, bearing S.W., and at seven P.M. the expedition anchored outside of the reef or shoal called Mermaid Shoal which extends westward from Cape Van Diemen. The 25th was occupied by the expedition in threading its way through this intricate and extensive reef, and by half-past six in the evening, having cleared it, they anchored in seven fathoms water, off Bathurst Island. At daylight on the 26th they weighed and stood for the entrance between Melville and Bathurst Islands into Apsley Strait, and in the afternoon they anchored off Luxmoore Head in fifteen fathoms. (Luxmoore Head is a promontory of Melville Island, within the entrance of Apsley Strait.) The remainder of the 26th, the 27th, the 28th, and 29th, were occupied in searching for water, but none but what was brackish was found until late on the 29th, when a small stream was met with by Captain Bremer: this decided him to establish the new settlement in Apsley Strait, on the Melville Island side. The most eligible spot that presented itself was six miles higher up than Luxmoore Head; and on the 30th September the soldiers and convicts were landed, and the operation of clearing away ground on which to erect buildings was immediately commenced.

The spot fixed upon by Captain Bremer for the settlement was named by him Point Barlow, in compliment to Captain Barlow, 3rd Regiment, who was appointed Commandant; a low point of land to the N.W. of it was called Garden Point; and these two points formed the extremities of a small bay, which became the anchorage, and was named King's Cove. The beach around it, as well as to the S.E. of the intended settlement, was low, muddy, and lined with mangroves, and the higher grounds were covered with a dense forest.

By the 21st October, through the united efforts of the sailors, soldiers, and convicts, the settlement was in a great state of forwardness: and this being the anniversary of the battle of Trafalgar, Captain Bremer landed some guns and mounted them on the fort, which was now nearly completed; a royal salute was fired; and besides the names already mentioned, others were given. That part of Apsley Strait between Harris Island and Luxmoore Head was named Port Cockburn, and the work was called Fort Dundas.

* Named by Captain Bremer from the circumstance of having buried a bottle on the spot, in which was an account of his proceedings on landing at Port Essington.

On the 13th November, the fort, wharf, soldiers' huts, officers' houses, and commissariat store, being completed, also an excellent well thirty feet deep and six in diameter, and the provisions all landed, Captain Bremer took his departure for India, leaving an officer and thirty marines to assist in the protection of the settlement. The establishment at this time was as follows: Captain Barlow and Lieutenant Everard, 3rd Regiment; Lieutenant Williamson, Royal Marines; Assistant-Surgeon Turner, Royal Artillery; Mr. Miller, Commissariat Department; Mr. Tollemache, Commissariat Storekeeper; thirty soldiers of the Royal Marines; fifty of 3rd Regiment; and forty-five convicts. One small vessel of about sixty tons (the Lady Nelson) was also left for the purpose of being employed in procuring supplies from the island of Timor.

The first object—viz. clearing away a small space of ground to enable the settlers to erect huts for shelter, stores, and an hospital, in a country thickly wooded, surrounded by mangrove swamps, and under a burning sun—required no ordinary exertion; but by the perseverance of the military and prisoners, aided by the crew of the Tamar frigate, the fort was finished, a temporary wharf formed, and huts sufficient for shelter were constructed, in seventy-four days; subsequent to which and the departure of the Tamar, the convicts (forty-five in number) were the only labourers that could be employed in clearing away and bringing the ground into a state of cultivation, every other individual having abundant occupation to make himself by any means comfortable and secure. As the huts were unavoidably erected close to the standing timber, the natives, who constantly hovered through the forest, were extremely troublesome, frequently throwing their spears into the huts and hospital; scurvy and ague also soon appeared, and, diminishing the number of workmen, retarded exceedingly the operation of clearing; and the difficulties experienced in communicating with Sydney occasioned other drawbacks, as will in the sequel appear.

From the great distance between Melville Island and Sydney, and the total want of any direct intercourse, very little was known about the settlement even in July, 1826. Towards the end of 1825, one set of despatches reached Sydney, which had been sent *viâ* Batavia or India; and these did not convey a very favourable report of the new settlement, the Commandant having experienced many unexpected difficulties, the principal of which were, want of fresh provisions and vegetables; inadequate materials for carrying on field labour; scurvy, and a great deal of sickness; several deaths which had taken place; the loss of the Lady Nelson, which was sent for supplies to the island of Timor, in February, 1825, and never afterwards heard of; and also of a schooner called

the Stedcomb, which the Commandant had engaged, in place of the Lady Nelson, to procure buffalos from Coëpang Timor, and which sailed from Melville Island in February, 1826, and never returned, having been taken by pirates off the east end of Timor. The settlement was thus left without fresh meat or vegetables, which latter could not be produced in sufficient quantity; and scurvy thus broke out, and raged for many months in a very alarming degree. Supplies of flour, pickles, and preserved meats were afterwards sent from Sydney, in the ship Sir Philip Dundas which reached Melville Island in the beginning of 1826; and another vessel (the Mermaid cutter), despatched from Sydney in March 1826, arrived at the settlement on the 5th August. These delays and losses occasioned not only great impediments to the improvement of the settlement, but left the Governor of New South Wales in much anxiety respecting it.

At the beginning of August, 1826, his Excellency Lieutenant-General Darling, then Governor of New South Wales, was pleased to appoint me Commandant of Melville Island, and directed me to embark on board the Colonial schooner Isabella, with a detachment of troops, some convicts, and various stores, as well as live stock, and to proceed with all despatch through Torres Straits to relieve Captain Barlow and his detachment. On the 19th August we left Port Jackson, and reached Melville Island on the 19th September. The officers and men who had formed the settlement, and had been there about two years, were rejoiced to find that a relief had arrived for them; they gave us a discouraging account of the oppressiveness of the climate, the scarcity of vegetables, the deficiency of fresh meat, the almost impossibility of procuring fish, the dreariness of the situation—(never having been visited by any other than the two small colonial vessels already mentioned as sent from Sydney with supplies, by a man-of-war's boat, which came in for a few hours, whilst the man-of-war, the Slaney, remained outside the reefs, about eighteen miles off; and I believe also that H. M. ship Larne had touched there)—the hostility of the natives, and many other mortifications which conveyed but a gloomy picture of the settlement. I was, however, fortunately not of a temperament to be cast down by these accounts; but on the contrary rejoiced that I had been placed in so novel and interesting a situation, and looked forward with a pleasing anticipation that patience, exertion, and industry would soon bring the settlement to answer the intentions of Government in having formed it.

As the views of Government in wishing to establish a commercial depôt have been already mentioned, and two years' trial had now been given, certainly with very limited means, I shall here state such observations as I made immediately after my arrival,

and introduce the substance of my first report to his Excellency the Governor of New South Wales.

The number of persons landed at the settlement in 1824 amounted to about one hundred and twenty-six; and during the period of two years which elapsed before my arrival, eight soldiers and four convicts had died, but two of these had been drowned, and one died in consequence of spear-wounds received from the natives.

The appearance of the military and prisoners (although their complexions were sallow) was that of health; and from the statement of Dr. Turner I formed an opinion that Melville Island could not be called very unhealthy, and that the salubrity of the climate, with common precaution, was by no means inferior to most under the same parallel.

The amount of population, after Captain Barlow sailed, was as follows: one hundred and fifteen males, fifty-four of whom were prisoners, and six females, besides fourteen sailors on board of ship. The live-stock consisted of sixteen head of horned cattle, twenty-three sheep and lambs, and fifty-four head of swine, (all kept exclusively for breeding;) besides which, sixteen buffaloes for slaughter had just been landed from Timor. Of land cleared of timber there were fifty-two acres, three of them cultivated; and ninety-five acres on which the timber was felled, but not cleared off. The buildings consisted of three wooden houses for officers, one for soldiers, one for an hospital, two store-houses, thirteen huts for the prisoners, and seven for the Royal Marines. The huts were in general miserable hovels, constructed hastily and irregularly.

In looking about the settlement, things appeared in a more backward state than they should have been after an occupation of two years; but this was owing to the scarcity of workmen, the total deficiency of any draught animals, and the want of good mechanics. The gardens were very backward; there not being any competent person to attend to them until a few weeks previous to my arrival. The soil near the sea was very rocky and difficult to the spade, and on this ground a government garden was marked out in 1824. Melons and pumpkins grew well in it, and where there was any depth of soil it was found to be good, and all seeds planted there sprung up quickly; but what Nature did for them was counteracted by an incapable gardener.

The Malays had never been seen near Melville Island, nor had any vessel visited it up to the present period, excepting the English men-of-war and government colonial store-ships already mentioned.

The approach to Apsley Strait was intricate, attended with danger, and required much caution, in consequence of extensive

reefs, strong currents, and sand-banks, which embarrassed its entrance, and of which I shall speak more fully in another place; but I then thought it might be rendered safer by means of buoys.

Melville Island is situated between the parallels 11° 8′ 30″ and 11° 56′ S., and extends west and east from longitude 130° 20′ to 131° 34′ E. It lies off the north coast of New Holland, from which its eastern end is distant fifteen miles. The sea between Melville Island and the main was named Clarence Strait by Captain King, and is studded with small islands, rocks, and reefs, between which run rapid currents. It is five degrees to the westward of the Gulf of Carpentaria.

The most northern and western point of Melville Island (Cape Van Diemen) is three hundred and thirty miles distant from the island of Timor, the centre of which island bears W.N.W. from it; and the Dutch seat of government at Coëpang is four hundred miles distant.

The extreme length of Melville Island from Cape Van Diemen to Cape Keith is seventy-five miles; and its breadth, from Cape Radford on the north side, to Cape Gambier on the south, is thirty-seven. The surface of the island is low and gently undulating, averaging from twenty to seventy feet above the sea; but there are a few small elevations towards the southern side, of probably two hundred feet height.

Melville Island is separated from Bathurst Island by a strait, varying from four miles to one and a half in breadth, and forty-six miles long. This strait is called Apsley Strait. Bathurst Island is of a triangular shape, each side measuring about forty miles. Its surface and its productions are similar to those of Melville Island. The northern line of coast of Melville Island and the north-western side of Bathurst are generally low and lined with mangroves. The eastern, western, and south sides are more elevated, and sometimes abrupt, forming cliffs or clay banks. Both those islands are well clothed with wood, presenting one mass of dark green foliage, excepting at the western end of Bathurst Island, which is sandy, and of a barren aspect,—the trees being scattered and stunted from exposure to the strong blast of the north-west monsoon.

In October, 1827, I examined the north coast of Melville Island, hoping to find some good harbours, or a more eligible situation for the settlement than Apsley Strait proved to be; but the whole line of this coast I found lined with an almost continued barrier of mangroves, except a few places where there were abrupt banks, twenty feet high, of a red ferruginous clay; the bays were all shallow, exposed to the north and north-west winds,

unfit for anchorage for any other than small craft or boats; and the heads of these bays terminated in salt-water creeks, surrounded by thick belts of mangrove. I observed two fine abrupt sand beaches towards the eastern end of the island; the one extending from Lethbridge Bay to near Smoky Point, and the other extending from Brenton Bay to near Point Jahleel; both face the north-west, and are a great resort of turtle.

As the commanders of those vessels that visited the settlement during my command remarked on the great difficulties of the entrance into Apsley Strait, many of them, although several times in the strait, having frequently touched on the rocks or shoals, and been sometimes, in calms, driven or drifted by currents to the southward of the island; and as I possessed no chart of the whole of Apsley Strait, or even of these islands, I determined on surveying the whole, particularly examining the southern end of the Strait, which had only been once before approached by any vessel (that of Captain King, in 1818); and I hoped that by finding a safe entrance at that end the prospects of the settlement would be materially improved.

In March, 1827, I entered upon this survey, taking the basis of my operations from Garden Point,—the exact situation of which had been carefully fixed, in 1824, by Lieutenant Roe, of H. M. S. Tamar, who also had surveyed and drawn a good chart of the northern end of the straits. The result of my survey, which occupied nine days, was as follows:—From the settlement to within seven miles of the sea at the southern end of the straits, (a distance of thirty miles,) the channel is safe and deep enough for any vessel; but at seven miles within the entrance of the straits, commencing at an inlet named Medina, I found the passage intricate and dangerous, the channel narrow, and winding between sand-banks and coral reefs, which are covered at half-flood, some dry at low water, and others having then half a fathom water upon them. These dangers first appear in a circular basin (which I named Shoal Basin) near where Captain King anchored and terminated his attempt to pass through the straits in 1818. The mouth of the strait is about three-quarters of a mile wide, having seven fathoms water in mid-channel; it opens into a wide bay, which at high-water appears to be devoid of any danger, but at half-tide extensive sand-banks are exposed and extend almost entirely across and around the bay, leaving a very narrow and winding channel on the eastern side, varying in depth at low water from ten to two fathoms. This bay is three miles wide, and at low water there is no perceptible passage to the open sea, the sand-banks extending seaward as far as the eye can reach. It was at the time of spring tides that I was there, and the water rose and fell fourteen feet; the tide ran at the rate of five miles an hour.

In the chart I have named this bay Shoal Bay; it is in lat. 11 48′ South, and long. 130° 43′ East.

I remained two days outside of the southern entrance sounding, and endeavouring to find a passage out to the open sea; but the sand-banks were so numerous, and the winding channel through them so narrow, with the soundings irregular, that I was obliged to desist. I was moreover limited with regard to time, and as I had neither a chart nor chronometer to assist me in making a quick return to the settlement round Bathurst Island, or by the eastward through Clarence or Dundas Straits, round Melville Island, as I had intended, (provided I could have got easily out,) I was most reluctantly compelled to return, disappointed in my hopes. I landed and examined a small low island that is situated in the bay outside of the strait: from the flock of pelicans seen upon it I named it Pelican Island; but, upon subsequent reference to Captain King's chart, I found that it had already been designated one of the Buchanan Isles.

Both Melville and Bathurst Islands, which form the strait, present the same unvaried and gloomy appearance throughout. The land is invariably low, intersected by swamps in the lowest parts, and the higher ground is one continued forest. The shore, from one end of the strait to the other, is bordered by a broad belt of impenetrable mangroves, and indented by numerous salt-water creeks, which present the appearance of rivers; the upper part of these creeks generally terminating in salt marshes, through which drain small streams of water, which is thus brackish even when the tide is out. Some of these creeks stretch inland seven or eight miles.

Mermaid Shoal.—During my residence on Melville Island, I thrice examined the Mermaid shoal which had occasioned great embarrassment to vessels approaching Apsley Strait.

This shoal extends eighteen miles in a westerly direction from Cape Van Diemen, and, I believe, was named by Captain King after the vessel he sailed in, when surveying the N. and N.W. coast of Australia; and its probable boundary is laid down in that officer's excellent chart. Commencing from Cape Van Diemen, it runs out in a northerly direction five miles; its northern boundary then trends away W.S.W. nearly eighteen miles. At the western end there is a sand bank running S.E. and N.W., about seven miles long, and sometimes visible at low water, which is separated from the rest of the shoal by a narrow channel, in which the depth of water is very variable in consequence of frequent overfalls of the ground; and the tide runs very rapidly through it. At half flood I found the soundings vary as follows, viz.: 10, 7, 5, 3, 10, 4, 7, 6, 8, 9, 10 fathoms. Between this channel and the coast, extending from Cape Van Diemen to

Piper's Head, the shoal consists of clusters of coral rocks. The southern side projects in a S.S.W. direction from Piper's Head, entering about a mile and a half into St. Asaph's Bay, and thence runs N.N.W. to within a mile of the sand-bank already mentioned. A shoal also runs out in a N.W. direction from Point Brace, (the western point of entrance to Apsley Strait,) extending to the northward of the point two miles and a quarter, and to the westward five miles and a half. The outward border of this shoal is two miles distant from that of the Mermaid; and if a vessel entering or going out of Apsley Strait keeps in mid channel, it will have good soundings from eight to twenty fathoms; but near the shoals on each side the soundings rapidly alter; perhaps in two successive heaves of the lead, from nine to six and three fathoms, thereby requiring very great caution. Further, from the frequently muddy colour of the water it is difficult to distinguish the immediate vicinity of the shoals. In boisterous weather the winds and currents together cause such a broken and agitated sea all across the channel, that it would be very dangerous for any ship to venture through in such weather.

The anchorage in King's Cove, although ten miles within the straits, is not at all times secure. The bottom is soft mud, with the ground rising rapidly towards the shore, and strong currents sweep round the cove; in squally weather, therefore, with the wind off the land, vessels are liable to drag their anchors. The Mermaid, Isabella schooner, and the Lady Nelson brig, did so at different periods.

Reef between Cape Fleeming and Point Jahleel.—It may also be considered relevant, that I should mention a dangerous reef which lies off the eastern end of Melville Island. I presume it was observed by Captain King, but I am not aware that it was particularly remarked; and I was ignorant of its existence until I found myself hard and fast upon it through the carelessness of the mate upon watch, as I was proceeding from Melville Island towards the Cobourg Peninsula in 1827. Our bearings were then as follows:—

1st. Point Jahleel bore W. by N. six miles and a half distant.

2nd. The most distant point to the S.E., supposed Cape Fleeming, bore S.E. by S. four miles.

3rd. The nearest land, named by me Point Dowset, bore S. $\frac{1}{4}$ W. three miles and one quarter.

4th. A point on the eastern side of a deep bay, (named Disaster Bay in my chart,) bore S.W. $\frac{3}{4}$ W. four miles distant.

From the appearance of broken and light coloured water, the reef appeared to extend between three and four miles in a crescent form, and in detached patches, the convex side facing the eastward.

The interior of Melville Island is very difficult of access, in consequence of almost impenetrable mangrove-swamps and close forest; and in my several excursions into its interior, for the purpose of surveying and penetrating in direct lines from the coast, I found the features of the country always similar. From the closeness of the trees and want of elevated spots, I could seldom see beyond three or four hundred yards, and my movements were always guided by compass.

When seen from the sea the island has a pleasing appearance in consequence of its gently undulating surface and being thickly wooded; but when on shore its beauty vanishes, a monotonous succession of salt-water creeks, mangrove-swamps, and forest, (the trees of which are generally of the same appearance, having long bare trunks and very scanty foliage,) speedily surfeiting the most ardent admirer of the beauties of nature.

The elevated ground sometimes runs in narrow strips and at others extends widely; the slopes generally terminate in a swamp, but yet sometimes they have open spaces of arid flat ground at their base, of from fifty to a hundred acres in extent, covered only with low shrubs and thin coarse grass. Here and there are also plains of dry mud without any vegetation. The surface of the elevated ground is very stony, being covered with small shining masses of ironstone, having a metallic lustre, as if they had been ejected from a furnace. The sloping sides are less stony, and the flat ground is generally quite free from stone. Streams of water are scarce throughout the island, but the swamp water is generally drinkable; and by sinking wells a constant supply of excellent water is obtained. The swamps are generally full of long grass and reeds, intermixed with small trees; and leading into these swamps are narrow gullies choked up with a kind of cane or ratan, (*Flagellaria indica*, Linn.) Excursions into the interior are attended with excessive fatigue and much risk, the leading causes of which are the oppressive heat experienced in the close forest, where the air is seldom in motion; the myriads of sand-flies which infest and torment the traveller whenever he stands still or rests for an instant, and the constant alertness demanded to guard against the hostile natives.

Soil and Productions of Melville Island.—After four years' experience, we found the soil of Melville Island in general to be of an inferior quality, partaking of the character of the ironstone which is so generally diffused over it. The subsoil, after digging two feet and a half, is much better, being a brown mould of a saponaceous texture. This is the character of the soil on the elevated ground at a little distance from the shore; close to the shore it is very rocky, and the rocks are generally of a ferruginous nature, heavy, brittle, and splintery in the fracture; the soil

is light and shallow, intermixed with much sand and gravel. Bordering on the swamps, it is richer and more productive, but sometimes so dark in colour (almost black) that, by attracting the heat of the sun, it burns up the vegetables which it had quickly produced. After digging a few feet below the surface, the ground is frequently found to be of a whitish clayey nature. There are many flat pieces of ground near the swamps which I think capable of producing rice; but we had neither the means nor the opportunity of trying experiments with that grain; and the results of our trials of the productive qualities of the soil, generally, will be found afterwards.

The vegetable productions indigenous to Melville Island are various and abundant, vegetation being certainly altogether very luxuriant, and during the whole year there was plenty of grass for the subsistence of our cattle. The timber is in general of a useful quality; and although trees which are small in the stem predominate, yet there are many of considerable dimensions and applicable to house-building, furniture, ship and boat building, and to agricultural purposes. The largest timber measured sixty feet of stem, and three feet in diameter; and the average number of trees to an acre is about one hundred and twenty, but sometimes they are more numerous, amounting to one hundred and eighty. At a distance from the swamps, there is but little underwood; but in their neighbourhood, and generally on all the low ground, the sago palm (*Cycas media*, of Brown), the fan palm (*Livistona inermis*—Brown), the grass palm (*Pandanus spiralis*—Brown), and the cabbage palm (*Seaforthia elegans*—Brown), are thickly intermingled with the more lofty timber. Amongst the forest trees, several species of eucalyptus are most abundant.

Although the timber, as I have already stated, is both abundant and good, yet one-third or fourth of the trees are frequently rendered useless from the depredations of the white ants; which excavate the interior of a tree from one end to the other, forming a tube from three to five inches in diameter; and even the hardest wood, such as lignum vitæ, does not escape them.

During my residence on Melville Island we tried twenty-five varieties of wood, of which I shall here insert a list; at the same time showing the uses to which they were applied, with their dimensions and qualities. As most of them were of a species unknown to any of the colonists (none of whom were botanists), the nomenclature was formed either from the colour of the wood, structure of the bark, form of the leaf, or locality of the tree; and samples of all of them are in the writer's possession.

List of Timber found on Melville Island.

No.	Colonial, or Common Name.	Botanical Name or Species.	Locality.	Length of Stem.	Diameter.	If plentiful or otherwise.	When in Blossom or Fruit.	Quality of Wood.	To what purposes applied.
				ft. ft.	in. in.				
1.	Nutmeg	Myristica insipida. Br.	Swampy ground	20 to 40	8 to 12	Abundant	May	Soft	Timber little used, as it soon decays.
2.	Eucalyptus	E. miniata. C.	Dry land	20 to 50	20 to 36	Ditto	March	Hard	For girders, scantling, and weather boards.
3.	Alspice		Near the swamps	2 to 20	6 to 12	Ditto	Ditto	Soft	Wood never used.
4.	Red Apple Tree		Sandy soil	12 to 40	8 to 12	Plentiful	Fruit in Nov.	Fine grain	For cabinet work.
5.	Swamp Wood		Swamps	12 to 30	8 to 12	Ditto	April	Soft	Used for planks, but subject to worms.
6.	Lignum Vitæ		High land	20 to 50	12 to 36	Ditto	Unknown	Hard	Block-sheeves and treenails.
7.	Brown Wood		Ditto	12 to 16	18 to 20	Ditto	Ditto	Close grain	Scantling, planks, and boat timbers.
8.	Teak, or Yellow Wood	Acacia, sp.	Close to swamps	20 to 60	12 to 36	Ditto	May	Close & hard	Furniture and boat-building.
9.	Blood Wood		Forest land	20 to 60	10 to 20	Ditto	Unknown	Ditto	Treenails, scantling, and shingles.
10.	Red Bark, with narrow leaf		Ditto	20 to 60	10 to 20	Scattered	Ditto	Hard	Ditto, ditto.
11.	Brown Turpentine Wood		Ditto	20 to 40	7 to 12	Plentiful	March	Ditto	Scantling and weather boards.
12.	White Turpentine Wood		Near swamps	20 to 30	12 to 24	Ditto	Ditto	Coarse	Planks; but soon decays.
13.	Cherry Wood		Ditto	12 to 30	12 to 20	Ditto	Fruit in Dec.	Fine & hard	Fit for any purpose.
14.	White Apple Tree	Eugenia, sp.	Ditto	12 to 30	12 to 20	Ditto	Ditto	Tough	House and agricultural purposes.
15.	Large Swamp Wood		Swamps	20 to 60	12 to 36	Ditto	Unknown	Soft	Planks; but soon decays.
16.	Plum Tree*		Forest land	3 to 10	6 to 12	Scarce	Ditto	Hard	Joiner's work.
17.	Swamp Elm		Swamps	15 to 30	8 to 12	Plenty	Ditto	Soft	Ditto
18.	Red Bark, with broad leaf		Dry forest land	15 to 20	9 to 12	Scarce	Ditto	Hard	Ditto
19.	Swamp Ash		Swamps	15 to 50	9 to 20	Ditto	Ditto	Soft	Planks and Scantling.
20.	White Border Wood †		Near to swamps	15 to 40	9 to 20	Plenty	May	Ditto	Ditto, ditto.
21.	Cotton Tree ‡		Do. and on high land	15 to 30	9 to 20	Ditto	Ditto	Rather hard	Ditto, ditto.
22.	Variegated Bark		Swamps	15 to 30	10 to 14	Scarce	Fruit in Nov.	Soft	Ditto; but subject to worms.
23.	Cypress Pine	Callibris, sp.	Rocky ground	12 to 20	6 to 22	In Clumps	Seeds in Sept.	Brittle	Close-grained, and used for box and cabinet-work.
24.	Blue Gum		Forest land	15 to 40	10 to 24	Not plenty	Unknown	Hard	Every kind of coarse work.
25.	White Swamp Wood		Swamps	20 to 40	10 to 36	Plenty	Ditto	Soft and fine	Window-sashes and blinds.

* Plum tree—named from the structure of the wood being similar to the English plum tree. † Named from its growing on the borders of swamps.
‡ Produces a pod, the size of a large hen's egg, filled with short coarse cotton.

The only trees we met with, producing an edible fruit, were two species of apple and a plum; one of the apples was very acid and astringent, and only palatable in tarts or puddings; the other two fruits, though pleasant to the taste, were not much indulged in for fear they might prove pernicious.

Grasses are abundant, and grow very rank, some of them being very injurious to the cattle; but the greater proportion are wholesome and nutritive, and the cattle, when once acclimatised, thrive well upon them. Cattle, sheep, and goats, when first landed upon Melville Island, suffer very much, either from the grass, water, or climate; I cannot decide which—probably a combination of all three. During the first three years of the settlement, two-thirds of the cattle died in ten or fourteen days after being landed. The cows which survived this trial afterwards did very well; but sheep never fattened; they, however, produced fine lambs, and these, as well as the produce of the cows and goats which escaped the mortality on first introduction to the island, continued afterwards to thrive well. In 1827, we adopted a new plan of managing the cattle when first landed, and the deaths were in consequence much decreased.

The grass preferred by the cattle was that which grew on the borders of the swamps and the young grass around fallen timber; but the fine-looking grass on the forest land they avoided: of this we, however, made tolerable hay. We tried several exotic grasses, which succeeded very well; particularly the Capeen and Caffer grass.

Besides the forest trees already enumerated (and which are for the most part evergreens), there is a great variety of ornamental trees, shrubs, and flowers, which give some liveliness throughout the year to the otherwise sombre appearance of the island; amongst them, the abiscus, casuarina, convolvulus, the bead vine (*Abrus precatorius*—Linn.), and other runners and parasitical plants, are very conspicuous. The loranthus, with scarlet flowers, abounds; as also the beautiful calythrix (*C. microphylla*—Cun.), bearing a pink-coloured flower*. Of the flowers most numerous and beautiful, are the following:—*Crinum angustifolium*—Br.; *Calostemma album* — Br.; *Ipomœa pes caprœ*, with pink flowers; *Plectranthus salicifolius*, with purple flowers; a *Dendrobium*, with white flowers, &c.

Some of the mangroves grow to a considerable height, and the mangrove holly (*Acanthus ilicifolius*—Br.) is very frequent in their neighbourhood. In the forest land, trees producing a gum or rosin are numerous; this gum, exuding from the bark, forms lumps upon the stem, and is much used by the natives in the

* Shrubs of the genus *Persoonia* are also frequent.

formation of their spears. I can say but little of the esculent roots indigenous to Melville Island: there is a root of a small yam-like appearance, and another resembling a parsnip, both of which were scarce; and as they were only met with when better-known vegetables became tolerably plentiful in the gardens, I do not know that any trial was ever made of them, and we had never any opportunity of ascertaining whether they were used by the natives or not. The only vegetable production we observed them to eat was the young flower-branch or leaves within the spathæ of the cabbage palm, with the seed of the sago palm. The former was frequently made use of at the settlement, and a most acceptable vegetable it was when boiled or stewed. The cabbage palm grows to a great height (sometimes thirty feet), and latterly we obtained the germ, or rather the flower-branch, by ascending the tree and cutting it out with a strong knife or tomahawk; but, at the commencement of the settlement, many palms were altogether cut down near the root, and they consequently became scarce in the neighbourhood of Fort Dundas, though we frequently found clumps of them seven or eight miles from us. A large bean* is also met with in sandy places, and particularly near the shore; but when cooked and made use of, it was apt to occasion pain and a looseness of the bowels.

The first settlers reported that cloves and nutmeg were indigenous in the island, but this was altogether a mistake; and the nutmeg-tree (*Myristica insipida*—Br.), which I observed growing both close to and in the swamps, produced a small nut very slightly pungent, scarcely three-quarters of an inch long, but egg-shaped, and the mace, or net-work enclosing it, devoid of flavour. Some people have also been led to believe that sandal-wood was indigenous in Melville Island; but this is also an error, as the wood mistaken for it was the cypress pine, a species of *Callitris*, which resembled the sandal-wood in colour, and had somewhat of its pleasing smell. Wild ginger is however indigenous in Melville Island.

Quadrupeds.—Having stated all that I at present recollect under the head of indigenous vegetable productions, I shall now mention those of the animal kingdom. Of four-footed animals, we had the kangaroo, opossum, bandicoot, native dog, a small brown rat, a species of squirrel, and an animal very destructive to poultry, with a sharp nose, and the body covered with dark brown hair: the tail is fourteen inches long, and bare, like that of a rat, excepting within three inches of the tip, which is covered with long white hair; it measures twenty-seven inches from the extremity of the nose to the tip of the tail. The Ternate bat, or

* *Bauhini microphylla.*

flying fox, (*Vespertilio vampyrus*—Linn. *Pteropus Edwardsii, Desmarest. Mamm.*) is very numerous in the vicinity of the creeks, and flies about or suspends itself to trees in flocks of several hundreds together: those which I procured measured ten inches in length of body, and three feet between the extremities of the outstretched membrane. Of all the animals I have mentioned, only two of them were used by us as food; viz., the kangaroo and bandicoot; the former we seldom got, as they resorted to situations at too remote and inconvenient a distance to admit of our hunting them. The bandicoot afforded good eating, and were found generally, on moonlight nights, concealed in the hollow trunks of decayed trees.

Birds.—Of the feathered tribe there is a great variety, and of the most beautiful plumage; amongst them I may enumerate the following: white cockatoo, with yellow crest; black cockatoo, with red crest and red at the extremity of the tail-feathers; seven varieties of peroquets; six varieties of pigeons; four kinds of king-fisher, and amongst them the gigantic king-fisher (*Dacelo gigantea*—Leach); swamp pheasants (*Centropus phasianus*—Ill.); quail; curlew; wild ducks; sand-larks (seen in flocks in November); wild geese (rare); and a wild black fowl of the gallinaceous order, weighing from three to four pounds, and found in packs amongst the long grass near swamps, the flesh hard and insipid; blue and white cranes, and several more of the genus *Ardea*. There are magpies, ravens, hawks, owls, and wattle-birds; and many beautiful small birds are also abundant.

Reptiles.—Amongst the class reptiles, we found a great variety of the snake tribe, measuring from one foot to twelve in length: they were met with everywhere—in the forest, swampy ground, and houses. Although several of the soldiers and convicts were bitten by them, none of the wounds were very serious, excepting in the case of one man (the overseer), who was bitten by a snake whilst in bed. The reptile took a piece of the flesh clean out of his thigh; and as there was no medical man on the island at the time, Lieutenant Bate (who was superintending the sick, and was immediately informed of the accident) burnt the wound all around with caustic, instead of cutting any part away. The man suffered considerable pain for some days, and experienced many of the sensations felt by those who have been bitten by venomous reptiles. He was confined for ten days from the effect of the bite. The snake was found on the following morning in the overseer's hut, coiled up under a box. It was immediately killed, and burnt upon a fire before I had an opportunity of examining it. It was described to me as being six feet long, with a broad head and small neck. Another snake was brought to me which had bitten a dog and drawn blood. It measured ten feet

in length, had a broad, flat head, and small neck. It was furnished with a double row of very sharp teeth: the fangs were curved, and measured three-quarters of an inch in length, and a small bladder was attached to the root of each. The back was of a dark mottled brown colour, with a white belly. Although this appeared to be a venomous snake, yet the dog never suffered from the bite. This I attributed to his long hair preventing the poison entering the wound.

The Saurian order are very numerous, the most remarkable being the frilled iguana, or *Clamydosaurus Kingii* of Gray. The common iguana (*Iguana delicatissima*), from two to four feet in length, also abounds.* The skink-formed lizard (*Telequa tuberculata*, Gray) is met with in stony places; and an endless variety of the smaller lacertæ, of beautiful colours, are seen wherever the eye is directed, sporting in the sun, and cunningly waiting to entrap any unsuspecting insect that ventures near. Frogs of an immense size (four and five inches in length of body, and prettily spotted) swarm in damp places.

Apsley Strait, and all the creeks around Melville Island, abound with alligators (*caimans*). They measure from fourteen to seventeen feet in length; and in the clear water around the island, are frequently seen water-snakes, two and three feet in length, and spotted black and yellow. Turtles are common on the sea-coast of Melville Island, but they were never seen in Apsley Strait, and we of consequence were never able to obtain any for the use of the settlement. Our limited number, and necessary occupations at the settlement, deprived us of the power of sending parties to any such distance as would detain them beyond twenty-four hours. Even to procure a few fish, we were obliged to send ten miles from the settlement, to the nearest fishing-ground; and owing to the strong tides and currents, and the fishing time being that of half flood, a party, after drawing the seine as often as it was attended with success, could seldom return under twenty-four hours; and in so warm a climate, the few fish they caught were by that time scarcely fresh enough to be eaten. I have been on these excursions all night, exposed to heavy rain, for the purpose of obtaining a change of food for those intrusted to my care, and have returned with probably only about eighty or one hundred pounds' weight of fish, for the supply of one hundred and thirty individuals. Although, as I have already stated, we were never able to take turtle, yet I have seen them swimming about in considerable numbers off Brenton Bay, near Point Jahleel.

Insects.—To the entomologist Melville Island offers an ample

* These iguanas burrow like rabbits underground, and their holes are so numerous in the light sandy soil of the forest, that it requires considerable caution to avoid falling in to them.

field for observation. The species are both numerous and beautiful; and the vicinity of the swamps would afford the insect collector an abundant harvest. The orders hemiptera and lepidoptera are particularly beautiful, and in great numbers, and that of coleoptera is also found abundant in species. Of the order neuroptera, the libellula, or dragon-fly, is in great variety and beauty; and I have seen five kinds of ant, chiefly of the genus termites: viz., the white ant, which rears its pyramidal dwelling to the height of seven or eight feet; the green ant; red and black ant; large black ant; and a very minute ant, that can scarcely be discerned with the naked eye. The white ant infests the houses, and destroys everything that comes in its way. These insects make their approach by forming an earthen gallery, under cover of which they advance in myriads, and commit terrible depredations. They cut through all bale goods in our stores, such as canvass, blankets, shirts, trowsers, and even shoes. They are so rapid in their operations, that I know instances where bales, containing two dozen of shirts each, each shirt packed one above the other, and placed on shelves four feet from the floor, and six inches from the wall, have been perforated through and through in twenty-four hours, notwithstanding that the storekeeper examined the bales every day, and that on the day previous to those discoveries, not an ant was to be seen in the store. But these insects do not confine their attacks to bale goods. They entered my cellar, and in a few days' time destroyed two dozen of claret; and during a period of four days, while one of the soldiers was in the hospital, they completely gutted his knapsack, which was hanging on a peg in his barrack-room, and contained all his necessaries. They spread through it in all directions, and destroyed his shirts, trowsers, stockings, jacket, shoes, and even razors. Of the latter, the blades were encased in rust, from the moisture, or viscus, which these insects carry along with them, and the horn handles were eaten through. In the course of three or four weeks, they also destroyed thirty pounds' worth of clothes belonging to Mr. Radford, one government tent twenty feet long, three hundred feet of timber in the timber house, three ammunition boxes in the magazine, sixty-five pairs of trowsers, and twenty-three smock-frocks in the engineer's storehouse.

There are several species of bee, and amongst them a very small one about the eighth of an inch in length, that produces fine honey, which they deposit in trees. Mosquitoes and sand-flies are the pest of the island: they kept us in a perpetual fever, and no seasoning by climate secured us against their attack.

From sunrise until sunset, the sand-flies issue forth in millions, and keep one in a constant state of irritation by fixing upon the face, neck, and hands—where, inserting their proboscis, they

inflict most severe pain, and cause the blood to flow most profusely. When they take their departure at sunset, the mosquitoes remind you that the torments of the day are not yet passed; and from six o'clock until ten they exercise their tormenting powers, which are too well known to require description.

The next annoying and destructive insect is the cockroach: these became very numerous, swarmed in the houses, and destroyed clothes, paper, bread, and books, indiscriminately. These insects generally made their appearance at night and, as if by a concerted signal, issued from their hiding-places all at once, and made a noise by scampering along the walls, as if heavy showers of hail were falling. Besides the insects mentioned, I may add the scorpion, centipede, and tarantula, each of which were in great numbers.

Sea Productions.—In regard to the sea productions, my observations are very limited. The following are all I met with:—the common shark, porpoise, sting ray, rock cod, mullet in abundance, cat-fish, pipe-fish, sole, flounder, bream, flying fish, ground shark, and a very good eating fish called by the sailors 'skip-jack.' We never procured any shell-fish; and on my walks along the beaches, I met with very few shells of any kind. It is probable that the natives are always on the look-out for any shell-fish that may be driven on shore, and carry them off for food, as I have found at their encampments the shells of the tiger nautilus, cockles, and oysters. The biche la mer, or sea slug, was found in small quantities, but by no means so plentiful as to induce any of the Malay fishers to approach Melville Island in search of it.

Climate.—The climate of Melville Island is certainly unhealthy from the end of October until the beginning of April, or even until May. The heat is excessive, and the atmosphere, then overcharged with moisture, is extremely oppressive and debilitating. This is the period of the north-west monsoon, or rainy season; and the general range of the thermometer is from 80° to 100° in the shade, and seldom varies more than 12° during the twenty-four hours. The mid-day heat is 89° or 90°, and the extremes 77° and 100°. These were the ranges at Fort Dundas, which was surrounded by swamps, and about twenty-five feet above the level of the sea. At this season, the body is constantly bathed in perspiration—morning, noon, and night; and the debility occasioned by the combined effects of the heat and damp is most distressing. Without any muscular exertion, labour, or even common exercise, debility, weariness, listlessness, and a sensation of excessive fatigue, are universally experienced and complained of. On rising in the morning, fatigue and a want of refreshment is felt; and after a few minutes' slow walking, even after the sun is down, the act of lifting the feet is a fatiguing exertion, and the body feels a

sensation of weight pressing upon it, and bearing it down. Although the settlement of Fort Dundas was surrounded by deep swamps, and broad belts of mangrove growing out of mud beds, yet the swamps, being generally full of trees, and surrounded by thick underwood, the exhalation arising from evaporation was probably not so injurious as it would have been, if cleared from timber. In the mornings at day-break, these swamps were generally covered with a dense vapour, which was dissipated in an hour after sunrise; but for a distance of two or three hundred yards from the swamps, there was always a miasma, or oppressive heavy smell of decayed vegetable and animal matter.

The north-west monsoon sets in about the beginning of November, when the sun is approaching the meridian of Melville Island on its passage to the southward: it is preceded by squalls and variable winds, and its setting in varies sometimes three or four weeks, in comparing one year with another. During this monsoon, there is almost daily thunder in the afternoon and evenings.

In 1824, the rains and north-west monsoon commenced early in November. In 1825, they commenced about the same period. In 1826, they did not set in until December. In 1827, the rain and squalls commenced about the middle of October; but there was that year no regular monsoon either at Melville Island or in the Timor seas. As in all tropical climes, the rain falls in torrents during this season, but seldom continues above two or three hours at a time—falling generally from two to five o'clock in the afternoon, or during the night; therefore, there is scarcely a day but out-door labour may be carried on for a few hours.

The most unhealthy season is during the north-west monsoon, particularly at the commencement of the rains, when fevers, dysentery, diarrhœa, and constipation of the bowels, are very frequent; but from timely remedies, which our system of surveillance insured, these complaints seldom terminated fatally. I observed, that when the setting in of the rainy season was protracted beyond the usual period, sickness was increased: this was the case in 1826, and the same observation was made at Coëpang Timor that year.

We had ten or twelve cases of fever in November and December, five of which proved fatal, the patients dying in twenty-four or thirty hours after being admitted into hospital.

The termination of the north-west monsoon is indicated by squalls, and sometimes a tempest in the early part of April, as was the case in 1827 and 1828. The sun then returning to the northward, the wind settles in the south-east, the sky becomes clear, the rains cease, the atmosphere becomes drier, and the weather more temperate. In May, the hospital, which was generally pretty full during the former monsoon, gets cleared, animal spirits revive, and

the thermometer ranges from 75° to 90°, the mid-day heat being 87° and 89°. June, July, August, and September, are the only tolerably pleasant months in the year; the mornings and evenings are pleasantly cool, and exercise can be freely taken until ten in the morning and after four o'clock in the afternoon, and may frequently, with impunity, be taken even in mid-day. No rain falls during these months, but there are frequent heavy dews at night. In exposed places, vegetation is completely burnt up; but, with great care, some garden vegetables are preserved, the chief of which is the pumpkin. The thermometer during these months is 67° at six o'clock in the morning, 87° at three in the afternoon, 77° at nine at night; the extremes being 63° and 89°. Notwithstanding the great heat at Melville Island at all seasons, and the clearness of the sky during the dry season, or south-east monsoon, the atmosphere contains considerable moisture; although not perceptible to the senses, yet it is evident from the great difficulty in keeping articles made of steel from rust.

Although the wet and dry seasons are pretty regular, yet the winds are not always steady near the land, viz. blowing from the north-west point with the rainy monsoon, and the south-east point with the dry monsoon; but vary several points with each monsoon. In Apsley Straits a breeze frequently sets in from seaward, or from the northward, with the flood tide during the south-east monsoon; but we had no regular land and sea breezes.

Diseases.—During the period I was on Melville Island, we kept a regular hospital register-book, in which every case admitted into the hospital was entered daily, and the disease, treatment, and duration of the patient's illness carefully inserted. I had an opportunity of daily examining this register, and had it copied every morning into the register kept in my own office, for the purpose of transmitting to the colonial secretary at Sydney; therefore, although I cannot exactly carry in my memory the number of deaths, I perfectly recollect the prevailing diseases, most of which I find noted in my journal, as well as many of the deaths. The prevailing diseases were—intermittent, acute, and typhus fevers, constipation of the bowels, vertigo (frequent), dysentery, diarrhœa, rheumatism, scurvy, and nectalopia; the latter disease was very common. The cases of typhus and acute fever appeared at the beginning of the wet season; and when the winds were variable during that period, many were suddenly seized with sickness, violent griping, and delirium. We could not account for the prevalence of nectalopia, or, as it is sometimes called, moon-blindness. Salt meat was certainly generally issued to every person, but they had, besides, a wholesome proportion of flour, rice, or bread, with vinegar, tea, sugar, and a small quantity of vegetables; nor were the settlers exposed to any extraordinary glare from sand or water,

and many who had this complaint used very little of their salt meat. Even when fresh meat was issued, this disease prevailed to a considerable extent.

With respect to the scurvy, it appeared to me to be an endemic disease arising from some peculiar local cause; with new comers, it might be occasioned by a removal from a cool climate to a heated and damp one. This disease only appeared generally at the settlement of Fort Dundas, shortly after its establishment in 1824. The constant use of salt provisions, without vegetables, hard labour during the wet season, and the excessive heat of that season, may have engendered it; and notwithstanding the attention and endeavours of an intelligent and experienced surgeon (Dr. Turner) to prevent and afterwards arrest it, the disease made great progress until the end of 1825, or beginning of 1826. When lime juice was obtained, and vegetables became more plentiful, the disease then subsided. There were, however, several cases of scurvy during 1826, 1827, and 1828, although the utmost caution was taken to guard against it by great attention to cleanliness, use of vegetables, and frequent issues of fresh and preserved meats, pickles, and vinegar. When the first detachment of troops were relieved in 1826, those who replaced them had spirits mixed into grog issued to them every day (the former detachment had no spirits issued); and amongst these very few cases of scurvy appeared, although they lived generally upon salt provisions for the first year, with a very small occasional addition of vegetables, probably once a week.

When the settlement was established in Raffles Bay in 1827, on the north coast of New Holland, and in the same parallel with Fort Dundas, at which place no spirits or wine was issued either to the military or convicts, the scurvy broke out and spread in a rapid and alarming degree, both amongst the soldiers and prisoners.

The site of the settlement and its neighbourhood was dry; the disease occurred during the dry season. The establishment consisted of young healthy men, direct from Sydney, and many of them only a few months from England. The complaint made its appearance among the settlers in six or seven weeks after landing: their diet consisted of a small quantity of salt meat, and occasionally fish (which was caught close to the settlement), with flour, sugar, and tea or coffee. When the malady had attacked and rendered incapable of exertion two-thirds of the settlement, spirits, lime juice and sugar made into punch, was issued to all the worst cases, and grog or wine issued to the military. It immediately remitted in virulence, and ultimately nearly or entirely disappeared. I saw all the sufferers myself, having had occasion to go to Raffles Bay; and from my observations and inquiries,

I certainly thought that the scurvy there, as well as on Melville Island, was endemic, and more dependent on climate and local causes than diet.

Considering the consequences of the climate of Melville Island, during my residence there and that of my predecessor, and knowing the unremitting attention that was paid, and measures adopted, in order to preserve health throughout the settlement during my command, I must pronounce it to partake more of the character of an unhealthy than a healthy climate. I should not recommend invalids to go there during any period of the year to be restored to health, from any part of the world; although from May to September, healthy people may continue in the enjoyment of health with rational care; but from the end of September to May, few can escape some attack or other of illness. The climate, after a year's residence, is extremely debilitating to Europeans; but on the whole, with proper precautions, it does not often engender any fatal complaint. I must, however, mention one gentleman who suffered much from the climate: this was Mr. Miller, of the commissariat, who remained in a very debilitated state for a year and more after leaving the island. I dare say if elevated spots were cleared, extensive openings made, and good commodious airy houses built, Europeans would find it as healthy as any equally low island within the tropics.

The foregoing remarks are applicable to the effect of climate on those living on shore;—the crews of the government vessel attached to the settlement, which plied between Melville Island and Timor, were always in health. The following is an account of the deaths which occurred (as appears on reference to my despatches) from the establishment of the settlement, in September 1824, until I was relieved, in May 1828:—

From September 1824 to September 1826, the population had been 136; the deaths 12. From September 1826 to May 1828, the population had been 135, and the deaths 14. The total number of persons who had resided on the island during these four years amounted to 180, out of which there were 26 deaths; but as six of those deaths were accidental (two of them being caused by drowning, and four killed by the natives) we find only 20 deaths by sickness—which is about one death out of every nine.

I shall here subjoin the result of my thermometrical observations; and may also remark that we experienced successive shocks of an earthquake on the 1st, 2nd, 3rd, and 19th of August, 1827; each shock lasted about a minute. The sensation was, as if the island had been shook violently by some immense power, attended at the same time by an indistinct rumbling noise. It was not an undulating or upheaving, but a violent trembling or shaking motion.

METEOROLOGICAL TABLE.

	Month.	Thermometer. 6 A.M.	8 A.M.	Noon.	3 P.M.	9 P.M.	Midnt.	Extreme	Average State of the Weather.
South-east Monsoon, or Dry Season.	April ...	78	82	87	88	82	79	90	Cloudy, with squalls and rain, 1st to 14th; clear and dry from the 15th to 30th.
	May	75	80	87	87	80	77	90	Clear weather, with light easterly and southerly winds.
	June....	69	76	84	86	77	75	88	Clear weather, with easterly winds, and strong breezes in the afternoon.
	July	63	70	83	85	69	66	87	A mixture of clear & cloudy weather, with variable winds.
	August .	66	76	85	87	75	72	90	Pleasant cloudy weather, with breezes from the S.E. and N.W.
	Septem..	70	77	86	87	78	77	92	Pleasant cloudy weather, with variable winds S.E. and N.W.
North-west Monsoon, or Wet Season.	October .	75	80	88	90	82	79	95	Cloudy and sultry, with variable winds; some rain and thunder.
	Novem. .	76	82	90	92	84	81	99	Cloudy, with thunder, frequent showers and squalls from S.E. to S.W.
	Decem. .	83	84	89	90	83	81	99	Cloudy, and calm close weather, much rain, thunder, and squalls; wind N.W.
	January .	80	83	87	88	83	82	94	Squally, with heavy rain, thunder, and oppressive hot nights.
	February.	79	82	87	88	83	81	94	Cloudy, rainy weather, with wind from the N.W. and S.W.
	March ..	78	82	88	90	82	80	95	Cloudy, calm, sultry weather, with rain in the afternoon; wind variable.

Natives.—In personal appearance the natives of Melville Island resemble those of the continent (if I may so call it) of New Holland, and are evidently from the same stock; but they are more athletic, active, and enterprising than those I saw on the southern coast of Australia, at Port Jackson, Newcastle, or Hunter's River. They are not generally tall in stature, nor are they, when numbers are seen together, remarkable for small men. In groups of thirty, I have seen five or six strong powerful men of six feet in height, and some as low as five feet four, and five.

They are well formed about the body and thighs; but their legs are small in proportion, and their feet very large; their heads are flat and broad, with low foreheads, and the back of the head projects very much; their hair is strong, like horse-hair, thick, curly or frizzled, and jet black; their eyebrows and cheek-bones are extremely prominent—eyes small, sunk, and very bright and keen; nose flat and short, the upper lip thick and projecting; mouth remarkably large, with regular fine white teeth; chin small, and face much contracted at bottom. They have the *septum of the nose* perforated, wear long bushy beards, and have their shoulders and breasts scarified; the skin is not tatooed, as with the New Zealander, but is *scarified,* and raised in a very tasteful manner;* and their countenance expresses good-humour and cunning. All those who have reached the age of puberty are deficient of an upper front tooth—a custom common in New Holland. The colour of their skin is a rusty black, and they go about perfectly naked; their hair is sometimes tied in a knot, with a feather fixed in it; and they frequently daub it with a yellow earth. On particular occasions, when in grief, or intending mischief or open hostilities, they paint their bodies, faces, and limbs with white or red pigments—so as to give themselves a most fantastic, and even hideous appearance.† In disposition they are revengeful, prone to stealing, and in their attempts to commit depredations show excessive cunning, dexterity, arrangement, enterprise, and courage. They are affectionate towards their children, and display strong feelings of tenderness when separated from their families; they are also very sensitive to any thing like ridicule. They are good mimics, have a facility in catching up words, and are gifted with considerable observation. When they express joy, they jump about and clap their hands violently upon their posteriors; and in showing contempt, they turn their back, look over the shoulder, and give a smack upon the same part with their hand. In the construction of their canoes, spears, and waddies, they evince much ingenuity, although the workmanship is rough from the want of tools; they are expert swimmers, and dive like ducks. They show no desire whatever for strange ornaments or trinkets; they are polite enough to accept of them without any expression of astonishment or curiosity, but very soon afterwards take an opportunity of slyly dropping them, or throwing them away. The only articles they seemed to covet were hatchets

* The breast of one taken prisoner was scarified, and formed into ridges, much resembling the lace-work on a hussar's jacket.

† They cover their bodies with grease, it is supposed to secure them from the piercing sting of the sand-flies and mosquitoes; and their bodies smell so strong that even the cattle used to detect them at half a mile distance, and gallop off, bellowing in great apparent alarm.

and other cutting tools; but still, when they could steal, they carried off every thing they could lay hold of. As long as we occupied the island, the natives were extremely shy and cautious in all their communications with us; they never intrusted themselves in our power; and notwithstanding my utmost efforts by acts of kindness and forbearance to gain their confidence, and convince them that we desired to be on friendly terms, I found it utterly impossible to accomplish this desirable object. Previous to my arrival they had committed murder, various depredations, and daring acts of violence. They had at length been fired upon whilst committing acts of outrage; and from all my inquiries I believe they had been the first aggressors, by throwing spears. When I assumed the command, I was extremely anxious to court their friendship, as without it, with our limited numbers and means, we never could become acquainted with all the resources of the island, or make them of available use to us: I therefore prevented any of the military or prisoners from putting themselves in contact with the natives without my presence or orders; I allowed no arms to be taken out except by those on whom I could depend, and strictly enjoined that they should only be used against the natives in self-defence, and when by the laws of England it would be justifiable. I feel confident, also, that these orders were strictly attended to; but notwithstanding they continued until the last day distrustful, if not even determinedly hostile. They put two gentlemen of the settlement, one soldier and one of the prisoners, to death, and wantonly wounded several others. During my time we were obliged to fire at them several times; we never knew of any having been killed, although in one or two instances they were wounded; they might have died, and the spirit of revenge might have excited them to other acts of violence. There was a curious inconsistency in their conduct: on one day they would appear good-humoured and friendly, and allow individuals of our settlement to pass unmolested through extended lines of them, and probably on the following day would throw their spears at any individual they could surprise by stealing upon him. They never came near us without their spears and waddies; but sometimes they would leave their spears a few hundred yards in their rear, concealed behind trees, amongst the long grass, or in possession of some young boys, who would run up to them on the first signal; they would then approach within fifty or sixty paces, extend their arms, throw their waddies to the rear in token of amity, and then by signs oblige all those who approached them from our side to extend their arms also, and turn round to show they had no weapons concealed; when satisfied, they would enter into a palaver, and two or three of the most daring would advance in front of the others, which latter (part

formed in a group, and a part extended singly to a distance of a quarter of a mile on each flank) would remain ready to support them in case of emergency. These few in advance would allow one or two of our people to approach within two or three paces of them, determined to maintain a superiority of two or three to one. Fearful of drawing this memoir out to too great a length, I must refrain from relating any of their daring and cunning acts of aggression, or the numerous interesting occurrences which took place. Suffice it to say, that we had one of these savages as a prisoner for several weeks, from whom I learnt a good deal of their character; and the following little circumstance caused me to conjecture, at an early period, the reason of their being so suspicious of strangers:—

In one of my interviews with a tribe of the aborigines, who had approached to the outward boundary of the forest, and within half a mile of the fort, I observed that they appeared more familiar than usual. Having previously prepared a medal, attached to a piece of scarlet tape, I expressed a wish to hang it round the neck of a fine-looking young man, who bore a feather in his hair, and appeared to have some authority. This young man remained at a short distance (two or three paces), took hold of his wrists, and appeared as if struggling to escape from the grasp of an enemy; he then pointed his hand towards his neck, looked upwards to the branches of a tree, shook his head significantly (evidently in allusion to being hung), and avoided coming nigh enough to receive the proffered gift. This led me to imagine that the island had been visited by strangers, and the natives forced away by them as slaves; in corroboration of which opinion, I may add three other circumstances which came under my notice:—

The first is, that the Malay fishermen, from Maccassar, are forbidden to go near Melville Island (which they call *Amba*), alleging that it is infested by pirates—probably slavers, as amba, in the Malay language, signifies a slave.

The second circumstance relates to a lad, who had been taken from a native tribe in 1825, and detained at the settlement three or four days, when he escaped. This lad was the colour of a Malay, and possessed their features: whence it is probable that he was taken when a child from some Malay slave-ship or fishing prôa, and reared amongst the Melville Islanders.

The third circumstance is, that when Captain King, R.N., entered Apsley Straits, in 1818, and was proceeding towards the shore near Luxmorehead in his boat, a number of natives were on the beach; and a female, who entered the water in order to decoy him close to the shore, called out 'Vin aca, vin aca.' This being a Portuguese expression, induces me to believe that vessels from the Portuguese settlement of Delbi, on the north side of

Timor, might have visited Melville Island, for the purpose of seizing the natives, and carrying them away as slaves.

During the four years that this island was occupied, only two aboriginal females were seen, and at a distance: they were both old and ugly, and their only garment was a short narrow apron of plaited grass. We frequently saw young boys, from six to twelve years of age, along with the men: they were well made, plump in person, good-looking, and with a remarkable expression of sharpness in their eyes.

The weapons used are spears and waddies: the spears are from ten to twelve feet long, made of a heavy wood, and very sharp-pointed; some are plain, others barbed—some have a single row of barbs, from twelve to fifteen in number, and others a double row: they may weigh three pounds, and are thrown from the hand (without any artificial lever, as at Port Jackson) with great precision and force, to a distance of fifty or sixty yards.

The waddies are used as weapons of attack, as well as for killing wild animals and birds. They are made of a heavy wood, twenty-two inches long, one and a half in diameter, pointed sharp at one end, and weighing above two pounds; they are not round and smooth, but have sixteen equal sides, with a little rude carving at the handle, to ensure their being held firmer in the hand.

Their canoes, water-buckets, and baskets, are made of bark, neatly sown with strips of split cane. The canoes consist of one piece of bark, are twenty feet long, twenty-eight inches wide, and fifteen deep; the stem and stern are neatly sewn with thin slips of cane, and caulked with white clay; the gunwales are strengthened by two small young saplings (such as grow in marshy places) fastened together at each end of the canoe; the sides are kept from closing by pieces of wood placed across, and which also answer as seats.

The natives of Melville and Bathurst Islands are divided into tribes, of from thirty to fifty persons each; I do not think that I ever saw above thirty-five or forty men together, although some individuals, surprised by them in the forest, have reported having seen a hundred; the noise they make, and their jumping from tree to tree, make them often appear more numerous than they actually are. They lead a wandering life, though I think each tribe confines itself to a limited district; and probably when tired of one, or their resources are exhausted, the strongest may usurp that of a weaker. In 1824-5 a tribe of daring athletic men kept constantly in the neighbourhood of Fort Dundas. In the beginning of 1826, a strange tribe visited the settlement, and they were generally slight-made men; but by the end of the year the former tribe returned, and continued to remain in the neighbourhood until the island was abandoned in 1829. During the dry season they dispersed them-

selves a good deal on hunting excursions, and burnt the grass on the forest grounds for that purpose from April to September. I think when they move that their women and children accompany them, as female voices were frequently heard at a distance at night, proceeding from their encampments. They generally encamp on sandy banks, amongst the mangroves, or on dry open spots near swamps, or on the sea-coast. They do not give themselves the trouble of constructing wigwams in the dry season, merely forming a bed of palm-leaves, or long grass, wherever they repose for the night; but during the wet season they have some covering, and their encampment being more stationary, displays a little comfort, and is generally in a pleasant spot near the sea.

The following is an account of my visit to one: — Upon landing under the high sandy beach, we came upon an extensive encampment of natives; the men, women, and children all fled like frighted deer, and left us quietly to examine their domestic economy. There were thirty wigwams, all made of newly-stripped bark; each consisted of a single sheet of bark, formed into a shed or mere roof, open at each end, with a fire at the entrance; the interior space was four feet and a half long, three in width, and three feet high. Pieces of soft silky bark, rolled up in several folds, and answering as pillows and seats, were in each wigwam. Some of these erections were placed under spreading shrubs; and the twigs being artfully entwined into each other, formed a tasteful inclosure. Several of them were ornamented inside by figures drawn with white clay: one in particular was neatly and regularly done all over, representing the cross-bars of a prison-window. The utensils consisted only of bark buckets and baskets; and the ground around was strewed with the shells of turtle, crabs, oysters, and limpets. At one end of the encampment lay the materials for constructing a canoe; and on a block of wood close to it was observed marks made with an axe, or tomahawk. We committed no depredations, and saw the natives hastening back when we quitted the shore.

The food of these people consists of kangaroo, opossum, bandicoot, iguanas, and lizards during the dry months; fish, turtle, crabs, and other shell-fish, during the wet months; and their vegetables are the cabbage-palm and fruit of the sago-palm. They eat their meat just warmed through on a wood fire; and the seed of the sago-palm is made into a kind of mash. Amongst those natives whom we encountered, I never saw any deformed, or having the appearance of disease or old age;—probably such were left with the women, in places of security, and only the able warriors came near us. There was one powerful, determined-looking fellow frequently seen, who had lost a hand; and he

threw his spear by resting it on his maimed arm, and taking a deliberate aim.

Although the Aborigines of Melville and Bathurst Islands are of the same race or breed as those throughout New Holland, yet their language is different. We had a native of the southern coast with us for a short time, and he could not understand a word they uttered. They speak low and quick to each other; but their pronunciation is so indistinct, we scarcely ever made out a word. I was in hopes of picking up much of their language from the native we had made prisoner, but during the time that I was absent on an excursion to Port Essington, he effected his escape. His dialect did not sound harsh; and his expressions were very significant, from the gestures with which he accompanied them.

The following are some of those expressions: —'*Co curdy*'—Water, give me some water, or I am thirsty; '*Hooloo, hooloo*'—My belly is full, I am not hungry; '*Bungee*'—Fire-arms; '*No bungee*'—Don't fire; '*Peerce*'—An axe; '*Pakee*'—Peace or friendship; '*Piccanini*'—Children.*

I do not think that these Islanders ever cross over to the coast of New Holland; for the currents are so rapid in Dundas and Clarence Straits, that it would be dangerous for their slight canoes; and although so close to the Cobourg Peninsula, yet the spears of the Melville Islanders are differently formed from those used by the natives of that peninsula, and much heavier.

It appears to be the custom of the natives to bury their dead, their burial-places being in retired spots near their most frequented encamping ground. The burial-place is circular, probably ten or twelve feet in diameter; it is surrounded by upright poles, many of which are formed at top like lances and halberts, fourteen or fifteen feet high; and between these the spears and waddies (probably of the deceased) are stuck upright in the ground.

It is quite impossible to form any estimate of the numbers of the natives, but they are seen on all parts of the coast of these two islands. I shall not presume even to give a guess at their probable number.

The following is a list of the exotic fruits, grain, vegetables, &c., which we cultivated in Melville Island; with remarks on their success.

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* Wharra-wharra is also a common expression of the natives, when calling aloud to each other, or wishing to attract attention. [Wharra is the name of a palm at Tongataboo.]

List of Fruits, Vegetables, Roots, Plants, and Grains, which were grown or tried on Melville Island.

Names.	Quality.	Remarks.
Plaintains	Excellent.	Produced fruit throughout the year.
Custard Apple	Ditto.	Ripe from February to April.
Cocoa-Nut	Ditto.	Plants throve well, 1826—9.
Lemons, Limes, Shaddock, Orange, Mango, Guavas, Tamarinds, Pomegranate	. . .	All these plants were thriving well, but had not advanced far enough to produce fruit.
Pine Apples	Very fine.	Abundant, and promised to produce throughout the year; weighing from 4 to 6 lbs.
Papaw Fig	Ditto.	In fruit at all seasons.
Melons (six kinds)	Ditto.	Ripe from February to June.
Water Melons	Ditto.	Ditto during nine months of the year.
Pumpkins	Good (not large)	Ditto from December to August.
Yams	Very good.	Fit for using in June.
Sweet Potatoes	Ditto.	Ditto all the year round.
The Common Potatoes	Very bad.	Could not be cultivated.
Onions	Good.	Particularly the small white potato-onion.
Turnips	Very bad.	The tops only could be used.
Bringal	Very good.	Ripe from October to March.
Beans (varieties)	Ditto.	Ditto from November to March.
Peas	Bad.	Did not grow well, and destroyed by vermin.
Cabbage	Very good.	Fit for use in July.
Cucumbers	Ditto.	Ditto from November to April.
Cress	Ditto.	Ditto during the rainy season.
Capsicum	Ditto.	In fruit during six months of the year.
Calavances	Ditto.	Liable to be destroyed by grubs.
Endive	Ditto.	In season from December to May.
Parsley	Ditto.	Ditto from December to April.
Beet-root	Good.	Grew large in garden mould.
Radishes	Very good.	In season in Nov. and Dec.; but did not seed.
New Zealand Spinach	Ditto.	Ditto ditto, and throve well.
Vegetable Marrow	Ditto.	Ditto from February to June.
Arrow-root	Ditto.	Ditto in July.
Ginger	Ditto.	Ditto ditto.
Saffron	Ditto.	Produced about one pound to each root.
Sugar-cane	Rather weak.	Indifferent, from want of an experienced cultivator.
Turmeric	Pretty good.	
Cotton	Short and coarse.	Produced three or four crops a year.
Indian Corn	Very good.	Planted in Nov., and ripe in April or May.

I shall next make a few remarks on the effect which the climate had upon our domestic live stock.

The English breed of cattle, when first landed upon Melville

Island died in great numbers; but those which survived, latterly turned out well, remained healthy, had beautiful sleek hides, and reared fine calves. They were herded on the borders of the swamps from daylight until sunset, when they returned to the stock-yard well-filled, and gave excellent, sweet, well-flavoured milk.

The buffaloes, introduced from Timor, herded separate from the English cattle; nor could we get them to associate together. After being first landed, generally a third or fourth part died within the first fourteen days, from inflammation of the bowels. This disease is brought on either by change of climate or some bad quality in the grass. The appearance of the animal when taken ill, was drowsiness, lying down, swelling of the bowels; and death ensued in five or six hours. We at first thought this disease was brought on by over-eating green grass, or drinking too much water, on being first landed from the ship; and this suggested the plan of keeping them in the stock-yard for the first week, feeding them on hay and green grass mixed, giving them but little water, and increasing the allowance of food daily. Many, however, died under this treatment; and others did not survive long after being driven out to pasture at the expiration of the week. Ultimately, I built long roomy sheds, under which the buffaloes were allowed to shelter themselves from the sun, from ten o'clock in the morning until three in the afternoon; and as these animals delight in wallowing, like pigs, in mud holes and pools of water, I directed them to be driven to such places (both morning and evening) as would enable them to enjoy this refreshment. This system, combined with caution in feeding them for the first week after being landed, tended to diminish the deaths from one-third to one-tenth.

Sheep did not thrive well, for although they increased tolerably, yet they never became fat or fit to be killed for food. From 1824 until May 1828, only two of the New South Wales breed were killed at the settlement; and neither weighed fifteen pounds. It is remarkable, that the sheep introduced from Sydney lived better on the island than those which were brought from Timor: the difference of latitude between that island and Melville Island is only one degree, yet, out of one hundred sheep landed at different times, not above five survived the first fortnight or three weeks.

Goats, which are considered a hardy animal, died off even faster than sheep: out of about twenty, which were introduced in the course of four years, from Timor, not one lived beyond twenty days, although carefully fed and confined in the stock-yard. Goats from Sydney lived better, as two only out of six died.

Pigs did not thrive unless provided with plenty of grain and cooks' fat. The swamps, being too full of water, afforded no

food; nutritive roots were scarce, and earth worms were not met with. The roots and heart of the fan and sago palms sometimes afforded a little subsistence, as did occasionally the young sprouts of the cabbage palm; this was, however, but the precarious and scanty subsistence of such pigs as wandered (at the risk of being speared by the natives) to a distance from the swamps and fort. The government stock of pigs, amounting sometimes to 130 or 140, were, in consequence of an insufficiency of grain, always poor and unfit for killing; and yet they wandered at liberty all day: whereas those which were house-fed by private individuals were always fat, and afforded excellent meat.

Poultry did well during the dry season, and as long as a little Indian corn or paddy (rice with the husk upon it) could be procured: they, however, required great care in rearing, as the chickens were very subject to blindness during January, February, and March; and the almost constant thunder, from October to April, frequently destroyed every young brood of chickens at the settlement at the same hour.

Towards the end of 1827, I had sufficient experience to form a more correct opinion of the advantages and disadvantages of Melville Island, as a commercial station, than I had twelve months before. I also made myself acquainted with the places of resort of the Malays, and their period of approaching the coast of New Holland; as well as ascertaining the most desirable situation for a settlement on the north coast. I represented to his Excellency the Governor of New South Wales the disadvantages under which Melville Island laboured, and which appeared to me to counterbalance any argument that could possibly be offered in its favour.

Some of these objections were as follows. The approach to Apsley Strait was greatly obstructed by shoals; it was out of any direct line of trade, and had never attracted the attention of the traders of any nation whatever, not even the Malays, who annually came within thirty miles of the island, and within a hundred miles of the settlement: this enterprising people avoided Melville Island, both on account of their instructions from Macassar and their aversion to enter narrow straits where there are strong currents. The soil near the settlement was generally light, and difficult to bring into a state for cultivation, and European labour I considered inadequate to do justice to it. The climate was extremely debilitating, although not decidedly very unhealthy; and the constitutions of Europeans suffered much from its effects. In the course of twelve months, nearly every individual belonging to the establishment had been in hospital, and some of them three or four times. These combined circumstances, with several other obstacles, already mentioned in this memoir, were so much at

variance with the prosperity of a young settlement, and had operated so much against it for three years, that I felt convinced there was no chance of opening a commercial intercourse between Melville Island and the Indian Archipelago, either through the medium of native vessels or others. Thus, the main object of Government in forming an establishment in this part of the world, with a view of extending our commerce by introducing European manufactured goods more generally into demand throughout the Indian islands, was completely frustrated.

From an impression that Melville Island would be abandoned, I directed my attention more to the eastward, to that part of the coast of New Holland to which the Malay fishing-proas resorted regularly every year. I visited the Cobourg Peninsula, and surveyed Port Essington, which latter place I found to possess many advantages over Port Cockburn.

Port Essington is situated on the north side of the Cobourg Peninsula, which projects N.N.W. from the main land of Australia, and extends in that direction about fifty geographical miles. The greatest breadth is fifteen miles, and its narrowest part, where it is joined to the main by a neck of land of five miles in length, is two miles and a half across, from Mount Norris Bay, on the north-east, to Van Diemen's Gulf, on the south side of the peninsula. This gulf was discovered and so named by the Dutch navigators, in 1705.

The port is in 11° 6′ south latitude, and in 132° 12′ east longitude. It was examined by Captain King in 1818, and named by him after Vice-Admiral Sir William Essington. Vashon-Head, Point Smith, Knocker's Bay, Middle-Head, Table-Head, and Saddle Hill, were names also given by Captain King; such other names as appear in the chart of my survey were given by me, generally from local circumstances.

The approach to Port Essington is perfectly open and unobstructed by any danger whatever; at its entrance it is seven miles wide, between Point Smith on the east side, and Vashon-Head on the west: the general direction of the port, which extends between seventeen and eighteen miles, is S.S.E. $\frac{1}{4}$ E., having a depth of water throughout of nine, twelve, and five fathoms; its average breadth is five miles, and at the southern end it forms three spacious harbours, each of them extending inwards three miles, with a width of about two; the depth of water being five fathoms, with a bottom of stiff mud and sand. These harbours are sheltered from every wind, and would afford excellent and secure anchorage for vessels of any description, being perfectly free from hidden danger; indeed, the whole port is a secure

place of anchorage for vessels of any size, and forms altogether one of the finest harbours in the world. There is no harbour yet known (Port Jackson excepted) to be compared to it in the whole extent of Australia, and it may be entered in safety, as well during the night as by day. It may be also approached at all seasons; would be a convenient place of call for vessels proceeding from Sydney, through Torres Strait, to Java, Singapore, and India; and from its contiguity to Timor, New Guinea, Celebes, and the other islands of the Indian Archipelago, it is accessible to the Malay and Bugis' trading proas, as also the junks from China, in consequence of the regular monsoons, which extend many degrees to the southward of Port Essington*.

There are few dangers that I could observe in the whole extent of this noble port, and certainly none but what are visible, and can be easily avoided. At the entrance, on the west side, there is a shoal encircling Vashon-Head; it runs out about a mile, and is partially uncovered at low water; its outward edge is abrupt, and the water suddenly deepens from one fathom and a half to three, six, and nine fathoms. Off Turtle Point, on the west side of the port, there is a rocky islet and a circular reef which extends three-quarters of a mile from the shore; but on the opposite or east side of the port, the water is deep close to the shore. At half a mile W.N.W. from Table-rock Head, there is a small rock which is uncovered at half-tide; but within twenty or thirty feet of it, there is five fathoms water. The next danger is between Table-rock Head and Malay Point; here there is a range of rocks at one mile distance from the shore, which retires and forms a bay. These rocks bear south from Table-Head: there is a ripple upon them at high water, and at ebb-tide they are partly uncovered. From Oyster-Head, a reef (which is dry at low water) runs out in a northerly direction to the distance of half a mile. Off Spear Point, which is opposite to Malay Point, the water is shoal to the distance of nearly half a mile from the shore; but there is plenty of room for any vessel to pass, with a depth of ten and twelve fathoms between that and Malay Point; and within twelve yards of the latter point, there is ten fathoms. This channel is the entrance into the two inner harbours, of which Middle-Head forms the separation. Along the front of the projection which forms Middle-Head the water is shoal, and studded with small sharp-pointed rocks, running out to a quarter of a mile distant from the shore. There is a shoal, or rather a bank, off Mangrove Point, which is dry at low water, and a bar being formed between this bank and the opposite point to

* The general range of the monsoons is to twelve degrees from the equator, but it sometimes reaches to thirteen and fourteen degrees of south latitude.

the westward, the bay beyond it (and which is in itself very shallow) is of no use as an anchorage.

I have now enumerated all the dangers (if such they can be called) which I could distinguish; and on reference to the plan of Port Essington, it will appear obvious that none of them can seriously militate against this extensive port being one of the safest and finest in the world.

The shores of this harbour present a pleasing variety of little bays and sandy beaches, alternating with bold cliffs and steep clay banks; whilst inland, the continuous forest of trees, of rather a monotonous dark-green foliage, is occasionally relieved by small round hills, rising a hundred feet above the general elevation of the land; which land, gently undulating, rises from one hundred to two hundred feet above the level of the sea, but in many places only from thirty to sixty feet.

The cliffs, rising perpendicularly fifty or sixty feet from the water, are in some places of a dark-red colour and ferruginous nature, and in others of a dusky-white indurated clay. There is also a coarse-grained white sandstone, which I observed in Kangaroo Bay, and on the west side of the inner harbour beyond Malay Point.

Soil and Vegetable Productions.—In my several excursions on both sides of the port, I met with a variety of soil, and certainly that of an indifferent quality preponderated; yet I observed many situations in which the soil was very good, principally on the low flats and hollows, and near places which were evidently swampy in wet weather. On the highest grounds near the shore, such as Table Rock, Observation Cliff, and Oyster Head, the land is rocky, with a shining rounded ironstone, of very weighty substance, similar to that so general on Melville Island. The soil in which this stone abounds was found very detrimental to vegetation at the settlement of Fort Dundas, and we had not a sufficiency of materials convenient enough to correct it; but at Port Essington, such materials as sea sand, salt-water mud, coral for lime, are all abundant. On the moderately elevated land, as Curlew Point, Turtle Point, and behind Kangaroo Bay, there are comparatively few stones; and the soil, although light, and mixed with a good deal of sand, nevertheless appeared productive.

The vegetation around the port was abundant and very luxuriant. The forest land is clear of underwood; the lower grounds and hollows produce good grass (even in the middle of the dry season); and wide-spreading shrubs and flowers are there numerous. From my experience at Melville Island, the climate of which is the same, and the soil similar to that around Port Essington (which latter possesses other superior local advantages)—as also

from the manner I saw several tropical productions cultivated on the Philippines, Java, Timor, and Singapore—I entertain a strong conviction that most, if not all, tropical productions could be brought to considerable perfection on the Cobourg Peninsula.

Although the timber in the vicinity of the coast is generally not of great dimensions, yet the species are various, and of sufficient size for house-building and agricultural purposes; and from the specimens of larger timber which I saw near Raffles' Bay (which is also on the Cobourg Peninsula), as well as from my intimate knowledge of the wood of Melville Island (in the same latitude, and with similar soil to Port Essington), I am satisfied that timber is to be found near Port Essington fit for every purpose, including household-furniture and boat and ship-building; but I do not think there are good spars for the masts and yards of large vessels. The trees on the high stony grounds around the port measure from fourteen to sixteen inches in the diameter of the trunk. On Malay Point, which is low, with a sandy soil, the trees are of larger dimensions, and the trunk measures about twenty-six inches in diameter. The Eucalyptus species are numerous throughout; the hibiscus, casuarina, sago palm, fan palm, grass-tree, and cabbage palm, are also very conspicuous; as are likewise runners and parasitical plants.

From the circumstance of the soil, climate, and latitude being nearly the same as those of Melville Island, and all the indigenous productions which I saw being similar, I conclude that the same species and varieties are common to both, and shall therefore refer to the list I have already given of indigenous productions in my account of Melville Island. For similar reasons, I likewise refer to the list of exotic productions which had been tried and succeeded well at Fort Dundas. The latter will be a good criterion by which to estimate the productiveness of the soil of Port Essington; particularly as, when I visited the settlement in Raffles' Bay, which is only thirteen miles east of the above port, I found all the plants which I had sent from Melville Island to Captain Smyth, of the 39th regiment, (then commanding at Fort Wellington,) thriving well; and in the second year from the establishment of that settlement in Raffles' Bay, the orange, lemon, shaddock, cocoa-nut, and tamarind trees, were succeeding very well indeed; the pine-apple plants were strong and healthy, bananas were abundant, as were also pumpkins and sweet potatoes; the sugar-cane, turmeric, arrow-root, capsicums, and other culinary vegetables, were rapidly increasing: therefore, from these corresponding circumstances, any observations on the productions of Melville Island may be considered as completely applicable to Port Essington.

From the long continuance of dry weather in these latitudes

artificial vegetation suffers very much during six months in the year; and, as at Fort Dundas, we had no streams of water from which we could irrigate the gardens and fields, and the formation of tanks was not sanctioned, on account of the expense, our gardens produced very little indeed during the dry season: though by keeping a number of casks, and filling them with water daily from the wells, we in some measure counteracted the effects of the long drought. However, as there is much more water at Port Essington than was imagined, garden and field culture may reasonably be expected to be more satisfactory.

Having mentioned three places where water was obtained, I have to add, that, besides them, I met with pools of drinkable water a little inland, behind the flat ground which in my plan I have named Native Companion Plain (the native companion—a species of ardea—is a very large bird, which I saw in flocks there; they stood four feet in height; plumage, blue-grey; head, scarlet; legs, long; and the bill seven or eight inches in length); and, towards the end of the dry season, vegetation looked very fresh in the hollows and shaded places. Two other indications of water being in the neighbourhood of Port Essington, I may also mention; the first is, that the natives are numerous around it and constantly seen there—they must require water. The second indication is the great number of kangaroos I observed, which animal is generally in the neighbourhood of water and good pasturage.

Besides the indigenous vegetable productions enumerated in my list, I may mention, that a vine producing a small grape was met with at Raffles' Bay; and some excellent roots, which I did not find on Melville Island, but which, at Port Essington, the natives use as food.

Animal Kingdom.—Of land animals and birds I observed kangaroos, bandicoots, iguanas, pigeons, quail, curlew, native companions, wild geese, ducks, and swamp pheasants; besides great varieties of perroquets, cockatoos, hawks, herons, cranes, and gulls. The fishing-hawks were extremely audacious; and frequently when, after hauling the seine, we left the fish we had caught piled together on the beach, and removed from fifty to a hundred yards off, to draw the net at a fresh place, these birds would dart down and invariably carry off a fish: they were so daring, that I was at last obliged to leave a sentry to protect those we had taken.

Port Essington is well stored with fish; and from the numerous extensive sandy beaches around it, there is great facility in procuring abundant supplies with the seine. The Malay fishermen also catch very fine fish with a coarse pearl-shell hook and line. Amongst the fish we took there were mullet, cavallos, bream,

gar-fish, flounders, whitings, a kind of pike, white mackerel, sting-ray, a fish resembling a herring, but fourteen or sixteen inches long, skip-jacks, old wives, and several others. Of shell-fish there are, the common oyster, and the large mother-of-pearl-shell oyster, green turtle*, spotted crabs, oysters, cockles, crayfish, couries, and various other small shell-fish; and quantities of sponge.

The large sea-slug called trépang, or *bêche la mer*, is very abundant all along the north coast from Endeavour Strait, in long. 142° 30′ E., to Dundas Strait, between Melville Island and the Cobourg Peninsula, and attracts a large fleet of Malay proàs during the months of December, January, February, March, and April; their fishing-ground extending from the Gulf of Carpentaria to Dundas Strait. The principal part of these proàs come from Macassar; they may measure from twenty to forty tons each, and are manned with from sixteen to thirty hands, and sometimes as many as forty. Each proà is commanded by a chief (called a Nacodah), and to each of these vessels from three to five canoes are attached. The canoes are from eighteen to twenty-five feet long, hollowed out from the trunk of a tree. These proàs are independent of each other, and the chief or master is not the owner, but merely acts for the proprietor, who resides at Macassar. He is not permitted to dispose of the trépang during the voyage, but is obliged to return to Macassar with the whole produce of his fishing. In November they commence their fishing by going to the eastward through Bowen's Strait, gradually returning to the westward until April or May; when, having cured the trépang and completed their cargoes, they repair to the ports in the Indian Seas from whence they sailed.

A trépang curing establishment is formed every year in Port Essington on Malay Point, and sometimes in Knocker's Bay. The buildings are of bamboo, which the Malays bring along with them, and remove when they quit the coast. A description of these temporary erections, as well as the manner of preparing the trépang for exportation, would unnecessarily lengthen this memoir; I shall therefore not dwell upon it, and only give a short description of the animal itself.

The trépang is an animal resembling a snail in its form and substance; it measures from eight to twelve inches in length; is cylindrical, and about five inches and a half in girth; the two extremities are round, and without close examination it is difficult

* The turtle are generally of the kind called green turtle; but it is probable that the hawks-bill also exists on this coast, as some specimens of turtle-shell brought to England by the writer, (which he received from the islanders in Torres Straits,) when worked up, admitted of a high polish, and were richly marked and transparent.

to decide which is the head (probably resembling in this respect a leech more than a snail). The mouth is transverse on the lower side of the head ; I did not observe the eyes (which must be very small), nor did I sufficiently note the other parts of its physical structure to venture on a more minute description. The lower part or belly is flattish, and it did not appear to be furnished with any membrane so as to enable it to swim. They are generally found stationary amongst sea-weed, or on sand-flats in shoal waters. There are two kinds of trépang—the one of a darkor blackish colour, the other a lighter or grey colour. The last is ten inches in length, and considered the best: the skin is rather roughish and tough ; it feels firm and stiff when taken out of the water, and the flesh is a mass of gelatinous substance.

The name given to this coast and its native inhabitants by the Malays is ' Marega.' They call Port Essington ' Limboo Moutiara' (Port of Pearl-shell) ; and the Aborigines call the Malays 'Mulwadies.'

The Malays represent that they found the natives extremely troublesome and hostile all along the northern coast ; and they were glad when in Raffles Bay, at the time of our having a settlement there, they found themselves protected from the Indians, and were able to repair their vessels without being molested by them. Previous to our occupation of Raffles Bay they were accustomed to resort for these purposes to a small island outside, close to the west point of entrance into the bay.

Climate.—The climate of the Cobourg Peninsula must be similar to that of Melville Island, therefore it will be unnecessary for me to dwell long upon it. I took a great deal of exercise there during all hours of the day, as did the whole of those along with me, amounting to thirty persons ; and none of us experienced even a headach. Port Essington being more open to sea breezes, and much freer from mangroves and mud-banks than Apsley Strait, the air must consequently be more pure, and less subject to that miasma which frequently arises from mangrove banks. I found the temperature the same as at Fort Dundas ; and on comparing the account of sickness at Raffles 'Bay with that on Melville Island, I remarked that they had fewer varieties of complaints than we had, as also fewer cases of illness in comparison to their numbers : this I attribute to the air being less debilitating along the coast of the Cobourg Peninsula, and thereby rendering the human frame less susceptible of disease.

In such a situation as Port Essington the mind is also more pleasingly exercised than in Apsley Strait, which I consider another great auxiliary to health. The settlement in Apsley Strait I may compare to an extensive penitentiary, shut out from the world, where a uniform and unvarying occupation em-

ployed each individual day after day, month after month, and year after year—a constant, tiresome sameness: an avoided place, never enlivened by the face of a civilized stranger—excluded from all communication with the world, excepting once in six months, when a colonial craft came from Port Jackson, with salt junk, flour, and other supplies. And the view from this penitentiary (as it really may be called) was bounded all around by a broad impenetrable belt of mangroves, backed by a forest of trees that were never denuded of leaves, and which, in place of being of a verdant green, were of an unchanging ever-greyish hue. Whereas at Port Essington, its occupation by a well-organized colony would attract the attention of strangers; and being a convenient place of call for vessels bound from Port Jackson to the Indian and China seas, this, with the annual visits of the Malays, would create an interest, and be a constant source of action for the intellectual powers. From Port Essington the eye may wander as far as the human sight can be carried over a wide expanse of ocean (always a noble sight), or be directed inland, where it may rest on some wooded knoll—be attracted by the graceful waving of the *Seaforthia elegans*, or the numerous smokes rising and curling from amongst the trees, as they ascend from a native encampment, or from their burning the grass on hunting excursions.

The meteorological table which I kept at Melville Island may be referred to as applicable to Port Essington, as well as my remarks on the monsoons. In addition, however, I may observe that there are frequent sea and land breezes along this coast, but by no means regular. The monsoons blow uniformly (from the south-east and the north-west, in their respective seasons) at forty miles from the coast; and although in-shore, they generally blow in the same direction as the prevailing monsoon, yet they frequently vary, and appear, as already stated, as sea and land breezes.

Tides and Currents.—The tides in Port Essington rise and fall about ten feet at the full and change of the moon: their velocity is inconsiderable, excepting off Malay Point, where, from the contraction of the channel, they run at the rate of from a mile and a half to two miles and a half an hour. The tides appeared to me frequently to influence the wind, as I found it after a calm to spring up and blow into the port with the flood, and again either fall calm or blow out with the ebb.

The currents in the open sea depend upon the monsoon—running to the westward with the south-east monsoon, and to the eastward with the north-west. But in-shore they are influenced by the tide—setting to the south-west with the flood, and to the east or east-north-east with the ebb, running from a mile to two miles an hour.

Natives.—The Aborigines around Port Essington and its vici-

nity are the same in appearance with those of Melville Island; but their habits are somewhat distinct, and their weapons a little different. They both go naked, are alike addicted to pilfering, and display similar characteristics of cunning; but I do not think the natives near Port Essington are so daring in their enterprises. I never saw a Melville islander with an ornament beyond a feather in the hair, scarifying the body, and bedaubing the head, face, and every part of the skin with yellow, white, or red pigments. But on the Cobourg Peninsula the natives have a fillet of net-work bound round the waist, and another round the head and arms, with sometimes a necklace; and they paint their bodies occasionally in the same manner as I have described in my account of the natives of Melville Island. Such of their canoes as I saw were hollowed from the trunks of trees, like those of the Malays, and were probably either left by these people or stolen from them, for I do not think they have any means of hollowing them out themselves.

Their weapons are spears and clubs: the spears are about ten feet long, and lighter than those of Melville Island; and their war ones, named 'Burreburai,' instead of being barbed like a fish-hook, as they are on Melville Island, are serrated like a saw. I should imagine from their weight that they are thrown from the hand, without the lever which is used near Sydney and King George's Sound; but they are by no means so formidable as the Melville Island ones. Four of those of Port Essington fell on board a boat belonging to the brig Anne, but fortunately did no injury. They have others at Raffles Bay, called 'Imburbé,' headed with stone; and also a small sharp-pointed spear for killing fish;—the clubs are rudely shaped, about four feet long and two inches in diameter. These natives wander about in certain districts, and subsist as those I have described in the second chapter; but from the number of turtle-shells I observed scattered about in my excursions round the port, I imagine they are better supplied with that important article than their insular neighbours of Melville Island.

I remarked one native burial-place at Port Essington: it was near Native Companion Plain. The grave was very simple, and placed under a widely-spreading tree. The space occupied was six feet long by three wide, over which was formed an open frame-work of twigs, the ends being inserted in the ground on each side. Upon the grave lay a skull, evidently of an Aborigine, with a thigh or arm bone; the scull was coloured red, as if with some dye*, and the teeth appeared as if they had been burnt. What I have related is all that came under my own

* Probably a red ochre, which is common along the north coast, and gives to the argillaceous cliffs a ferruginous tinge.

notice; but as it may be interesting to some, I shall conclude my observations regarding the natives on this coast by introducing an account given of them by a gentleman who interested himself in their character, manners, and habits, at Raffles Bay (at which place they became very familiar); for the communication of which I am indebted to Captain Stoddart, of the Royal Staff Corps:—

"In personal appearance they bear some resemblance to the natives about Port Jackson: they are, however, better made, and have more intelligent, and perhaps more savage countenances; they go entirely naked; their skin, particularly the breast and thighs, is ornamented, or disfigured, with gashes; their hair is long, and generally straight, yet I observed some crisp. Some of them have a fillet of net-work, about two or three inches wide, bound tightly round the waist, with a similar ornament round the head and the arms, and sometimes a necklace of net-work depending some length down the back. Several of them have the front tooth in the upper jaw knocked out, in the manner described by Captain Collins. They paint their face, and sometimes the entire body, with red earth: and those who are inclined to be dandies draw one or two longitudinal lines of white across the forehead, and three similar on each cheek; while a few who appeared to be 'exquisites' had another line drawn from the forehead to the tip of the nose. The *septum narium* is invariably perforated; but it is on particular occasions only that they introduce a bone or piece of wood through it, and sometimes a feather. In this part of the coast the natives are divided into three distinct classes—a circumstance quite unique. The first and highest class are named 'Mandrogillies;' the second 'Manburghes;' and the third 'Mandrowiles.' The first class assume a superiority over the others, which is submitted to without reluctance; and those who believe in real difference of blood amongst civilized nations might find here some apparent ground for their belief: as the Mandrogillies were observed to be naturally more polite and unaffectedly easy in their manners than the others, who it was imagined were neither so shrewd nor so refined. This, however, might be only imaginary.

"Mariac (or Wellington, as he was named by Captain Stirling), the chief of the country round Raffles Bay and Port Essington, is apparently about thirty years of age, and about five feet eight inches in height. His features are regular, and while he is in good humour, are placid and benign; but on the least displeasure, which arose occasionally from slight causes, they glanced with savage fire. He has evidently much sway among his tribe, as even 'Iniago' (another native) was observed to fall back by a look and word from his chief; though from his possessing a turn for fun and mimicry, and unrivalled dexterity in throwing the spear, he had become a favourite in the camp, to the great annoyance of Wellington, who seemed to view him in the same light that Haman did Mordecai. He gave Captain Barker to understand that presents to any of his

people should only come through himself, and occasionally showed so much ill-humour at deviations from this rule, that Captain Barker thought it prudent to *cut* him for some time. He limped in his walk; but whether from a wound received in foreign or domestic wars I did not learn.

"The natives generally go in parties from six to twelve; Wellington, however, went usually at some distance apart, accompanied by only one. When the settlement was formed, his attendant was Jacama, a 'Manburgee,' called by Captain Stirling 'Waterloo.' Afterwards Iniago had the honour of being his travelling companion, but lost the office from the attention he received in the camp; he was succeeded by Olobs, a 'Mandrogillie,' and as timid as a hare. When we left the settlement, Monanoo, the younger brother of the chief of Croker Island, held this distinguished employment. It is difficult to say whether they are accompanied in their excursions by their women, but it is probable that they are not. As far as we could learn, they never penetrate far into the interior, generally keeping along the shore, and occasionally cutting across any projecting point of land. Their food consists generally of fish, which they spear very dexterously.

"Hunting turtle seems to be a favourite occupation with them, and they appear quite adepts in that, to them, useful art. They also make use of shell-fish, which it may be the business of the women to collect. They do not use the trépang (so desired by Chinese epicures), which is in great abundance all along the coast. They use as food various esculent roots; and cabbage-palm affords an agreeable addition to their usual fare. They are also very fond of honey, which appears to be in abundance, as they were seldom seen in the settlement without a supply of that article, and when they went into the woods on purpose to procure it, they soon returned successful. Their mode of proceeding was, to watch the movement of the bees, which requires a keen eye and long practice, and when they settled to cut the hive down. This operation with their stone hatchets was, although completed much quicker than could be imagined, tedious. It was for this purpose that Waterloo ran away with an axe, after having seen and tried its use, rightly judging that it was far preferable to their own.

"Respecting the number of the natives, there were no means of forming anything like a correct opinion; yet, judging from the rapidity with which they collected on the occasion of one of them being confined for attempting to steal a canoe, it may be supposed that they are by no means thinly spread. On the occasion alluded to, two natives, who had observed 'Luga' confined, left the settlement, and spread the sad tidings. In the evening, 'Wooloogarie' arrived, accompanied by fifty men at arms. The interview was friendly, Luga being punished and at liberty. From the time the two natives left until Wooloogarie's arrival was an interval of six hours; they had to walk two or three miles, and cross and recross a strait two miles wide; they came in three canoes. It

is difficult to know whether they would have acted hostilely had their friend not been released: perhaps they only came to intercede in his favour; and, after the manner of other politicians, thought their request might be better attended to by having a formidable appearance.

"The only warlike weapons that they used, as far as we could learn, were spears, of different forms and sizes, the largest from nine to ten feet long—some serrated, and others headed with a sharp stone. They use the throwing-stick named 'rogarooh,' which is exactly of the same form, and made in the same manner, as that in use among the natives of Port Jackson.

"We could not learn whether they were in the habit of fighting with each other, or with neighbouring tribes; but spear-wounds being by no means uncommon among them, it is probable that in this respect they also resemble their Australian brethren. It is well known that they wage continued war with the Malays, who appeared both to hate and fear them.

"Although it may appear rather paradoxical, yet I do not hesitate to say, that these natives, far from being untameable savages as originally represented, are in reality a mild and merciful race of people. They appear to be fond of their wives and children—at least they talk of them with much apparent affection. They have frequently interposed their good offices in preventing the children being chastised; I have seen them run between the mother and the child, and beg the former to desist from her (as it appeared to them) unnatural conduct, in punishing her own offspring. They are like all other uncivilized people, very irascible, but easily pacified: they require to be managed like children. That they may be taught to distinguish conventional right from wrong was quite apparent; and many instances occurred that showed their aptitude in this respect. Iniago, after having become honest himself, once detected one of his companions endeavouring to secrete a spoon, while they were about to partake of some rice prepared for them; provoked by this ungrateful behaviour, he instantly took it from the delinquent and packed him off, without permitting him to have any share of the food. On first visiting the settlement, a native would invariably pilfer anything that came in his way that he could secrete; which, however, was always brought back by those who knew that such conduct was not countenanced by their civilized visiters: many instances of this kind occurred. They also soon learned to distinguish between a person whose word was to be depended on, and another of no veracity.

"The chief objects of their desire were tomahawks, large nails, and iron hoops; but in the progress of time they took a fancy for various articles of dress—a shirt was a great object for them to obtain; and they became so particular, that if a button was wanting in the collar or sleeve, they were not satisfied until the deficiency was remedied. A coloured handkerchief was also much prized, which they used to roll neatly round the head.

"After they became somewhat polished in their manners, if they

saw anything that struck their fancy, they asked for it; if given them, they showed no visible marks of thankfulness; and if firmly denied them, they laid it quietly down. Some time before we left the coast, they could be trusted implicitly, even with those articles they most highly prized. It may be justly presumed, that living as they do agreeably to nature, they are subject to fewer diseases than man in a civilised state. However, that they are not altogether exempt from the ills attending animal existence, was very obvious. 'During the inclement and wet weather, at the commencement of this year,' observed Dr. Davis, 'a party of the Aborigines was discovered labouring under acute bronchitis, on a low neck of land near the western boundary of Raffles Bay. The symptoms were very severe. During the continuance of the disease they were very abstemious. The only remedies which we saw them employ were (during the severity of the acute stage of the disease) cords tied very tightly round their head, and the frequent pouring of cold water on their heads. On one occasion the chief (Mariac, or Wellington) laid down on the sand, and caused one of his tribe to stand on his head—most probably for the purpose of deadening the acute pain he was suffering. Several of these people have deep circular impressions, on their faces in particular, as if caused by the small-pox. From the want of making myself understood, the nature of the disease which produced these marks was not ascertained.'

"The natives described in language, or rather by signs, 'sufficiently significant,' the history of this malady, which they call 'Oie boie,' and which seems to be very prevalent among them. It evidently bears a resemblance, both in its symptoms and consequences, to small-pox, being an eruptive disease (attended with fever) leaving impressions: it frequently destroys the eyes. I observed more than one native with this mark. I could not learn whether they used any remedy except abstinence. They are also subject to ophthalmia.

"Whether they have any idea of a Superior Being, or of a future state of existence, it was impossible for us to ascertain. It was easy enough to exchange communication as far as regarded objects evident to the external senses; but, as may be easily imagined by those conversant on the subject, any attempt to talk of abstract principles must have proved altogether fruitless and vain. When it is called to mind that the natives were just beginning to lay aside suspicion, and to visit the settlement without fear, not long before it was abandoned, it will not seem strange that these particulars relating to them are so scanty and imperfect.

"It is a curious circumstance that the natives inhabiting different parts of New Holland, although in form, manner, mode of life, and implements of war, they have a striking resemblance, should possess not the least affinity in language. The dialect of this part of the coast is by no means inharmonious; there is an evident difference in pronunciation between the different classes. It is also difficult to obtain the true sound of their words, as it frequently happened that if (the true sound not being caught at first) the word was repeated by

us as nearly as we could guess, they immediately adopted our mode, either through indifference or complaisance; and it required some pains to obviate this apathy or over-politeness."

Raffles Bay is in the same parallel with Port Essington, and thirteen miles east of it. It was named by Captain King, in 1818. The latitude is 11° 12′ 30″ S. and the longitude 132° 26′ E. It is of a circular form, the diameter being about three miles. The bay is very shallow, having only from three to four fathoms water; and along the whole of its eastern side it is shoal to the distance of three-quarters of a mile from the shore, having at low water about a fathom at that distance; on the western side the water is deeper, the shore having steep banks; on the eastern side the shore is very low, with mud-banks in front of it. There is a great deal of mangrove around Raffles Bay; the land is similar to that of Port Essington, but not quite so elevated; and from the circumscribed dimensions of the bay, its shores are not so much refreshed by the sea breezes as those of the neighbouring port. The entrance to the bay is a mile and a half wide, and easy of access: but there is a sunken reef three miles north of the entrance, and two miles distant from the western shore. The vessel in which I was touched upon it when going out of Raffles Bay; this reef, therefore, demands caution from vessels going out or in. The entrance is also a little concealed by Croker's Island (for vessels approaching from the eastward), and cannot be discovered by ships coming from the west until that island is approached within two miles.

The land round the settlement is low, but dry and well-wooded; there is no mangrove close to it (although there is much of this along the southern side); and there is a long, open sandy beach in front, where there is good fishing with the seine. The soil is similar to what I have described in Port Essington and Melville Island.

There were no traces of the Malays in Raffles Bay when I visited it, but afterwards they made their appearance. Two or three proas were induced to enter, and had some repairs done to them; whilst many others, not knowing there was a British settlement in that port, passed within sight, on their way to Bowen's Strait. The following year, however, (1828) many more ventured, glad of being under protection of the British, as their dread of the natives had formerly always deterred them from landing in Raffles Bay. Sometimes, during the north-west monsoon, ten or twelve proas have been seen passing in the course of a day, entering Bowen's Strait.

The objects of natural history being the same as at the two former places, I shall pass them over in silence.

The climate is also the same; but the locality being drier, freer from swamps and mangroves, and more open to the sea breezes, was not so injurious to health as that of Melville Island. When the serious attack of scurvy (which I before mentioned) had subsided, the settlement continued tolerably healthy until it was given up. It was only retained two years; the population was generally about seventy, and seven or eight deaths took place. It is probable there would have been more, had not fourteen very bad cases been removed from it in November, 1827, and a few others in May, 1828. Scurvy and ophthalmia were the prevailing diseases, but I cannot take upon myself to say what others appeared.

With respect to the management of live stock at Fort Wellington, I did not hear that the buffaloes suffered so much after being imported, as they did at Dundas; and the pigs fattened well by feeding on roots which they found in and about the swampy ground. The marshy flats near Fort Wellington were dry during part of the south-east monsoon, and never very deep, so that the pigs could easily grub throughout them; but on Melville Island the marshes were several feet deep, and never dry; there, accordingly, the pigs were only fat when house-fed.

Both Raffles Bay and Melville Island were abandoned in the same year (1829); and I shall conclude this memoir by offering a few remarks on the occupation of the northern coast of Australia. At present (1834), that part of the territory of this extensive continent extending from Morton Bay on the east coast, to Swan River on the west, and embracing all that part of Australia to the northward of twenty-five degrees of south latitude, is not only without any single point of it being occupied, but a great part of its coast (to say nothing of the interior) still remains to be surveyed. This line of coast, measuring an extent of upwards of three thousand one hundred miles (if reduced to a straight line), possesses no good harbour (as far as has yet been asertained), with the exception of that admirable one I have described on the Cobourg Peninsula. This port is a central situation on the extent of coast alluded to; it is the most prominent part of that coast, and the most northern point of Australia (Cape York excepted, which is in latitude 10° 37′ south). The coast to the westward of it, as far as 20° south, and even farther, is a dangerous and inhospitable one, on account of the numerous islands, reefs, and shoals which lie along it, with extraordinary and perplexing currents running amongst them; whilst the coast to the eastward, as far as Endeavour Strait, although probably more safely approachable, yet presents no harbour of consequence; and if it did, they would be too far to the eastward to be conveniently situated for commencing a trade with the eastern seas.

Port Essington is as the friendly hand of Australia, stretched out towards the north, openly inviting the scattered islanders of the Javanese, Malayan, Celebean, and Chinese seas, to take shelter and rest in its secure, extensive, and placid harbour; where they may deposit the productions of their native inter-tropical isles, and receive in exchange the more improved manufactures of the natives of the temperate zone. If settled by some civilised nation, and well provided with such European goods as are known to be in great demand by the inhabitants of the eastern seas, it would soon attract their attention. The Bugis from Celebes, and the traders of other islands in those seas, at present resort to Sourabaya, Penang, Singapore, Delhi, and Coipang Timor, for such articles of supply as are required throughout the Archipelago. They make a trading voyage both going to and returning from these places, touching at the different islands on their way in the central and eastern part of the Archipelago—such as Mandar, Kaili, Macassar, Bonirati, New Guinea, Timor, Ceram, Sandal-wood, Flores, Balé, Borneo, and many others. They pick up the produce of those islands, as also the produce of the fisheries on the coast of New Holland, and exchange them at the Dutch, English, and Portuguese colonies, for European goods. The exports of tripang, from Macassar, for the China market, according to Mr. Crawford's calculation, amount annually to seven thousand peculs*; and sell at from twenty to one hundred and twenty dollars a pecul. Of pearl shell, according to the same author, there is exported annually to China, viâ Singapore, five thousand peculs, at fourteen dollars a pecul. Tortoise-shell, cowries, and shark-fins, also sell well in China; the latter selling at thirty-two dollars a hundred weight. The tortoise-shell alone which was brought to Singapore by the Bugis in one year (1826), and sent from thence to England, amounted to sixteen thousand pounds weight: the bark of two species of mangrove also sells well in China.

I have particularised those articles in order to show how valuable a part of the traffickable commodities of the Bugis traders is to be found on the northern coast of Australia and its neighbouring seas. The sea around the island of Timor, and as far south as latitude 26°, abounds with the spermaceti whale; and the whalers employed in that fishery, and on the north coast of New Guinea, at present resort to Delhi and Coipang for supplies and refreshment. According to Mr. Crawford's account, there are 32,000 tons of shipping, and 3200 seamen, employed in this fishery. Now, so fine and convenient a harbour as that of Port Essington would certainly be a most desirable place of rendezvous for these whalers, particularly during a time of war.

* A pecul is 130 pounds weight.

At present, a great many vessels go from Port Jackson to Manilla, Singapore, and Sourabaya, in search of cargoes for the European market, and load their ships with Chinese goods and the produce of the Indian islands, deposited at Singapore and Sourabaya by the Bugis and other traders of the Archipelago. The articles brought from the Indian islands (many of which are exported to Europe) are cloves, nutmegs, mace, pepper, rice, cotton, oil, indigo, tamarinds, betel-nut, gambier, antimony, cassia, ratans, dragon's blood, cane, sapan-wood, turmeric, mother-of-pearl shell, tortoise-shells, sandal-wood, ebony, sago, bees-wax and honey, benzoin, ivory, camphor, benjamin, birds of Paradise from New Guinea and islands near it, striped and tartan cotton cloths from Celebes, gold dust and gold and silver bullion, and many other articles.

For the China market, particularly, they bring tripang, tortoise-shell, mother-of-pearl, shark-fins, birds'-nests, mangrove bark, eagle-wood, hides, and a sea-weed called agar-a-gar. The European commodities which are exported in return, for the supply of the central and easternmost islands of the Archipelago, consist of chintzes, cambrics, printed and white cottons, gaudy-coloured handkerchiefs, bandanas, velvets, broadcloths, iron and steel (both unwrought and manufactured), fire-arms and gunpowder, earthenware, and glass.

If a depôt of these articles was established in a convenient place on the north coast of New Holland, such as Port Essington, the Bugis traders would there find it easy to dispose of their cargoes in exchange for the commodities they require; and as the distance from Celebes to the Cobourg Peninsula is only about 760 miles—whereas the distance from that island to Singapore is 1200 miles—it would appear to me to be more convenient for them to resort to Port Essington, than either to Java or the Straits of Malacca; and likewise, by the distance being much shorter, they might be enabled to supply the purchasers of their European commodities at a more reasonable rate than they do at present. The cost just now to the consumer is from 150 to 200 per cent. on the prime cost. The Macassar fishermen who came to the coast of New Holland, said, that Macassar was badly supplied with the necessary marketable articles; and what could be procured were sold at exorbitant prices.

As the maritime undertakings of the inhabitants of the Archipelago never extend beyond the influence of the periodical winds, and they are averse to venturing far from land, Port Essington is the only port of New Holland that they can be expected to carry on a traffic with. The Chinese proceed on a similar principle; and as, by the regularity of the monsoons, their junks come to Macassar, Coipang, Timor, and Sourabaya, it

may be reasonably expected, that, with the certainty of finding a market, they would venture also a few hundred miles further, and would prefer a British port to either Dutch or Portuguese. The Chinese junks reach the coast of Java, from Canton (a distance of 1800 miles), in fifteen days; the distance from the centre of the north coast of Java, or about Samarang to Port Essington, is 600 miles; so, with the same rate of sailing, they could reach Port Essington in five days more; and they would have a fair wind all the way—the north-east wind blowing in the China seas, and the north-west wind prevailing to the south of the equator at the same season, that is, from November to April. Several Chinese junks trade to Macassar, and I should imagine that their owners would be glad to send them five or six days further sail to Port Essington, provided they could there find an exchangeable medium for the productions of China and be supplied with European goods.

Having thus shown the advantageous position of Port Essington, with respect to the Indian Archipelago, in a commercial point of view, and stated that a great many ships go from Port Jackson to look for cargoes at Manilla, Singapore, and the ports of Java, on their way to the two latter places, frequently passing through Torres' Strait and within a very short distance of Port Essington (probably thirty or forty miles)—may it not be presumed, that if the scattered productions of the Archipelago and China were concentrated and deposited in Port Essington, as they are now at Singapore, that it would be a great advantage for our ships to proceed there for cargoes, and thereby save much time in their return to Europe, avoiding the lengthened voyage, and shortening their return home by 1700 or 3600 miles?* The staple produce of Timor, within a few days' sail of Port Essington, would most probably flow into it, as exchangeable articles: consisting of bees-wax and honey, rice and Indian corn, sandal-wood, and copper. I, however, do not know that copper is exported from Timor, but it is found there.

Vessels sailing from Port Jackson can pass through Torres' Strait during the months of May, June, July, August, and September; but during the rest of the year, hazy weather and contrary winds render that passage impracticable. Vessels approaching Port Essington from the westward should pass through the Straits of Samoo, by which the shoal towards the west end of the Great Sahul Bank is avoided. This approach is open at all times of the year, although, of course, the run from the Straits of Samoo to the Cobourg Peninsula may be accomplished in three days

* Singapore is fourteen degrees more to the northward than Port Essington; and the north part of Luconia, round which ships generally go to Manilla from Port Jackson, is thirty degrees more to the northward; which will account for the difference of distance alluded to.

during the north-west monsoon, and will take seven or eight days during the opposite monsoon.

A second advantage which would arise from the occupation of Port Essington would be the facility it would afford, from its central situation, to any future minute survey of the coast to the westward and eastward, as also for exploring the interior of this extraordinary country, from the north; thereby adding to our geographical knowledge, and probably opening a new field in the science of natural history.

From its contiguity to New Guinea (which island is only 540 miles distant), it might possibly, at no very distant period, carry on a lucrative trade with it also. As its barbarous people become civilized, they will require clothing, utensils, and every manufactured article in use by their more cultivated neighbours of the islands to the west of them; and the satisfaction of introducing the arts and comforts of civilized nations amongst these unenlightened people, as also amongst the islands to the south-east of New Guinea—as New Ireland, New Britain, Solomon's Isles, New Hebrides, and New Caledonia—will devolve upon whatever nation establishes a well-appointed settlement on the northern coasts of Australia. There are some fine islands also in Torres' Strait, where some small establishments for fishing and taking turtle might be detached from the principal depôt; and they might contribute materially towards facilitating the safer passage of ships through those straits, the approach to which is attended with much danger, and demands great caution.

In a military point of view, Port Essington also possesses advantages: it commands the passage from the South Seas, through Torres' Strait, to the Indian Ocean; it would be a rendezvous in time of war for all vessels trading in the Indian Archipelago; it would be a place of refreshment for our ships of war, on their way from Port Jackson to India between May and October, and a place of call for vessels conveying troops to India from Sydney during the same season. It would also be a rendezvous for our whalers in the Timor Seas and amongst the Polynesian Isles; and would ultimately become the capital of Northern Australia. Its locality is well adapted for the construction of defensive works, and a few would suffice for the protection of the entrance.

If Port Essington should ever be settled, it must eventually carry on a commercial intercourse with Asia, China, and the intermediate islands; and if agriculture is carried on in the Cobourg Peninsula, as it would be, provided the Chinese and Malays were encouraged to settle there, its productions being different from those of Europe, would afford other exchangeable media for its manufactures and productions.

When I was in the Timor and Javanese seas, in 1829, I heard of several instances of quarrels having taken place between the Indian Islanders and the masters of small European traders, as also the misconduct of some of those captains of vessels, in their intercourse with the islands of the Archipelago: these misunderstandings arising generally from the European trader not being acquainted with the customs of the Islanders in their modes of barter or sale. Such occurrences as these also tend to confirm me in a belief that a more profitable intercourse would be carried on with the Indian islands if a central depôt was established, and the intermediate intercourse carried on between this depôt and the islands by the native traders themselves.

In conclusion, I shall introduce an extract from Mr. Crawford's excellent work on the Indian Archipelago; and this gentleman was most intimately acquainted with the resources and habits of those islanders, as well as with the productions and the manner of trading in the islands:—

"In order to carry on an extensive intercourse with the Indian islands, a colonial establishment becomes the only means of effecting this object. Such a colony should be situated in the direct route between the most civilized tribes of the Archipelago, and in the track of the navigation between the great nations of the East and West. The harbour should be good, and the land fertile: a free trade, liberal administration, and such a degree of regular government as would ensure security of persons and property, will inevitably ensure a large share of success.

"There ought to exist the most unbounded freedom of commerce and settlement to persons of all nations and religions; and a pure and impartial administration of a code of laws, suited to the state of such a colony, and adapted to the peculiar character of its varied population, should form the most important branches of the administration. A moderate impost on external commerce—which that commerce well protected should certainly afford—with the sale of public lands, and an excise on vicious luxury, would afford a sufficient revenue to defray the expenses of government and the charge of public works.

"Such an establishment would become a great emporium; the native trader would find it the best and safest market to repair to; and the scattered productions of the Archipelago would be accumulated and stored in it for the convenience of the distant and inexperienced trader of Europe. The European voyager would find it the best market for his goods, and the sacrifice of a great nominal profit would be compensated by the expedition with which his business would be dispatched, and an immunity from those dangers and risks to which inexperience must necessarily commit him, in a direct intercourse with the natives."