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From a sketch by G. Binnert

Pub. by R. Pentier, London, 1814

J. Clark, G.

Bugong Mountain

WANDERINGS

IN

NEW SOUTH WALES,

BATAVIA, PEDIR COAST, SINGAPORE,
AND CHINA;

BEING

THE JOURNAL OF A NATURALIST

IN THOSE COUNTRIES, DURING 1832, 1833, AND 1834.

BY

GEORGE BENNETT, Esq. F.L.S.

FELLOW OF THE ROYAL COLLEGE OF SURGEONS, &c.

IN TWO VOLUMES.

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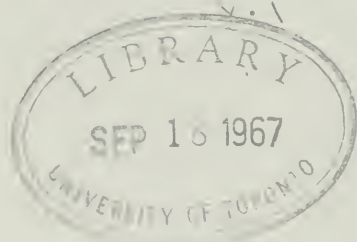
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P R E F A C E.

THE Work now given to the Public is the result of a series of recent excursions into the interior of the Colony of New South Wales, at intervals of disengagement from professional duties, and at periods of the year best calculated for observations in natural history. To this are added a detail of such incidents as appeared to the Author worthy of notice, while visiting Batavia, Singapore, China, &c. on his return to England.

The writer in his narrative has limited himself principally, if not entirely, to the notes taken at the instant of observation, his object being to relate facts in the order they occurred; and, without regard to studied composition, to impart the information he has been enabled to collect in simple and unadorned language, avoiding, as much as possible, the technicalities of science.

LONDON, JUNE, 1834.

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WANDERINGS
IN
NEW SOUTH WALES,
&c.

CHAPTER I.

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—Date palms—Leave the island.

ON the 15th of May 1832, the island of Porto
Santo, in latitude $35^{\circ} 5'$ north, longitude $16^{\circ} 5'$
west, was seen bearing south-west, half-south, at
the distance of forty miles from the ship "Bro-
thers," Captain Towns, bound to New South

Wales, eleven days having elapsed since leaving Plymouth, from whence we had taken our departure. The appearance of the island, when we had reached to within seven or eight miles of it, was generally barren, varied by an occasional verdant patch scattered over the rugged rocks, which terminated in steep cliffs to the water's edge.

On the following morning at day-light, the dark towering land of Madeira* was visible, rising like a huge black mass from the blue water. By eight A. M. we were in the passage between the south-east side of Madeira and the group of islands known as the Desertas, sailing, with a light and agreeable breeze, from the eastward, which enabled us to have an excellent view both of the former islands and Madeira; and as our progress seemed to be quicker than would have been expected from our gentle zephyrs, we were probably also aided by a current. †

* Madeira signifies, in the Portuguese language, "woody;" and the island was so named from the very wooded appearance it had on its discovery.

† In summer, Horsburgh states that the north-east winds prevail, and a south-west current sets through the channel, between Madeira and the Desertas. The current along the south side of Madeira and the Desertas mostly sets to the leeward in strong gales; but at the conclusion of a gale, it sometimes changes suddenly, and sets contrary to the wind.

The passage between the Desertas and Madeira is considered to be about eleven miles across. The Desertas stretch nearly north-north-west and south-south-east, and may be five leagues in extent; they have an abrupt, barren appearance, with steep, rugged, perpendicular rocks descending to the sea; on the largest island there was some appearance of cultivation, and the *tufa*, or red volcanic ash, imparts that colour to several parts of the island; there is a high pyramidal rock, resembling a needle or pillar, situated about the north-west part of the group, which at a distance is like a ship under sail.

By eight A. M. the heat of the sun had dissipated the gloomy mist which had previously been pending over and concealing the beautiful features of the island of Madeira, and caused it to burst forth in all its luxuriance and beauty; the northern part of the island had a very sombre, barren aspect, when compared with the fertility of the southern; the plantations, glowing in varied tints, interspersed with neat white villas and small villages, gave much animation and picturesque beauty to the scene.

Early in the morning is the time best calculated to view the island clearly, as the sun, gradually emerging from the dense masses of clouds which have previously enveloped

the towering mountains, gilds their summits, and, gradually spreading its rays over the fertile declivities, enlivens and renders distinct the splendid prospect afforded to the voyager. As the sun, however, acquires a stronger power, its proximity to a wide expanse of waters soon causes a mist to arise by which the clearness of the view from the sea is much obstructed.

As we approached, the town of Funchal opened to our view, the white habitations rising like an amphitheatre, and the hills around, covered by the variegated tints of a luxuriant vegetation : the whole appearance of the island was such, as to be well calculated to excite the most agreeable sensations of delight at any time, but more especially after the eye has enjoyed for a time only the prospect of sea and sky.

As it was not our intention to touch at this island, in the course of the day we had passed and left it far in the distance. We spoke off the island one of Don Pedro's blockading squadron ; it was a brig mounting eighteen guns, filled with such a motley crew as one may expect to see in a piratical craft. The spokesman informed us that Don Pedro was with Admiral Sartorius, in a large ship off the north side of the island : we then parted ; they wishing us " un bon voyage," and we, in return, hoped they might obtain

abundance of prize money, but which we hardly supposed would ever be realized.

There are various objects well calculated to excite interest to a naturalist during a long voyage, and to furnish both amusement and instruction. The splendid *Physalia*, or “Portuguese man of war,”* is often seen floating by the ship; the inflated, or bladder portion of this molluscous animal, glowing in delicate crimson tints, floats upon the waves, whilst the long tentaculæ of a deep purple colour extend beneath, as snares to capture its prey. It is oftentimes amusing to see persons eager to secure the gaudy prize; but they find, by painful experience, that, like many other beautiful objects of the creation, they possess hidden torments; for no sooner have they grasped the tinted and curious animal, than, encircling its long filiform appendages over the hands and fingers of its capturer, it inflicts such pungent pain by means of an acrid fluid discharged from them, as to cause him to drop the prize, and attend to the smarting occasioned by it.

This beautiful molluscous animal inhabits the

* They are called “Guinea Ships” by the old navigators, from their floating like a vessel on the water, and from having very probably been first seen in great numbers about the coast and gulf of Guinea.

tropical seas, and is also seen in high latitudes during the summer months* of the year. When first removed from the water, it excites the admiration of the spectators by the elegant and vivid colours with which it is adorned. These tints, however, are as evanescent as they are brilliant; and soon after this animal is taken from its native element, the crest sinks; the bright crimson, green, and purple tints lose their brilliancy, and the beauty which had previously excited so much admiration fades, and at last totally vanishes. There are a number of species of the genus; † but the one most commonly seen is the *Physalia pelagica* of Lamarck, (*Holothuria physalis* of Linn.) They are known to our seamen as the “Portuguese men of war,” and

* Mr. John Fuge, of Plymouth, informed me that he captured a specimen of the *Physalia pelagica*, in the Catwater, (Plymouth Sound,) a few years since, in the month of August; it was floating upon the surface of the water, and living when caught; he placed it in a glass globe of sea water, and preserved it for three weeks. The only motion he observed in the animal, was an occasional contraction and elongation of the beaked end of the bladder portion of the animal, and the tentaculæ were also drawn up and thrust forward.

† *Physalis tuberculosa*, *P. megalista*, *P. elongata*, and *P. pelagica*, are the species given by Lamarck. (Sur les Animaux sans Vertèbres, tom. ii. p. 478.)

galère or frégate among the French, from having some resemblance to a small vessel resting tranquilly on the surface of the water during a calm, at which time they are more readily discerned than during strong breezes : they have also been confounded by many persons unacquainted with natural history with the *Nautilus*.

The figure of this species is somewhat ovate ; the upper portion resembles an inflated bladder, rounded at one extremity, and with a beak-like termination at the other. On the summit or back is a crest or ridge, slightly elevated, sulcated, and fringed at the edges : the whole of this part of the animal is of a light blue, with occasional streaks of delicate sea-green, and tinged with brilliant crimson : this portion of the animal is filled with air, and, although I have heard it frequently asserted that the animal has the voluntary power of collapsing the bladder on the approach of tempestuous, or inflating it on a return of fine weather, yet I do not credit the remark, considering it is more probably a seaman's tale than the result of a naturalist's observation. On examination, no apparatus is found by which such an effect could be produced ; and if it actually possesses such a power, why is it not exercised in every moment of peril ?—for, when we approach the animal to capture it, or

when it is taken from the water, no such change occurs; the bladder still remains inflated, and can be preserved thus distended either in a dried state or by placing it in alcohol. During strong breezes, I have seen them floating on the waves; but, from the ship passing at that time rapidly through the water, they are then more rarely observed. I have also seen them thrown in tempestuous weather on the beach at New South Wales, the bladder portion of the animal still remaining inflated. From these, and other reasons which might be adduced, the assertion cannot be considered as the result of actual observation. Situated at the under portion of the animal is a mass of tentaculæ, some short and thick, others long, filiform, and extending to several yards in length: these seem to consist of a chain of globules, filled with an extremely acrid fluid: in colour, they are of a beautiful purple, with an admixture of crimson; and they are covered by a glutinous substance, having a peculiar odour. The inflated membrane is probably intended to keep the animal buoyant on the water, by which it is readily enabled to extend its long tentaculæ in search of prey, or it may be designed as a locomotive agent, aiding the animal in its progress over the "vast bosom of the ocean,"—thus serving the purpose

of a sail. It is said that the appearance of the *Physalia* near to the sea-coast is the indication of an approaching tempest.*

Having captured a very fine specimen of this animal on a former voyage in latitude $9^{\circ} 0'$ south, and longitude $12^{\circ} 59'$ west, and being aware of the pungent property residing in the tentaculæ, I was desirous of trying its effects on myself, for the purpose of ascertaining from personal experience the constitutional irritative effects resulting from it. On taking hold of the animal it raised its tentaculæ, and stung me on the second and ring fingers. The sensation was

* On the 5th of April, 1834, in latitude $29^{\circ} 17'$ north, and longitude $42^{\circ} 57'$ west, temperature of the atmosphere 68° to 72° , I caught in my towing net a very fine specimen of *Physalis pelagica*, adorned with the usual beautiful tints, but not so vivid as I have usually seen them. The specimen was the largest I had before witnessed. During the month of April, 1834, I observed specimens of this mollusca as far north as latitude $38^{\circ} 32'$ north, and longitude $34^{\circ} 30'$ west. The lowest range of the thermometer being 58° , and highest 72° . In March, 1831, I had seen them as far north as the latitude of the Azores or Western Islands. Often when we had very strong westerly winds, with a heavy sea running at the time, I saw them; yet not, to use a nautical expression, "furling sail" and sinking; this was sufficient to prove the absurdity of the opinion that they collapse and sink during stormy breezes. I have frequently seen them capsized by a wave, but almost instantly after regain their natural position.

similar at first to that produced by the nettle ; but before a few minutes had elapsed, a violent aching pain succeeded, affecting more severely the joints of the fingers, the stinging sensation at the same time continuing at the part first touched by the acrid fluid. On cold water being applied, with the intention of removing or lessening the pain, it was found rather to increase than diminish the effects. The irritation resulting from the poisonous fluid emitted by the animal extended upwards, increasing in extent and severity, (apparently acting along the course of the nerves,) and in the space of a quarter of an hour, the effect in the fore-arm (more particularly felt at the inner part) was very violent, and at the elbow-joint still more so. It may be worthy of remark, that when the joints became affected the pain always increased. It became at last almost unbearable, and was much heightened on the affected arm being moved ; the pulse of that arm was also much accelerated, and an unnatural heat was felt over its whole surface. The pain extended to the shoulder-joint ; and on the pectoral muscle becoming attacked by the same painful sensation, an oppression of breathing was occasioned, which we find similarly produced by rheumatism, when it attacks that muscle ; and it proved very dis-

tressing during the time it remained. The continuance of the pain was very severe for nearly half an hour, after which it gradually abated, but the after effects were felt during the remainder of the day in a slight degree of numbness and increased temperature of the arm.

About two hours after I had been stung, I perceived that a vesicle had arisen on the spot; and when children have been stung, I observed that numerous small vesicles arose, similar to those produced by the nettle. The intensity of the effects produced depends on the size and consequent power of the animal; and after it has been for some time removed from the water, it is found that the stinging property has diminished. This irritative property, unattended, however, by any of the constitutional effects, remains for a long time in the tentaculæ, even after they have been removed from the animal; for on touching a handkerchief some weeks after it had been used in wiping off some portions of the tentaculæ, the stinging property was found to have remained, although it had lost that virulent quality, which produced on a recent application such violent constitutional irritation.

This irritative secretion does not, however, exist solely in this species of mollusca; several of the *medusæ* have similar properties, which

may perhaps be considered as both offensive and defensive; and it has been, and no doubt correctly, supposed to be given to these animals as a means of procuring their food, the benumbing principle existing in the tentaculæ rendering their prey when touched unable to escape. For what purpose this acrid property is found existing in the vegetable kingdom, it is difficult to decide, and all that has yet been said on the subject may be considered as merely hypothetical. For instance, at the island of Singapore there is a remarkable species of the order Fuci, usually found growing in isolated patches upon coral banks. Finlayson thus mentions it: "It is pinnated, plumose, elegant, about a foot and a half in length, and of a whitish colour. It is endued with a property of stinging like nettles; the sensation produced is more acute and more penetrating, more instantaneous, but somewhat more permanent. The hand is scarcely brought into contact with it, before the wound is inflicted. A small corrugated granular bag, filled with a transparent fluid, would seem to be the organ by which it produces this effect. These are no sooner touched than they discharge the fluid they contain. The plant soon loses this power after being removed from the water." This plant seems, therefore, to possess an offensive

or defensive property analogous to that of the *Physalia*, but for what purpose it would be difficult to form an opinion.

The usual method adopted for the preservation of this curious and beautiful mollusca is by placing it in spirits; the form is thus well preserved; but its vivid tints, the subject of so much admiration, are totally lost. As it is with the beautiful but evanescent colour of flowers, no method has been discovered by which their natural brilliancy can be preserved, and it is impossible to retain that peculiar brightness given only by life and health. I have preserved the animal by detaching the tentaculæ from the bladder; (on account of their being too soft and perishable to enable them to be dried, *en masse*, with any chance of success; their form only being preserved well in spirits;) then permitting the air to escape from the bladder, dried, pressed, and afterwards gummed on paper, it produces a good lateral view of the form of this mollusca; the colours being afterwards artificially renewed by the pencil, and the tentaculæ underneath drawn and coloured, the *tout ensemble* conveys an idea of the brilliant appearance of the animal, as far as can be produced by art. I have also kept the animal with the bladder inflated, dried it in that state, and, by

afterwards colouring it, the appearance produced is very excellent; but, it is only by repeated trials that the best and most accurate methods of preserving objects of natural history can be discovered—the greatest difficulty existing, being that of preserving them accurately in their natural appearance.

We had the N.E. trade in lat. 28° N. and long. $18^{\circ} 11'$ W. and at three p. m. of the 25th made the “Northern Saddle Hill,” (N. W. hill,) on the island of Sal, (Cape Verd group,) bearing S. E. about six leagues distant.

The announcement of “land in sight,” and the delightful sensations produced by it, can only be appreciated by those who have for some length of time been tossed about on the “deep, deep sea,” for many a weary day, with nothing but sea and sky to gaze upon. All hasten on deck as soon as the land is stated to be visible; at first its rather indistinct form, as it rises from the horizon, does not excite so much interest; but, on a nearer approach, the variously tinted strata of the lofty mountains become visible, and plantations, trees, shrubs, and neat habitations cheer the eye; and, on landing, a profusion of the floral beauties of the vegetable kingdom, with butterflies vieing with them in splendour of tints, or several species of the coleoptera tribe

decked in golden armour, meet the eye. But the approach to the Cape Verd islands does not possess these beauties in any profusion—barren volcanic mountains, contrasted occasionally only by a few others of a verdant character are seen instead; even these become an agreeable prospect, being a change from the monotony of a ship, but a departure from them, after a few days' sojourn, is attended with but little if any regret.

On the 26th, at daylight, we sailed with a pleasant breeze between the island of Mayo and that of St. Jago; the former distant about ten, the latter about eighteen miles; the western side of Mayo had a very sterile appearance; there was not a tree or speck of verdure to be seen. The lofty mountain of St. Antonio, on the island of St. Jago, was visible; its declivities verdant, but the peaked summit was for the most part hidden by clouds. As we coasted along the latter island, the feature of the coast was very barren, although it was occasionally relieved by a small verdant valley, diversified by some miserable huts and a few stunted cocoa-nut trees. In the afternoon we anchored at Porto Praya,* about a quarter of a mile distant from the shore.

* "Praya" signifies, in the Portuguese language, "a beach or shore."

After dinner we paid a visit to the shore ; the landing-place is very inconvenient, and often dangerous, from the surf, which at this time was fortunately not high. After landing we had to walk over a soft sandy road, varied only by large stones coming in contact with our feet, and assuring us of their presence by the pain they occasioned. Several miserable date palms and dusty plants of *Aloe perfoliata* (a few of the latter being in flower) grew by the road side. Then by a winding and steep ascent, covered by loose stones, we arrived at the town, which is built upon a table land of moderate elevation, and on this side of the approach there is a battery mounting twenty-one guns. From the descriptions I had previously perused, the town appears to have been much improved since they had been written, but still it has nothing of interest to recommend it ; but the view of the bay and shipping from the elevated site is very pretty. The Plaza (in which the American consul resides, and where there is a small church, which as yet cannot boast of a steeple,) contains the best houses and stores, where almost any supplies of foreign manufacture can be purchased, but at exorbitant prices.

At the period of our visit, this, together with the whole of the islands of the group were suffering from a severe and long drought ; this one,

from its fertility, and the irrigation that is capable of being produced, as well as from imports, is in a better condition than the others. At the island of Fuego, more particularly, the inhabitants were said to be dying daily in great numbers, from famine. The island of St. Jago alone is stated to have a population of 27,000 inhabitants.

I observed several boats engaged in fishing near the ship, previous to our landing, and their mode of capturing the finny tribe appeared to me novel; they sprinkled something over the water, like crumbs of bread, that attracted the fish (which were five or six inches long) to the surface in shoals; the fishermen then swept amongst them a stick to which a number of short lines and hooks were attached, and by aid of this they usually brought up several fish at a time. After the fish were caught, some women, who were in the boat, were engaged in cleansing and salting them.

Tired of the dull village, we descended from the elevated site to a garden in which the well was situated whence the supply of water of excellent quality is procured for shipping. At this spot the plantain, date, papaw, and cocoa-nut trees, attracted the attention of those of our party who had never before seen these magni-

ficient tropical trees. The sides of the paths were adorned with the gay and handsome flowers of the *Poinciana pulcherrima*, and the more elevated lilac tree (*Melia azedarach*) profusely covered with its long panicles of fragrant flowers. As we rambled further into the scrubby parts beyond this cultivated spot, cotton shrubs, (*Gossypium herbaceum*,) the thorny *Zizyphus* and *mimosas* were abundant. The *Jatropha curcas* was used for hedges, and a handsome *asclepias* (*procera*?) called bombadero by the Portuguese, was abundant about this waste land, both in fruit and flower: the flowers are succeeded by a large somewhat oval fruit, containing a quantity of pretty feathered seeds; the whole plant (like all the family to which this belongs) abounds in a viscid milky juice; the capsule of the pod is elegantly veined, reminding the anatomist of the veins displayed on the exterior of the heart.

On the following morning a small party was formed for an excursion to the valley of St. Trinidad, to gain some idea, if possible, of the fertile portions of this apparently very sterile island. This valley, it may be said, commences soon after descending the table land on which the town is situated. We diverged from the direct road, for the purpose of visiting a plantation about a mile and a half distant from

the town. The road was stony, and there was nothing in the aspect of the country around to relieve the eye; a few stunted *Mimosæ*, (occasionally varied by a few of the same species of large dimensions and great age,) some stunted *Zizyphi*, and a few trailing plants of *Convolvulus soldanella*, which, by its dark green leaves and purplish flowers, contrasted in a beautiful manner with the sterile brown soil of the scorched plains. The plantation we visited was not yet in order; it contained some flourishing coffee plants, with cocoa, plantain, cashew-nut, and other tropical trees; but the principal object of my visit was to view a specimen of the *Adansonia digitata*, or monkey bread tree, and its very peculiar appearance and growth imparted much gratification; it was about eighteen or twenty feet high, and twenty-one feet in circumference. This tree was in full foliage, and its bright green digitated leaves imparted much animation to it. The tree is surrounded to some depth by a spongy sap. As subsequently at the valley I saw a much larger specimen of this gigantic tree, but destitute of foliage, I shall then return to its description, and add a sketch. From this part of the island I collected but few plants; *Momordica senegalensis* grew wild about the fertile parts, as well as *Lotus jacobæus*, *Tribulus cistoides*, *Asclepias*, (pro-

cera?) and a very pretty *convolvulus*, with lilac flowers, climbed over rocks and trees in good soil.

From this place we proceeded to our destination. The sun was fervent, but the inconvenience was in some degree mitigated by a delightful north-east trade breeze. We passed over scorched plains, about which a few stunted bushes of *mimosa* were scattered, and at other places some wretched trees of *Jatropha curcas*. In a small vale we passed a rivulet of delicious water, at which several negresses were busily engaged in washing linen. The springs of water appear excellent, and there seems to be no deficiency of it in the valleys; but the want of rain is often severely felt: it was stated to me, that during the previous twenty months only half an inch has fallen on this island.

Continuing our journey, we passed several negroes conveying their produce, consisting of fruit, vegetables, orchilla weed, &c. to the town for sale, upon asses, with panniers made from bullocks' hides. The animals seemed in excellent condition, at which we were not a little surprised, from what we had seen of the sterility of the soil. A few cattle were also seen wandering over the plains, where barely a speck of verdure tinged the barren volcanic rocks, still

the animals were sleek, and in tolerable condition ; we therefore came to the conclusion that they were turned out to feed, or, what was much more likely, to view the country and fast during the day, and driven home to feed at night.

We pursued our dreary path, occasionally passing a few negro huts, and refreshing ourselves with some delicious goats' milk. As we came upon the fertile portion of this valley, the change of scene was certainly most agreeable ; the brown-parched soil which we had been so long previously alone regarding, now gave place to the verdant plantations of sugar-cane, manioc, and various European and tropical esculent vegetables, which gave a rich and animated character to the scene. The plantations were also interspersed with a great variety of tropical fruit trees, such as orange, lemon, guava plantain, tamarind, custard apple, &c. The tamarind trees were stunted, compared with the luxuriant and elegant growth of those trees in India ; they were, however, laden with ripe fruit, whose powerful acid soon set the teeth on edge of such of our party as were induced to partake of them.

Several trees of the Boabab, or monkey bread-tree, (*Adansonia digitata*,) were now seen, and

among them one was particularly conspicuous from its size, as also from a resemblance to the union of three trees. This tree was destitute of foliage, but that loss was compensated by the curious character it assumed, being covered with fruit pending from a long, twisted, spongy stalk, varying in length from one to two feet.



This tree measured forty feet in circumference, and was about sixty feet high; the bark was smooth, and of a greyish colour; the termination of its larger branches is remarkable, from being abruptly rounded, and from these rounded extremities the smaller branches are given off, as may be seen in the accompanying drawing; this forms a very characteristic feature in the tree. The fruit, on the outer shell being broken, contained not the yellow pulp usually mentioned, but a white farinaceous substance enveloping the dark brown seeds, of an agreeable acidulated taste. This may proceed from the fruit being old. The fruit is of an oval form, usually six inches in length, and three or four in diameter; rough externally, and, when mature, of a brownish yellow colour; a dark red gum exuded from the outer part of the fruit.*

* “The largest tree in the world is the *Adansonia* or Baobab tree, the trunk of which has been found with a diameter of thirty feet; but its height is not in proportion. It is emollient and mucilaginous in all its parts. The leaves dried and reduced to powder constitute *Lalo*, a favourite article with the Africans, which they mix daily with their food, for the purpose of diminishing the excessive perspiration to which they are subject in those climates; and even Europeans find it serviceable in cases of diarrhœa, fevers, and other maladies. The fruit is, perhaps, the most useful

Some of the farms and plantations were in very fine and luxuriant condition, and this was an enjoyment to us after the arid country we had before seen, destitute almost of vegetation, and covered with loose stones. Of the feathered tribe, although not very numerous, a few were shot by one of the party, among which were two specimens of *Halcyon senegalensis*, and a fine hawk; quails and Guinea fowls (*Numida meleagris*, Linn.) were abundant, and several of the former were also shot; the crow and several species of *Fringillæ* were likewise seen. In the afternoon we returned to the town. The population consists for the most part of mulattos and negroes: fruit, including plantains, bananas, oranges, and pine-apples, was abundant, but not yet fully in season.

Among the very few decent houses in this paltry town, was one, the residence of a Don

part of the tree. Its pulp is slightly acid and agreeable, and frequently eaten; while the juice is expressed from it, mixed with sugar, and constitutes a drink which is valued as a specific in putrid and pestilential fevers."—*Hooker's Bot. Mag.* 2792.

"The dried pulp is mixed with water, and administered in Egypt in dysentery. It is chiefly composed of a gum, like gum senegal, a sugary matter, starch, and an acid, which appears to be malic."—*Delile Cent.* 12. Quoted in *Lindley's Int. to the Nat. Syst. of Botany.*

F. Melo, (who speculates in orchilla weed,) situated in the Plaza, which displays taste and neatness both in the exterior and interior of its arrangement: on the lower land, behind the house, he has laid out with much labour an extensive garden, well irrigated, and in which European and tropical vegetables, fruits, and elegant flowering plants, were thriving in luxuriance, and sufficiently proved that even in that sterile spot, industry and perseverance could surmount almost any difficulty. At the house of this gentleman, I had an opportunity of seeing some excellent specimens of the orchilla weed; this valuable production of the vegetable kingdom is indigenous to this and other islands of the group, as well as to Madeira, the Canaries, and the coast of Barbary; it is the *Roccella tinctoria* of botanists,* and is held in high estimation for the purplish dye it yields, and I believe, excepting the cochineal, is the only dye that possesses a mordant in itself. This

* (In June, 1831.) "Canary orchilla fetches in the London market from 270*l.* to 290*l.* per ton, while that which is brought from Madeira fetches only 140*l.*, and Barbary not more than from 30*l.* to 45*l.* The total quantity imported in 1829, amounted to 1,813 cwt. or 90½ tons."—"Archil is generally sold in the form of cakes, but sometimes in that of moist pulp."—*M. Culloch's Dict. of Commerce.*

lichen is of a gray colour, and those plants which are of the darkest hue, long and strong, are considered the best ; it grows to a great length, but is rarely obtained so, as the natives gather it before it comes to any size, on account of its high value.

The quantity collected in one year, among the whole of this group of islands, was 537,600 lbs. ; but sometimes a larger quantity is obtained, when, not having much work upon the plantations, the negroes can be employed for the purpose.* It is found on the steep rocks in the interior of the islands, and growing in the crevices ; the finest orchilla is collected at the island of St. Antonio, where it grows in some places so inaccessible as to be only procured by lowering the gatherer down the cliffs by ropes. This lichen is exported only to Lisbon, there being an order from the Portuguese government to that effect, but quantities were often smuggled direct to some foreign port.†

* At the time of our arrival a Portuguese brig was lying in the bay, having a cargo of this weed on board, which was estimated at a low calculation to be worth 30,000*l*.

† “ The dyer’s lichen was first exported from the islands of the Archipelago to Venice, Genoa, France, and England, for the use of the dyers. Towards the commencement of the last century it was discovered in the Canary Islands, and

Date palms were very numerous in the vicinity of the town, but did not appear to attain any high degree of perfection, or bear fruit, and were used, for what they alone seemed fit, as firewood.

The troops were decently clad, and consisted of about five hundred, principally negroes and mulattoes, officered by Europeans.

All arrangements having been completed, we left the island in the evening, with a fine north-east trade breeze.

was soon placed among the regalia of the Spanish crown. This excited the attention of the Portuguese, who collected it without restriction in the Cape de Verd Islands, Madeira, Porto Santo, and the Azores. In the year 1730, the Jesuits asked of King John V. the privilege of collecting the *Hervinha secca*; but the crown took the advantage into its own hands, and farmed the right of collecting it. At a later period the lichen was ceded to the mercantile company of Gram Pará and Maranhão; and, lastly, in the year 1790, the government again took this branch of commerce under its own care, because it had declined considerably under the bad management of the company. At present the exportation is small; but more considerable, however, from the Cape de Verd Isles. (See I. Da Silva Feijó, in the *Memorias Economicas da Acad. de Lisboa*, vol. v. 1815, p. 143.)—*Spix and Martius Travels in Brazil*, vol. i. p. 125.

CHAPTER II.

Enter the tropics—Flying fish—Luminosity of the ocean—Magnificent scene—Phosphoric light—Interesting facts in elucidation of that phenomenon—Albicores and Bonitos—A colossal whale—Sea birds—Gigantic species of albatross—Description of those birds—Their manner of flight.

ON the 31st of May we lost the north-east trade, in $8^{\circ} 40'$ north, and longitude 23° west, after which we experienced variable winds with torrents of rain, until the 4th of June, when we had the south-east trade in latitude $4^{\circ} 38'$ north, and longitude $22^{\circ} 49'$ west, and crossed the equator early on the morning of the 7th, in longitude $27^{\circ} 5'$ west, being altogether only thirty-two days from Plymouth, including our delay at St. Jago.

On entering the tropics many animate objects excite attention, among others the flying-

fish ; it is surprising how many different opinions have been formed on the subject of this fish ; some considering it seeks the air for sport or pastime, whilst others regard it as only taking flight when pursued, and thus decide its existence to be a continued series of troubles and persecutions. Between such opposite opinions, we can only form our judgment from actual observation, and there is one circumstance without any doubt resting upon it ; that the supposed war of extermination exercised against them has not diminished their numbers, for they are observed in as large “flocks” at the present day, as navigators have related of them former days ; they must also have had a long cessation of hostilities from the time of birth, to enable them to arrive at maturity. To say that these fish undergo persecution more than any other living animals of the creation, is absurd, for we may observe the same principle throughout the whole of the animated kingdom of nature.

On arriving in tropical regions, this curious fish is seen, and affords some variety to the tedium of a ship ; the passengers amusing themselves by watching its flight, and sometimes its “persecution,” when pursued by bonitos, dolphins, albicores, among the finny, and tropic birds, boobies, gannets, &c. among the feathered tribe.

I have frequently derived both information and amusement by watching the flight of these fish ; to observe them skim the surface of the water for a great distance, sometimes before, and at other times against the direction of the wind, elevating themselves either to a short height from the surface, or to five or six feet, and then, diverging a little from their course, drop suddenly into their proper element ; sometimes when their flight was not high above the water, and it blew fresh, they would meet with an elevated wave, which invariably buried them beneath it, but they would often again start from it and renew their flight.

I have never yet been able to see any percussion of the pectoral fins during flight, although such a high authority as Cuvier says, " the animal beats the air during the leap, that is, it alternately expands and closes its pectoral fins ;" and Dr. Abel also supports this opinion, and says that it agrees with his experience ; he has repeatedly seen the motion of the fins during flight, and as flight is only " swimming in air," it appears natural that those organs should be used in the same manner in both elements. But the structure of a fin is not that of a wing ; the pectoral fins or wings of the flying fish are simply enlarged fins, capable of supporting,

perhaps, but not of propelling the animal in its flight.*

In fish, the organ of motion for propelling them through the water is the tail, and the fins direct their course ; in birds, on the contrary, the wings are the organs of motion, and the tail the rudder. The only use of the extended pectoral fins in the fish is for the purpose of supporting the animal in the air, like a parachute, after it has leaped from the water by some power, which is possessed by fish of much larger size, even the whale. From the structure of the fin, I cannot consider it at all calculated for repeated percussions out of the water, although while in that fluid it continues its natural action uninjured, as it soon dries when brought into contact with the air, and the delicacy of the membrane between the rays would very readily become injured, were the organ similarly exerted in that medium.

The greatest length of time that I have seen these *volatile* fish on the *fin*, has been thirty seconds by the watch, and their longest flight, mentioned by Captain Hall, has been two hundred yards ; but he thinks that subsequent observation has extended the space. The most

* Abel's Voyage to, and journey into the interior of, China. 4to. p. 6.

usual height of flight, as seen above the surface of the water, is from two to three feet; but I have known them come on board at a height of fourteen feet and upwards; and they have been well-ascertained to come into the channels of a line of battle ship, which is considered as high as twenty feet and upwards.*

But it must not be supposed they have the power of elevating themselves in the air, after having left their native element; for on watching them I have often seen them fall much below the elevation at which they first rose from the water, but never in any one instance could I observe them raise themselves from the height at which they first sprang, for I regard the elevation they take to depend on the power of the first spring or leap they make on leaving their native element.

On the 6th of June, in latitude $1^{\circ} 50'$ north, and longitude $25^{\circ} 14'$ west, a flying-fish was brought me by one of the steerage passengers, which had just "flown" on board over his head, as he was standing near the fore-part of the ship; being still alive when he brought it to me, I hastened to place it in a bucket of water, to ascertain whether it would attempt

* Captain Basil Hall. See *Fragments of Voyages and Travels*.

to spring from it, and “take flight;” however, I found it was too late, for after floating about with its long pectoral fins half expanded, as it remained near the surface of the water, it continued alive for about the space of a minute, and then died. They usually, from the violence with which they come on board, receive some injury against the spars, boats, or chains, sufficient to destroy them; and therefore it will be difficult to observe their true actions as when performed in full vigour in their native element. This specimen measured nine inches in length. What excited my attention in this fish was a species of *anatifa* attached by its peduncle to the thorax. I regard as a very unusual circumstance, the existence of an *anatifa* attached to a living animal, particularly one of such rapidity of motion as this fish is usually supposed to be. The height at which this fish came on board could not have been less than fourteen feet from the surface of the water, and on the windward side of the vessel.

The “flight” of these fish has been compared to that of birds, so as to deceive the observer; however, I cannot perceive any comparison, one being an elegant, fearless, and independent motion, whilst that of the fish is hurried, stiff, and awkward, more like a creature requiring

support for a short period, and then its repeated flights are merely another term for leaps. The fish make a rustling noise, very audible when they are near the ship, dart forward, or sometimes take a curve to bring themselves before the wind, and when fatigued fall suddenly into the water. It is not uncommon to see them, when pursued, drop exhausted, rise again almost instantly, proceed a little further, again dipping into the ocean, so continuing for some distance until they are out of sight, so that we remain in ignorance whether they have been captured or have eluded pursuit.

The flying-fish swim in shoals, for on one day they are seen rising about, and in the vicinity of the ship, in great numbers; and on the day following, or latter part of the same day, only a few stragglers are seen. When disturbed by the passage of the ship through the shoal, they rise in numbers near the bows of the ship, and the consternation seems to spread among those far distant: the same may be observed when dolphins and albigores are pursuing them. On passing between the islands of Fuego and St. Jago, (Cape Verd group,) in December, 1828, I witnessed a number of bonito in pursuit of flying-fish; the former springing several yards out of the water, in eager chase, whilst large

shoals of the latter arose with an audible rustling noise before their pursuers, and the chase continued as far as we could see, a number of victims no doubt being sacrificed to the voracity of their hunters. Besides the finny enemies, they had to encounter, as they rose from the water, boobies, gannets, and tropic birds, which hovered about, and in our view secured very many as they sought refuge in the air. It was a novel sight, and one not often witnessed during repeated voyages, and afforded much amusement and interest to those who beheld it.*

Occasionally our attention was excited during the voyage, by the remarkable luminosity assumed by the ocean in every direction, like rolling masses of liquid fire, as the waves broke and exhibited an appearance inconceivably grand and beautiful. The phosphoric light, given out by the ocean, exists to a more extensive and brilliant degree in tropical regions,

* It would be interesting, but at the same time difficult, to ascertain where one particular species commences and another terminates, and the extent of their range. In the summer season they are found off the Cape of Good Hope, Port Jackson, and even on the banks of Newfoundland; and I have good authority for asserting that in the month of August, in even more than one year, they have been seen in Plymouth Sound.

although in high latitudes it is occasionally visible, more especially during the warm months of the year. The cause of it has excited much speculation among naturalists ; and although many of the marine molluscous and crustaceous animals, such as *salpa*, *pyrosoma*, *cancer*, several *medusæ* have been found to occasion it, yet no doubt *debris*, from dead animal matter, with which sea water is usually loaded, is also often one of the exciting causes.

As the ship sails with a strong breeze through a luminous sea on a dark night, the effect produced is then seen to the greatest advantage. The wake of the vessel is one broad sheet of phosphoric matter, so brilliant as to cast a dull, pale light over the after-part of the ship ; the foaming surges, as they gracefully curl on each side of the vessel's prow, are similar to rolling masses of liquid phosphorus ; whilst in the distance, even to the horizon, it seems an ocean of fire, and the distant waves breaking, give out a light of an inconceivable beauty and brilliancy : in the combination, the effect produces sensations of wonder and awe, and causes a reflection to arise on the reason of its appearance, as to which as yet no correct judgment has been formed, the whole being overwhelmed with mere hypothesis.

Sometimes the luminosity is very visible with-

out any disturbance of the water, its surface remaining smooth, unruffled even by a passing zephyr; whilst on other occasions no light is emitted unless the water is agitated by the winds, or by the passage of some heavy body through it. Perhaps the beauty of this luminous effect is seen to the greatest advantage when the ship, lying in a bay or harbour in tropical climates, the water around has the resemblance of a sea of milk. An opportunity was afforded me when at Cavité, near Manilla, in 1830, of witnessing for the first time this beautiful scene: as far as the eye could reach over the extensive bay of Manilla, the surface of the tranquil water was one sheet of this dull, pale, phosphorescence; and brilliant flashes were emitted instantly on any heavy body being cast into the water, or when fish sprang from it or swam about; the ship seemed, on looking over its side, to be anchored in a sea of liquid phosphorus, whilst in the distance the resemblance was that of an ocean of milk.

The night to which I allude, when this magnificent appearance presented itself to my observation, was exceedingly dark, which, by the contrast, gave an increased sublimity to the scene; the canopy of the heavens was dark and gloomy; not even the glimmering of a star was to be

seen ; while the sea of liquid fire cast a deadly vale light over every part of the vessel, her masts, yards, and hull ; the fish meanwhile sporting about in numbers, varying the scene by the brilliant flashes they occasioned. It would have formed, I thought at the time, a sublime and beautiful subject for an artist, like Martin, to execute with his judgment and pencil, that is, if any artist could give the true effect of such a scene, on which I must express some doubts.

It must not be for a moment conceived that the light described as brilliant, and like to a sea of "liquid fire," is of the same character as the flashes produced by the volcano, or by lightning, or meteors. No : it is the light of phosphorus, as the matter truly is, pale, dull, approaching to a white or very pale yellow, casting a melancholy light on objects around, only emitting flashes by collision. To read by it is possible, but not agreeable ; and, on an attempt being made, it is almost always found that the eyes will not endure the peculiar light for any length of time, as headaches and sickness are often occasioned by it. I have frequently observed at Singapore, that, although the tranquil water exhibits no particular luminosity, yet when disturbed by the passage of a

boat, it gives out phosphoric matter, leaving a brilliant line in the boat's wake, and the blades of the oars when raised from the water seem to be dripping with liquid phosphorus.

Even between the tropics, the phosphoric light is increased or diminished in its degree of brilliancy, in a very slight difference of latitude; on one day it would be seen to a most magnificent extent, on the next it would be perhaps merely a few luminous flashes. It might proceed from the shoals of marine animals, that caused the brilliancy to be less extensively distributed over one part of the ocean than another. That I am correct in asserting that some of the animals which occasion the phosphoric light, emitted by the ocean, do travel in shoals, and are distributed in some latitudes only in a very limited range, I insert two facts which occurred during this voyage, and which will no doubt be regarded as interesting.

On the 8th of June, being then in latitude $00^{\circ} 30'$ south, and longitude $27^{\circ} 5'$ west, having fine weather and a fresh south-easterly trade wind, and range of the thermometer being from 78° to 84° , late at night the mate of the watch came and called me to witness a very unusual appearance in the water, which he, on first seeing, considered to be breakers. On arriving upon the deck, this was found to be a very broad and

extensive sheet of phosphorescence, extending in a direction from east to west as far as the eye could reach ; the luminosity was confined to the range of animals in this shoal, for there was no similar light in any other direction. I immediately cast the towing net over the stern of the ship as we approached nearer the luminous streak, to ascertain the cause of this extraordinary and so limited a phenomenon. The ship soon cleaved through the brilliant mass, from which, by the disturbance, strong flashes of light were emitted ; and the shoal (judging from the time the vessel took in passing through the mass) may have been a mile in breadth : the passage of the vessel through them, increased the light around to a far stronger degree, illuminating the ship. On taking in the towing net, it was found half filled with *pyrosoma*, (*atlanticum*?) which shone with a beautiful pale greenish light, and there was also a few small fish in the net at the same time ; after the mass had been passed through, the light was still seen astern until it became invisible in the distance, and the whole of the ocean then became hidden in darkness as before this took place. The scene was as novel as it was beautiful and interesting, more so from having ascertained, by capturing the luminous animals, the cause of the phenomenon.

The second was not exactly similar to the pre-

ceding ; but, although also limited, was curious, as occurring in a high latitude during the winter season. It was on the 19th of August,* the weather dark and gloomy, with light breezes from north-north-east, in latitude $40^{\circ} 30'$ south, and longitude $138^{\circ} 3'$ east, being then distant about three hundred and sixty-eight miles from King's Island, (at the western entrance of Bass's Straits). It was about eight o'clock, P.M. when the ship's wake was perceived to be luminous, and scintillations of the same light were also abundant around. As this was unusual and had not been seen before, and it occasionally also appeared in larger or smaller detached masses giving out a high degree of brilliancy : to ascertain the cause, so unusual in high latitudes during the winter season, I threw the towing net overboard, and in twenty minutes succeeded in capturing several *pyrosoma*, giving out their usual pale green light ; and it was no doubt detached groups of these animals, that were the occasion of the light in question. The beautiful light given out by these molluscous animals soon subsided, (being seen emitted from every part of

* My journal remarks the atmosphere to have been very chilly during the day, but much milder in the evening ; the range of the thermometer during the day being from 49° to 56° .

their bodies,) but by moving them about it could be reproduced for some length of time after. As long as the luminosity of the ocean was visible, (which continued most part of the night,) a number of *Pyrosoma atlanticum*, two species of *Phyllosoma*, an animal apparently allied to *Leptocephalus*, as well as several crustaceous animals, all of which I had before considered as inter-tropical species, were caught and preserved. At half-past ten, P. M. the temperature of the atmosphere on deck was 52° , and that of the water $51\frac{1}{2}^{\circ}$. The luminosity of the water gradually decreased during the night, and towards morning was no longer seen, nor on any subsequent night.*

Albicores, † bonitos, and even a colossal whale

* How will this accord with the geographical distribution of the mollusca by Péron and Leseur? After studying the *Holothuria Medusæ*, and other congeners of delicate and changeable forms, they came to the conclusion that each kind has its place of residence determined by the temperature necessary to support its existence. Thus, for example, they found the abode of *Pyrosoma atlanticum* to be confined to one particular region of the Atlantic Ocean. — *Voy. aux Terres Aust.* tom. 1, p. 492, quoted in *Lyell's Principles of Geology*, vol. ii. pp. 111, 112.

‡ Albicores, bonitos, and dolphins, often follow the ship for several days in succession; we had occasion to note an albicore that was marked on the back by some sharp instrument, leaving a large sear by which it could readily be

close under the stern, beguiled a tedious hour, until we arrived in latitudes where the various species of albatross, cape petrel, and other oceanic birds afforded a change from the "finny" to the "feathered" tribe. We lost the south-east trade on the 13th of June, in about $14^{\circ} 30'$ south, and long. $32^{\circ} 14'$ west. In lat. $30^{\circ} 0'$ south, and long. $24^{\circ} 18'$ west, on the 25th of June, cape petrels* were first seen, and increased in numbers as we proceeded, continuing about the ship, in greater or less numbers, even to Port Jackson; albatrosses were not seen until we arrived in lat. 36° south, long. $5^{\circ} 18'$ west, when several species of this bird were often about the vessel.

Besides the sight of flying fish, sharks, dolphins, and other deep-water fish; cape petrels, albatrosses, and other oceanic birds, serve to banish the sameness of a sea voyage, and that ennui which lays its benumbing hand upon those who have but few resources in themselves, and looking for it in objects around, too often feel disappointed. It is usually about the 29° of latitude, and 26° of west longitude, that the gi-

recognized. It was first seen in 3° north latitude, and following the ship to latitude 11° south, a distance of eight hundred and forty miles.

† This petrel is said to be found from 24° to 60° south latitude.

gantic species of albatross is usually first seen, as well as the smaller but not less elegant species of the same bird. At first but few are seen, but they increase in numbers as the vessel gets into more southern latitudes; at some seasons of the year they appear more numerous than at others, which may be attributed to the pairing time, which may keep them, at certain seasons, nearer the rocky islets upon which they breed or rear their young. The large white or wandering albatross,* (*Diomedea exulans*,) the type of the genus, excites much interest by its majestic appearance, either when almost sweeping the sides of the vessel with its huge pinions, or when beheld a prisoner on the ship's deck, realizing the idea of the famed *roc* (allowing for the brilliant and exaggerated descriptions usual in all eastern nations) mentioned in the Arabian Nights' Entertainments.†

* Respecting the name given to this bird, it has been observed, that the first Portuguese navigator called them, the boobies, and other sea-birds, *alcatros* or *alcatras*. Dampier applied this name to an actual kind; Grew changed it to *albitross*, and Edwards into *albatross*. The French name these birds *mouton du cap*. There are a number of species enumerated; but it will require frequent and cautious observation previous to the determination of a new one, as they vary so much in plumage from sex and age.

† The condor is supposed by some to be the "Roc" of the Arabian Nights.

It is pleasing to observe this superb bird sailing in the air in graceful and elegant movements, seemingly excited by some invisible power, for there is rarely any movement of the wings seen, after the first and frequent impulses given, when the creature elevates itself in the air ; rising and falling as if some concealed power guided its various motions, without any muscular exertion of its own ; and then descending sweeps the air close to the stern of the ship, with an independence of manner, as if it were “ monarch of all it surveyed.” It is from the very little muscular exertion used by these birds, that they are capable of sustaining such long flights without repose.

When these elegant birds are captured, and brought on board, their sleek, delicate and clean plumage is a subject of much admiration ; and the fine snow-white down which remains after the removal of the outer feathers, is in requisition among ladies for muffs, tippets, &c. The large species of albatross measures from eight to fourteen feet. I have even heard it asserted, that specimens have been shot of this species, the expanded wings of which measured twenty feet across ; but the greatest spread I have seen, has been fourteen feet.* The immense distance these birds

* The other species I have seldom known to measure more than eight feet across the expanded wings.

are capable of flying, seems almost incredible, although often ascertained by birds having been caught, marked, and again set at liberty. When seizing an object floating on the water, they gradually descend with expanded or up-raised wings, or sometimes alight, and float like a duck on the water, while devouring their food ; then, elevating themselves, they skim the surface of the ocean with expanded wings, giving frequent impulses, (as the great length of their wings prevents their rising with facility from a level surface,) as they run along for some distance, until they again soar in mid-air, and recommence their erratic flights. It is interesting to view them during boisterous weather, flying with, and even against, the wind, seeming the “ gayest of the gay” in the midst of howling winds and foaming waves.

To watch the flight of these birds used to afford me much amusement ;—commencing with the difficulty experienced by them in elevating themselves from the water. To effect this object, they spread their long pinions to the utmost, giving them repeated impulses as they run along the surface of the water for some distance. Having, by these exertions, raised themselves above the wave, they ascend and descend, and cleave the atmosphere in various directions, with-

out any apparent muscular exertion. How then, it may be asked, do these birds execute such movements? The whole surface of the body in this, as well as, I believe, most, if not all, the oceanic tribes, is covered by numerous air-cells, capable of a voluntary inflation or diminution, by means of a beautiful muscular apparatus. By this power, the birds can raise or depress themselves at will, and the tail, and great length of the wing, enable them to steer in any direction. Indeed, without some provision of this kind, to save muscular exertion, it would be impossible for these birds to undergo such long flights without repose, as they have been known to do; for the muscles appertaining to the organs of flight, although large in these birds, are evidently inadequate in power to the long distances they have been known to fly, and the immense length of time they remain on the wing, without scarcely a moment's cessation.

When several species of the albatross, as well as petrels and other oceanic birds, are about the ship at the same time, no combats have been seen to take place between them; but on the death of one, the others soon fall upon and devour it. When one of this tribe of birds is captured and brought upon the deck, it appears to be a very

muscular bird,—judging from its external form. This deception is occasioned by the quantity of down and feathers, with a very dense integument, and the air-cells being often inflated in a slight degree. When these are removed, the body of the bird is found to be of a smaller size than would have been supposed, and, comparatively speaking, does not possess the muscular power, which, from its long flights, our ideas might lead us to suppose. I remarked that the albatross would lower himself even to the water's edge, and elevate himself again without any apparent impulse ; nor could I observe any percussion of the wings when the flight was directed against the wind,—but then, of course, its progress was tardy. Many, however, have differed with me in considering that the birds never fly “ dead against the wind,” but in that manner, which sailors term, “ close to the wind,” and thus make progress, aided by, when seemingly flying against, the wind.*

The different species or varieties of the albatross,

* This bird is evidently aided by its long wings as well as tail in directing its flight : they are never seen to soar to any great height, and are often observed to change their course, by turning the wings and body in a lateral direction, and oftentimes, when raising themselves, would bend the last joint of the wings downwards.

are but little understood ; in the course of a long voyage but few opportunities occur to any person acquainted with natural history to examine specimens, and consequently our knowledge respecting them is limited to a very few facts. It is not in many instances that a new species can be defined ; age and sex often producing differences which are frequently regarded as specific characters. If persons, who may feel an interest, or have studied this interesting science, would note down the differences of plumage, size, and sex, &c. of the birds captured, in course of time a mass of information might be collected, which would serve, in some degree, to determine the different changes of plumage undergone by the various species.*

On the 21st of August, the south end of King's Island was seen, bearing east-north-east, by compass, at a distance of thirty miles. We entered Bass's Straits on the same night, and anchored in Sydney Cove, Port Jackson, on the morning of the 25th of August.

* Cuvier enumerates five species ; but at the same time says, " On a observé divers albatrosses plus ou moins bruns ou noirâtres, mais on n'a pu encore constater jusqu'à quel point ils forment des variétés ou des espèces distinctes."—*Regne Animal*, tom. i. p. 555.

CHAPTER III.

Sombre appearance of the Australian coast—Feelings of an emigrant on approaching it—Improvement of Sydney—Fruits produced in the colony—Extent of the town—Cultivation of flowers and culinary vegetables—House-rent—The streets—Parrots—Shops—Impolicy of continuing the colony as a penal settlement—The theatre—Aspect of the country in the vicinity of Sydney—The grass tree—Floral beauties—Larva of a curious insect—The colonial museum—Visit to Elizabeth Bay—Valuable botanical specimens in the garden of the Honourable Alexander Macleay—New Zealand flax—Articles manufactured from that vegetable—Leave Sydney—Residence of Mr. M'Arthur—Forest flowers—Acacias—Paramatta—Swallows.

As we sailed by the Australian coast, its barren aspect neither cheered or invited the stranger's eye ; even where vegetation grew upon its shores, it displayed so sombre an appearance as to impart no animation to the scenery of the coast. To an emigrant, one who has left the land of his fathers, to rear his family and lay his bones in a distant soil, the first view of this, his adopted

country, cannot excite in his bosom any emotions of pleasurable gratification ; despondency succeeds the bright rays of hope, and he compares with heartfelt regret the arid land before him with the fertile country he has forsaken, because it afforded not sustenance for himself and family, and thus reluctantly caused him to sever the affectionate ties that united him to dear friends in his native land—the place of his birth—the soil and habitation of his forefathers for centuries.

One does not behold the graceful waving of the cocoa palm, the broad and vivid green foliage of the plantain, nor the beautiful luxuriance of a tropical vegetation, which delight the vision of the wearied voyager on a first approach to a tropical region, where the soil teems with cultivation, or a profuse natural vegetation extending from the loftiest mountains even to the ocean's brink. But on landing and viewing the interior of Australia, the wanderer, although seeing much to confirm his first impressions, will also view many parts of the country recalling to his memory features resembling the land he has left ; and as industry gives him wealth and independence, and he finds his family easily maintained, he becomes reconciled to his choice, and remains comparatively if not entirely happy.

Sydney was much improved and enlarged since my last visit in 1829; provisions were abundant and exceedingly cheap, the shipping being supplied with fresh beef at one penny a pound, and even less; vegetables are also very abundant, except in the most arid of the summer months; and fruit is, during the summer months, plentiful, and a great portion of excellent quality, consisting of several varieties of peaches, apricots, apples, pears, water-melons, loquats, grapes, plums, and strawberries, &c. Fruit of a superior kind obtains a high price, but the common kinds are very cheap; peaches for preserves or tarts being hawked about the streets at a penny a dozen. Gooseberries will not succeed in the vicinity of Sydney, but this fruit has been produced in the Argyle and Bathurst districts. Grapes have lately been perfected in the colony in great abundance, both as to size and flavour; and much attention is now devoted by the colonists to the cultivation of the vine; for which, from its prolific and early bearing, the Australian soil seems to be exceedingly well calculated.

Several enterprising individuals have introduced the different species and varieties of vines from Spain, France, Portugal, &c. &c. producing grapes, valuable in the manufacture of wine, as

also for the dessert ; and we may hope that the time is not distant when grapes will abound in Australia as they at present do at the Cape, and that wine both for home-consumption and exportation will be made from them. The immense increase of grapes in the colony during the last two or three years, leads one to suppose that the above opinion will speedily be confirmed.

On making a circuit around the town of Sydney, the metropolis of the Australian colony, the extent of ground it occupies, the number of buildings completed, as well as those erecting for the increased and still increasing population, the variety and neatness of the shops, excite the surprise of a stranger, and still more of a person who revisits the town after a brief absence, at the rapid improvements that have taken place in this distant colony in so short a period of time. The humble wooden dwellings are fast giving place to neat houses and cottages constructed of brick or sandstone ; but, as may be expected in all recently established towns, there is much want of symmetry in the construction of the buildings ; and on perambulating the streets, specimens of several unknown orders of architecture are seen ; the cottage style, with neat verandas, is one much adopted for private dwellings, and has a neatness of external appearance, with which the

interior usually corresponds. Many have neat gardens attached to them, in which, during the summer season, the blooming rose, as well as the pink, the stock, and other European flowers, impart a beauty, and remind one of home; or, in lieu of these gay vegetable productions, the industrious housekeeper has caused the plot of ground to be planted with peas, beans, cabbages, and other culinary vegetables. The tree cabbage, common on the European continent, but rarely seen in England, I observed introduced in the gardens; it thrives well in the colony.

House-rent is excessively high in the colony, being one of the greatest expenses to a resident in Sydney; it varies from sixty to two hundred and fifty pounds annually. The streets, being of sandstone, the constant attrition of it by vehicles, &c. produces, from its friability, much dust, which occasions, during windy days, much annoyance; from the same cause, the streets are often out of repair, and the best material for repairing them is a kind of flinty stone, brought by ships from Hobart Town as ballast.

Parrots are, perhaps, of all the feathered tribe, the most numerous in the colony; and different species are lauded for speaking, whistling, and other noisy accomplishments. No one can walk the streets of Sydney or any of the villages of

the colony, or enter an inn or dwelling-house, without seeing this class of birds hung about in cages, and having his ears assailed by the screeching, babbling, and whistling noises which issue from their vocal organs: it is the street music of the colony, and “pretty polly,” “sweetpolly,” are tender sounds which issue from the exterior as well as interior of every dwelling. These birds are evidently gifted with the bump of *talkativeness*. It was once asserted, that ladies kept the birds to converse with when alone, which served a double purpose—that of being to them both practice and amusement.

The best view of the town, shipping, and adjacent country is that seen from the “rocks,” and the prospect afforded from this elevated situation is very fine. Shops of all kinds are rapidly multiplying; and lately there have been extensive emigrations of artisans of all descriptions from every part of the united kingdom; butchers, bakers, pastrycooks, provision merchants, shoemakers, apothecaries, fancy-bread bakers, booksellers, &c. &c. are numerous, and have neat, and some even elegant shops; the press sends forth their cards and circulars, and large posting bills, printed in a neat and even superior manner, equal to any similar production in our country towns in England. Circu-

lating libraries and literary reading rooms are now becoming numerous, for the Australians are desirous of being a reading as well as a thinking people, and are anxious to have the permission of legislating for themselves; but whilst the free and emancipist parties are each desirous of gaining an ascendancy in colonial affairs, it would certainly not be advisable to grant the boon; both have their interests at home, and the emancipists are a wealthy and powerful body; and although I am not anxious to enter into the political affairs of the colony, I would, while on this subject, merely wish to suggest the expediency, from the wealth and importance of this part of the Australian colony, to no longer use it as a penal settlement, but encourage free emigration of labourers, and send the convicts to a new colony, which might be founded at the northern portion of the extensive Australian territory; then there can be no doubt that party spirit will in some degree subside, and the colony will increase still more in prosperity, being undivided by any party feeling.

It is well known that free emigration is detested by most of the convict party, and a wealthy individual of this class once remarked, '*What have the free emigrants to do here? the*

colony was founded for us, they have no right here;” and that individual, from his wealth, would probably be elected a member of a future House of Assembly. The emigration of wealthy settlers has been much retarded by the government order, that no grants of land are to be given, but only purchased; until that order is repealed, no great increase of settlers for agricultural purposes will take place; *one grant*—but one grant *only*—ought to be given to the emigrant on his arrival in the colony as before; and those who may be desirous of having an additional grant, may then be able to effect it by purchase; the land sold since the new order has been in operation, has been principally, if not entirely, purchased by those among the settlers who were desirous of increasing the extent of their property, and from the vicinity of the “selection” to their former grant, can afford to give a higher price for it, than the newly arrived settler, ignorant of the quality of the land, and the district in which it may be situated.

A theatre having been licensed by the governor, and lately opened by a *select* company of performers, I visited it one night to ascertain the actual state of the drama in the colony, as also to see the mingled society

which would be brought together by such a novel place of amusement. On the night mentioned, I visited it with a party of friends; the evening's entertainment was the "Heir at Law," and "Bombastes Furioso." The interior of the theatre (which was fitted up as a temporary measure, in a large room of the Royal Hotel*) is small, and is used only until one more complete can be erected: considering the disadvantages under which theatrical exhibitions must labour in so young a colony, the "*tout ensemble*" far exceeded what I had expected. The pit and boxes (for there was no gallery) might probably contain one hundred and fifty persons. To speak of the *performance* of Colman's celebrated comedy, would be to say it was beneath criticism; and the actors seemed determined to "play the comedy" after a manner of their own, substituting passages of their own for those of the author, in defiance of all dramatic rules.

* The building was originally erected as a theatre, at a very great expense, and after its completion the governor, at that time General Darling, refused to grant a licence for dramatic performances, in consequence of which it was fitted up as a spacious hotel. On the present Governor, General Burke, granting permission for theatrical entertainments, a portion of the building has reverted to the original purpose for which the whole had been erected.

The greatest novelty of the evening was a young Australian actress, to whom the drama was as much a novelty as she became to us this evening ; and consequently she had no medium of comparison by which her judgment could be directed. Her predominant fault was a want of feeling. In the very affecting scene, where poor Henry, long supposed to be lost, returns to his beloved and disconsolate Caroline—he was in ranting raptures, while she received him in the most hard-hearted manner that can be conceived, uttered the expressions placed by the author into her mouth as a mere matter of course ; and, as the unfeeling creature evidently showed that she neither felt nor understood the sentiments uttered, it proved no affecting scene either to actors or auditors. However, “ Advance Australia ;” the lady and the colony, we thought, are both young. As for the rest of the corps, they too often mistook indecency for wit, and probably by so doing they pleased the majority of their audience ; if so, both parties would be satisfied. The pit contained those usually seen in the galleries of the theatre at home ; and squabbles, threats, and actual combats, served to amuse some, and discipline others ; and the various scenes and expressions in both pit and boxes excited in our

minds any thing but an idea of the sublime and beautiful. It may also be worthy of remark, as a proof of the increasing morality of the colony, that no one was stationed at the doors, as in our depraved metropolis, warning you to "take care of your pockets;" and that neither myself, or any gentlemen in company, either in our ingress or egress, had our pockets picked.

The domain and country in the immediate vicinity of Sydney was assuming (in September) a gay and brilliant aspect from the profusion of flowering shrubs and plants strewed over the arid soil; there was, however, a peculiar character in the vegetation, the foliage of the trees having a dry appearance, and being destitute of the lustre so observable in those of other countries. This want of lustre is attributed by that justly celebrated botanist, Dr. Brown, to the equal existence of cutaneous glands on both surfaces of the leaf;* and another peculiarity is the trees attaining a great elevation, with branches only at the summit, and shedding their bark;

* "It is at least certain that on this microscopic character of the equal existence of cutaneous glands on both surfaces of the leaf, depends that want of lustre which is so remarkable in the forests of New Holland."—*Sketch of the Botany of the Vicinity of Swan River, by R. Brown, Esq. F.R.S., published in the Journal of the Royal Geographical Society of London, vol. i. 1830, 1831.*

some of the trees being seen perfectly decorticated and appearing in a smooth new bark, whilst others have the outer bark not yet quite thrown off, but hanging in long strips from the trunk. These peculiarities, in combination with others, convey to us different ideas from those formed from the vegetation of other countries.

Among the beauties of the kingdom of Flora, which are lavished so profusely in this colony, the different species of the *Banksia** genus (or honeysuckle, as all the species are indiscriminately termed by the colonists) would arrest the attention of the stranger, by its peculiar growth as well as remarkable flowers; the species *Banksia ericifolia* was most profusely in bloom, its erect tufts of orange-coloured flowers imparting to it a lively appearance. That curious and interesting tree the *Xanthorrhœa*,—yellow gum or grass tree of the colonists,—would attract observation from its peculiar growth, the trunk being surmounted by long grassy foliage, from the centre of which arises a long scape terminated by a cylindrical spike, either crowded with its small white flowers of sickly odour, or

* The dried cones of the *Banksia* are used by the aborigines for retaining fire, as they will keep ignited for a considerable length of time.

with dark coloured angulated capsules, containing small black seeds. The flowers of the several species secrete a honey, which exudes at first like dew-drops, and afterwards concretes into an albumen, attracting multitudes of insects, which soon deface the purity the flowers before presented. The natives readily produce fire by rubbing two pieces of the trunk of this tree together.

This tree is found abundantly in several parts of the colony, and there are already seven described species. It is named "*grass tree*" by the colonists from its long pendent grassy foliage, and "*yellow gum tree*" from secreting a quantity of yellowish gum.* It is a tree of curious growth, and I have seen the species called *hastile* from eight to ten feet high, and the trunk sometimes surmounted by from two to four heads; each bearing a flowering stem, which rises from the centre of the foliage to the length of six feet and upwards: it is round and very light, combining lightness with strength, and is used by the aborigines for making their spears, fish gigs, &c. The scape terminates in a cylindrical spike; the flowers are small, white, and numerous; an albumen is secreted from

* The analysis of the chemical properties of this gum is mentioned in Decandolle's *Organographie Végétale*, tom i.

them of a sweet taste, which is eaten by the natives and birds, and is also a source of attraction to multitudes of ants and other insects; the capsules are triangular, and contain three flat black seeds in distinct cells.

It secretes a yellow gum, resembling very much in appearance, though not in quality, the gamboge; externally it has a dull yellow appearance, but breaks with a bright yellow fracture, and is often streaked internally with red. In its natural state it has no fragrant smell, but by the action of fire it diffuses an agreeable odour, resembling that produced by frankincense, instead of which, I believe, it has been used in the Roman Catholic churches on the continent. It exudes spontaneously from the trunk, in very small globules, and is found in very thin layers about the bases of the petioles of the leaves, but may be melted into large masses.

The resin (more commonly known as the gum acaroides) is slightly bitter, pungent and astringent, and has been used in dyspeptic, dysenteric, and other cases; but not with such success as to cause it to be admitted into our *materia medica*.

The floral beauties were profusely lavished, and the brilliancy and gaiety they impart to the

otherwise arid country during the full flowering season, are to be equalled but by few countries. The present season was later than usual, from the coldness of the weather continuing for a more advanced period of the year than had been experienced for many years in New South Wales. On our arrival the thermometer was lower than we had experienced it in 41° south latitude, or when passing the Cape during the winter season. During the remainder of the month of August, the range of the thermometer was min. 45° , max. 58° .

Besides the *Banksia*,* or honeysuckles, the *Boronias*, *Epacris grandiflora*, with its elegant pendent blossoms, and two species of *Kennedia*,† one bearing red and the other small blue flowers

* I remarked that the wood of a species of *Banksia*, (I believe *dentata*,) which was used for fire-wood, was of a beautiful red colour, and when split in a longitudinal direction displayed a curious interlaced appearance; it had an astringent taste when chewed, staining the saliva of a dark reddish colour, and I think it would be worth trying if a dye would be furnished by it.

† The *Kennedia* is called the "woodbine" by some of the shepherds in the colony, who use a decoction of its leaves as a lotion for scabby sheep, and they declare it is a cure for that disease; but their declarations of the curative properties of the plant is not borne out by the experience of others, who have found it quite useless as a remedy for that disease.

entwined over the shrubs in their vicinity ; the other golden and fragrant flowers of the *Acacias* (of which genus the colony possesses a large number of indigenous species) gave an additional beauty to the otherwise arid character of the vegetation ; the *Xylomelum pyriforme*, or wooden pear-tree, so called from its exceedingly hard woody fruits, is seen abundant in the vicinity of Sydney, several are seen from thirty to thirty-five feet in elevation, and two feet in circumference. A splendid *Bignonia* overspread the rocks, decked with its pendulous clusters of tinted blossoms ; and two large and parasitical *Dendrobiums*, in full flower, adorned the rough trunk of one of the eucalyptus tribe to which it had attached itself for sustenance ; and the different species of *Grevillea*, *Leptospermum*, *Pimelia*, *Lambertia*, *Crowea*, and a number of others, added to the animated appearance of the soil. On the north shore the shrubs and plants, now in full flower, were more abundant ; the arid soil was brilliant with the variety of tints emanating from them, combining to charm the eye with their beauty, but were destitute of that agreeable fragrance for which the flowers of European climes are so highly esteemed.

On the *Leptospermum* I remarked an insect, or rather the larva of some Coleopterous insect,

pending from a sprig and enclosed in a case of a woven substance, strengthened externally by bits of twigs ; the insect to which this larva belongs is unknown to me, nor have I been able to see it described in any entomological work ; the only publication in which I have seen it mentioned, is in the catalogue of the museum of the Royal College of Surgeons in London, part 4, fasc. 1. "Preparations of Natural History in Spirit," page 117, No. 438. "Larva of a Coleopterous Insect in its Case."

It attaches itself to the sprigs of shrubs, and, like the caddis worms, protects itself by a habitation from which it can protrude the anterior part of its body, being attached internally to its case by the tail, and by that means can feed and change its locality at pleasure, bearing its case with it, and re-attaching itself to any other place that may suit its habits ; thus I have had them moving about in my room, attaching themselves to one place, and then removing to another ; at first much to my surprise at their power of mobility, until I saw it was effected by the protrusion of the larva from its habitation. The case is composed internally of a very tough web, and the exterior is covered by bits of twigs interwoven upon it in a perpendicular direction ; it suspends itself from the twig by a strong cluster

of filaments. I have found this larva enclosed in its case of various sizes from three to six inches; this has led me to conclude that, like the caddis worms, they increase in size in the larva state, enlarging their habitations as the former ones become too small for the increased size of their bodies. I found, by cutting one of the cases open, that they readily repair any injury their dwellings may have sustained, for a few hours only having elapsed after I had made the incision to view the contained larva, I found the case restored as firmly as before.

In company with my friend, Mr. Lauga, I visited the colonial museum, which is arranged for the present in a small room, assigned for the purpose, in the council-house, and which had been recently established at Sydney: it forms an excellent nucleus for a splendid collection, particularly in a country so prolific in rare, valuable, and beautiful specimens of natural productions. For the present, the ornithological collection is by far the best, both for the number, and being beautifully stuffed and "set up" in attitudes, from which it is evident that nature has been closely studied. Specimens of the families Columbæ, Psittacæ,* Raptores, &c. are the most nu-

* Among the *Psittacæ* tribe is the *Psittacus Novæ Hollandiæ*, curious as being one of the parrot tribe, seen and

merous. There are also several of the mammalia, and reptiles of the colony in the collection.

But, in a country where specimens could be procured in the majority of instances in almost any number, it would be of great interest to the lover of science, as well as to the admirer of nature, and also considerably increase the value of the collection and the advancement of scientific knowledge, if, besides among the birds, the male and female specimens being preserved, any showing the changes of plumage, which so frequently occur in the feathered tribe from the juvenile to the adult age ; the nest and eggs, together with the skeletons, or any remarkable anatomical peculiarity, should also be preserved. The same system may be adopted with

mentioned by Captain Cook, but is a very rare species in the present known parts of the colony,—(it is, more correctly, a species of cockatoo, and which, I believe, Mr. Vigors has; or intends, to place in a new genus,)—and has not been seen even in those portions of the colony visited by Cook. The specimen in the collection, is one among a few of this species that was seen at Wellington Valley a few years since, during a prevailing drought, and since that period they have not been seen in that or any other known part of the colony. I heard at Yas Plains, that it was not uncommon at some seasons of the year to observe birds, before unknown to the colonists, appear, and soon after again disappear, and are, perhaps, never seen again until years after, and often not at all.

respect to other animals, reptiles, and insects, arranged each under the separate families and genera, so as, in a comparatively short period of time, to form as valuable a collection of Australian natural productions as has ever been collected in any part of the world. Native weapons, utensils, and other specimens of the arts, as existing among the Aborigines, as well as the skulls of the different tribes, and accurate drawings of their peculiar cast of features, would be a desirable addition. At the present time, such might be procured without much difficulty ; but it is equally certain, as well as much to be regretted, that the tribes in the settled parts of the colony are fast decreasing, and many, if not all, will, at no distant period, be known but by name. Here, in a public museum, the remains of the arts, &c. as existing among them, may be preserved as lasting memorials of the former races inhabiting the lands, when they had ceased to exist.

The botanical productions of the colony may also be kept in a dried state for reference, together with specimens of the woods in different stages of growth. Peculiarities in the economy of any of the animals might be preserved as wet preparations, and to the whole collection, systematically arranged, as well as the scientific, (or hard names,

as the ladies call them,) let also the popular, colonial and native names, be attached. The council has liberally granted the sum of two hundred pounds annually out of the colonial funds, for the support of the museum ; a hundred and thirty pounds of which is a salary to the collector and stuffers of specimens of natural history for the collection, and the remainder is expended for cases, &c. ; but encouragement should be held out for donations, as is usual in other public collections.* At all events, the commencement of the public museum is excellent ; and science, I believe, is indebted for its institution to the Honourable Alexander Macleay, colonial secretary ; and may he see it attain an importance which no one can enjoy or appreciate more than himself, who has devoted the leisure moments of a long and arduous life engaged in other important occupations, to the study of the natural sciences.

* It would also be desirable to have the cases made in such a manner, as to be opened if required, and a closer inspection of the specimens obtained, which is often requisite for scientific examinations. To George Macleay, Esq. the museum is indebted for many valuable species of birds, which he had collected during his arduous journey in the exploration of the course of the Murrumbidge river, in the expedition under Captain Sturt.

In company with my friend, Lieutenant Breton, R. N., I visited *Elizabeth Bay*, about two miles distant from Sydney, and the property of the Honourable Alexander Macleay. The situation is beautiful, being in a retired bay or cove of Port Jackson, and the garden and farm is near the sea. This spot, naturally of the most sterile description, has been rendered, at a great expense and perseverance, in some degree productive as a nursery for rare trees, shrubs, and plants, from all parts of the world. We were much gratified with the valuable and rare specimens the garden contained, and surprised that a spot possessed of no natural advantages should have been rendered, comparatively, a little paradise.

In the garden, a species of *cactus* was pointed out to me by the gardener, Mr. Henderson, which Mr. Macleay had brought some years ago from Rio Janeiro: it had flowered at the usual time, and they had changed into what had the usual external form of the fruit. On making a section of one, it had the usual fructual character, although in an immature state. I was, however, informed that the fruit never attained maturity, but became as one of the *branches*, blossoms being produced from it, which would again produce fruit, and that fruit would not

ripen, but again produce flowers, so continuing during the whole of the flowering season, without ripening any fruit, having consequently a curious anomaly of fruit producing flowers, instead of flowers producing fruit. It has always, during the time it has been planted in the garden, exhibited this phenomenon, which was never observed in the plant from which this was taken at Rio. It must therefore be considered as a curious anomaly in vegetation.

The greatest importer and manufacturer of New Zealand flax* in the colony is Mr. Maclaren. I visited his extensive establishment, which had just been completed on the north shore near Sydney, for the cleaning and manufacture of the flax into rope. He has also establishments at New Zealand, from whence he imports the flax, exporting some to England, and manufacturing

* Captain Cook observes, "Of this plant, there are two sorts; the leaves of both resemble those of flags, but the flowers are smaller, and their clusters more numerous: in one kind, they are yellow; and in the other, a deep red." This plant is also indigenous to Norfolk Island, which, in its vegetation, partakes more of New Zealand than the Australian continent. Captain Cook observes, that at Norfolk Island, "we observed many trees and plants, common at New Zealand, and, in particular, the flax plant, which is rather more luxuriant here than in any part of the country."

the remainder into cordage for the use of the colonial vessels. He has also a powerful hydraulic press, for the purpose of compressing the flax into bales for exportation. He manufactures from this material a large quantity of whale lines for the colonial whalers, who speak in high terms of the quality of the rope, for that purpose. The rope manufactured from this flax, takes the tar readily, and the small lines are passed through it previous to their being made into rope of larger size.*

* Captain George Harris, R. N., C. B., and member for Grimsby, in the present parliament, has recently been manufacturing rope and cables of the phormium tenax, or New Zealand flax; and instead of tar, substitutes a solution of gum, or some such substance, (principally, we suspect, the caoutchouc or Indian rubber,) by which, it is contended, the rope is rendered stronger, more pliant, and less liable to part in short bends, turns, or clinches, and being stronger, smaller ropes than those now in use will answer for ships' rigging; the consumption of hemp, of course, diminishes in proportion—we say hemp, because the solution will also impart to the hemp the qualities we have named. If, however, a substitute is to be found for hemp and tar, we are rendered independent of the Russian trade in these articles;—a most desirable object, should the state of Europe at any time involve us in a difference with that nation. The bogs and rough ground of Ireland, all our African possessions and West Indian islands, and New South Wales, are particularly adapted to the culture of the phormium tenax. Captain

As I hope the time is not far distant when its value will be more appreciated, and the prejudice, at present so much against it, will have diminished, I may perhaps be excused in giving an account of this valuable plant from my own observations during a visit to New Zealand.

This valuable plant is regarded by the natives of New Zealand as sacred, but is probably an object of veneration for its value in manufac-

Harris was here on Monday, and superintended the making of a $14\frac{1}{2}$ inch cable, which is to be tried on his Majesty's ship *Rainbow*. A trial is also to be made of the relative strength of the phormium tenax and hemp in this yard, in a few days, for which a piece of $14\frac{1}{2}$ inch cable has been expressly manufactured. The price of hemp per ton is £38; that of the phormium tenax £28. Of the experiments that have been made at Woolwich, by order of the Admiralty, the following are the results:—

	T.	cwt.	lbs.
A $4\frac{1}{2}$ inch rope of the old sort broke at a strain			
of.....	3	8	40
4 inch phormium, with the solution.....	5	10	0
4 inch bolt rope, Italian yarns, present sort....	4	15	0
4 inch ditto, with the same yarns, with the pre- serving solution.....	6	8	56
4 inch common rope.....	5	7	56
4 inch hempen rope, with coal or mineral tar..	3	7	56
4 inch phormium, with the solution	5	16	70

The strongest proof is thus given of its strength. Its power, however, to resist wet, and its durability, are yet to be ascertained.—*Hampshire Telegraph*.

tures, as it is neither employed in religious or other ceremonies. It grows principally in moist, **marshy** soil, but I have also observed it growing on the declivities of hills. The leaves are ensiform, of a bright green colour, with a rim of orange along the margin: the foliage attains the elevation of five to seven feet, and resembles in mode of growth our water flags: the flower stalk rises to the elevation of four or five feet beyond the foliage, and bears a profusion of liliaceous flowers of a reddish yellow colour, succeeded by triangular capsules, filled with numerous oblong, flattened, black seeds. The leaves grow perfectly erect, but are figured incorrectly in Cook's first voyage, and other works, as they are delineated bending towards the ground, which from their rigidity they are, unless broken, unable to do. The flax procured from this plant is situated (unlike all other kinds with which we are acquainted) in the leaves, where the fibres run in a longitudinal direction, covered by the epidermis. There are several varieties of it indigenous to New Zealand, from some of which the flax is procured of much finer quality than others. I collected much finer specimens of the flax from the vicinity of the River Thames, New Zealand, than from the Bay of Islands.

The flax is used by the natives of New Zealand for a variety of purposes ; from it they manufacture very strong fishing-lines, and also a variety of handsome and durable mats, which are used both by males and females for clothing. The method adopted by the natives of New Zealand, for the separation of the fibre from the other parts of the leaf, is as follows :—The leaves, when full grown, are cut down, the most perfect selected, and a lateral incision is made with a shell on each side of the leaf, so as simply to cut through the epidermis ; the shell is then, with a gentle pressure, drawn from one of the incisions rapidly down the leaf, and is afterwards repeated on the other side ; by this, the whole of the external epidermis is readily removed ; the internal epidermis, which is of very thin texture, usually remains, but sometimes it is in the greatest part removed together with the external : the internal seems to unite the fibres of the leaf more intimately together, and if not cleaned from the flax when in a recent state, is removed afterwards with great difficulty ; and when it is suffered to remain, renders the flax less valuable as an article of commerce.

In the preparation of the flax, as well as in the manufacture of it into matting, the females

are employed, and custom renders them very expert. Before, however, the flax is manufactured into matting, it is previously soaked in water, and afterwards beaten, by which it becomes more pliable and soft. The plant is named *koradi* by the natives; and when the flax is prepared, it is named *muka*. This plant alone would render New Zealand a valuable colony to the British nation. At present the flax is used in England only in the manufacture of cordage, &c. ; but if the best varieties, indigenous to New Zealand, were selected, (for they differ materially in the fineness of the fibre,) and proper care and attention bestowed on the cleaning, when in a recent state, it may, there can be no doubt, be employed in the manufacture of linen of very fine quality.

Previous to being used for cordage, Mr. Maclaren has the flax well hackled, which materially improves its quality and appearance: could it be exported in this improved state, it cannot be doubted that much of the prejudice now existing against its use would be removed; for the epidermis of the leaves being entirely removed when the flax is well cleaned, the fibres will, as a matter of course, unite closer together, affording a united and stronger resistance; but Mr. Maclaren informs me that

the expense attending the hackling in this colony would not repay him at the price the material at present obtains in England, or even were it to advance to its former high price.

At present this gentleman cannot manufacture cordage at a less price than a ship from England could bring it out as stores, but still at a lower rate than the Europe cordage sent out on freight for sale ; in the colony it is therefore cheaper to colonial vessels, and is found very durable. It has been used three years and upwards as running gear for shipping, and highly approved of ; from the flax having been sent home in an uncleaned state, it has been rendered almost unsaleable, and gave an opportunity for those prejudiced to depreciate its value. From the natural indolence of the New Zealanders, it is difficult to procure the flax from them in a better dressed state, until some of them are taught the art of hackling it, which would be advisable to be done immediately. To attempt to clean the flax from the epidermis in any but during the recent state, is a labour of difficulty, from its close connexion with the fibres, by which a great loss in weight would necessarily be sustained.

Captain P. P. King, R.N. (who may be considered high authority,) when on the survey of

the Australian coast, used rope manufactured from this flax, and he commends it highly for running rigging. I was also informed by a mercantile gentleman, that from its unclean state (as well as from bending the fibres in packing, by which the edges decaying, the length of staple is diminished one-half) it has become quite unsaleable at home, and the opposition to it by the Riga flax importers tends still more to crush it, the badly cleaned state of the flax giving them a strong ground for its condemnation.

On the 9th of September I left Sydney, with the intention of calling on my friends in the vicinity, and then proceeding into the interior of the colony. I passed an agreeable day with the amiable family of Major Lockyer, at his pretty residence at the Field of Mars, near Kissing*.

* The following was mentioned to me as the origin of the name given to this point. Governor Phillip, at an early period of the colony, formed a pic-nic party to proceed up the Paramatta river, and a person was sent on before to prepare kangaroo steaks. They landed at this point, and having regaled themselves, the gentlemen, following the maxims of John Hunter, laid down upon the grass, and aided digestion by falling asleep; the ladies finding themselves deserted began to propose winning gloves, and therefore kisses were taken, and on their awaking the forfeit was demanded, and of course not refused. Before leaving the

Point, and situated upon the banks of the Paramatta creek or river.*

After an agreeable day's sojourn I left for Paramatta, calling at the "Vineyard," the residence of Hannibal M'Arthur, Esq. The habitation was delightfully situated on the banks of the Paramatta creek, or river. His gardens, annexed to the house, were extensive, and richly stored with many valuable shrubs and plants, and a brilliant display of hyacinths, anemones, jonquils, and other annuals, usually the ornament of our gardens, brought forcibly to our minds the recollection of our spring and summer seasons at home. Salt provision becoming an article of colonial export, Major Lockyer, Mr. H. M'Arthur, and many other gentlemen, settled in, and possessing large estates in the colony, are profitably employed in salting provision, both for the commissariat department of the colony, as well as for exportation. The Liverpool is preferred by some to

place the governor wished some name to be bestowed upon the point, and one of the ladies being requested to do so, in consequence of the occurrence just mentioned, named it "Kissing Point."

* This creek, commonly called the Paramatta river, is a creek or inlet of the sea from Port Jackson; the true river, which is very small, falls into this creek at Paramatta.

the salt of colonial manufacture, from its being of a stronger quality.

The woods in the vicinity of the "Vineyard" abounded with numerous plants of the *Orchideæ* family, growing in a very barren soil. One of these, that has received the colonial appellation of "*native hyacinth*," was just developing its beautiful cærulean blossoms, and another its flowers of a bright yellow, spotted internally with brown. These latter *Orchideæ* are named "*boyams*,"* having their bulbous roots filled with a viscid mucilage, which renders them an article of food among the aborigines: they are also sought after by the colonial children, who are fond of collecting and eating them; the little creatures would readily recognize their favourite "*boyams*" among the specimens I had collected. The Emu flowers, (*Richea glauca*,) were now abundant, and in full blossom; the colonial appellation has been given from the emus feeding upon them, that is, when emus were to be seen, for they have been driven by encroaching settlements far into the interior of the colony, and before long an emu will

* *Boyams* are the roots of different genera and species of the *Orchideæ* family; some are called, by the colonists, "double or single *boyams*," according to the appearance of the roots, and they all form an article of food among the aboriginal tribes.

be as great, if not a greater rarity, at Sydney than in England, for in the latter country I am happy to see they are endeavouring to, and I hope will, succeed in breeding them.

The acacias (of the species *floribunda* and *fillifannilius*) were abundant, and covered at this season with a profusion of delicate golden flowers, imparting to the otherwise sterile aspect of the woods, a gay and animated appearance, as well as diffusing a grateful fragrance around, wafted by the gentle breezes to a still greater distance; their drooping branches, thickly studded with pending clusters of blossoms, decorated the sides of the roads, gardens, barren plains, and banks of rivers, being the only trees that at one period of the season bestowed some life to the usual uninteresting character of the scenery, at some parts aided by other flowering shrubs in full blossom, among which those of the *Epacridæ* family were most profuse.

Paramatta is a pretty village situated in a vale, and has some well-constructed public buildings—as the government-house, orphan-school, commissariat stores, female factory, &c. The situation of the village renders it exceedingly sultry during the summer months. The government-house is well-situated, and the building is of neat construction; the grounds

about it are well laid out, and it has become the favourite residence of the present governor ; and when compared to the government-house at Sydney, well merits his choice.

Swallows were numerous at this season of the year, and were now busily engaged in constructing their nests under the eaves of houses ; the nests differ from those of the European species, in having a bottle-shaped neck.

I had no opportunity of ascertaining whether the species were the same ; but from casual observation I should think they were different. When these little birds are not in the vicinity of the dwellings of man, they construct their nests in the hollow trunks of trees, or under overhanging rocks, but always seem to prefer the society or protection of the human race : many are seen busily engaged in the construction of a nest, forming a “ co-operative society ;” when the nests are constructed in a situation about the dwelling, where, being built of mud, the appearance is unsightly, they are frequently knocked down ; but this will not deter the industrious little creatures from re-building in the same situations, until, being repeatedly destroyed, they are obliged to seek for another place of refuge.

CHAPTER IV.

Road from Paramatta to Liverpool—Dismal appearance of the uncleared land—Liverpool—Arrival at Raby Farm—The opossum—Prisoners and free men—Advantage of being sentenced to an iron gang—London pickpockets converted into shepherds—Suggestion with regard to the convicts—Leave Raby—Mr. Jones's farm—Cultivation of the vine—Sameness of the forest scenery in Australia—Lose our way—Journey resumed—Gloomy appearance of the Australian vegetation—The tea tree—Colonial farms—Emu-ford—Blue Mountain range—The Pilgrim Inn—View from Lapstone Hill—Variety of flowering shrubs—A beautiful garden—Road over the Blue Mountains—Picturesque prospects—A mountain station—Bleak air of the place—Our supper.

ON the 13th of September, I proceeded from Paramatta to Raby farm, near the cow pastures, (distant twenty-one miles from Paramatta,) at that time the residence of my friend Mr. Dutton. The road from Paramatta to Liverpool was in excellent condition, but the land on each side was for the most part uncleared; and, being

covered by dense forest trees, had a very sombre character. A few trees of the "green wattle," (*acacia decurrens*,) profusely covered by golden blossoms, and occasionally a cleared verdant space, alone gave anything like animation to the scenery.

The uncleared land has a dismal appearance ; the huge blue gum, stringy bark, box, and iron bark trees, (all of the *Eucalyptus* genus,) rose from the thick bush which surrounded their bases, to a great elevation. On arriving at the small village of "Liverpool," after a ride of nine miles, but little cultivation appeared ; the forest-trees and brush still kept their place, except that a few "runs" were becoming cleared. "Liverpool" is only a scattered village, containing some neat houses ; the colonial hospital is a very splendid building ; and the church, which has a tower and clock, is a small but neat brick building.

After passing this neat little village, several farms, with cleared and cultivated land about them, were seen, affording some relief to the dismal character of the Australian jungle. The "green wattle" trees, loaded with blossoms, were abundant, attracting numbers of beautiful insects. This species of *acacia* is valued as well for its beauty as for the utility of the bark in

tanning. It is of rapid growth, but seldom survives more than four or five years.

I arrived at Raby at noon. This farm is the property of W. Riley, Esq.; it is a large and very valuable estate, principally used as a sheep-run; and there are several fine breeds of these very valuable animals. The estate also possesses several acres of arable land, and much more capable of cultivation for grain, &c. but not yet used for that purpose.

Here I had an opportunity of seeing the common opossum of this country, (*phalangista vulpina*,) one a young female, and the other an old male specimen,* (the “young feller” and “old

* The dimensions of the large specimen were as follows :

	Feet.	Inch.
From the vertex of the head to the tip of the tail	2	3
Breadth across the shoulders	0	3
Length of the tail	0	11½
Breadth of the loins	0	3⅞
Length of the fore-leg to the claws	0	6⅝
hind-leg to do.	0	7⅜
Length of the head to the snout	0	4
Length of the ear	0	2½

The tail is naked underneath from its extremity to within five inches of the base, and is prehensile.

The colour of the male specimen was greyish; a short fine fur covers the back, being also continuous of the same colour to within four inches of the tail; after which the fur becomes longer, more glossy, and of a black colour; the fur on the

feller" of the blacks.) When the aborigines observe marks of the animal's claws upon the bark of a tree, they ascend and search in the hollows of the trunk, drag the creature from its place of concealment, (where it remains during the day, feeding at night,) and killing it, convert its carcase into a meal to satisfy their appetites; indeed, even when the blacks have been well fed by the settlers, they seldom refrain from ascending after an opossum, if they observe recent tracks of one on the trunk of a tree, which their keen vision soon enables them to do. The stomachs of these animals were distended with clover, grass, and the young leaves of the eucalypti trees. The odour which emanated from their bodies during dissection was of that camphorated kind which might be expected to pro-

abdomen was of a yellowish white colour; near the feet the fur is short, of a dirty yellow colour, with brownish patches; the colour is similar under the chin, throat, and angles of the jaw; the upper part of the ears is nearly bare; the thumbs of the hind feet have no claw, but the fore-feet are pentadactyle, and armed with sharp claws; the four toes of the hind-feet are also armed with claws, the first dividing into two phalanges, each having a claw. The young specimen differed from this only in having a yellowish tinge mixed with the grey over the back, legs, and abdomen; angles of the jaw and throat of a brownish yellow; the under portion about the eyes and upper part of the head of a yellowish colour.

ceed from their feeding on the foliage of those trees which are well known to possess that peculiar smell. The fur of the opossum is used at Sydney by the hat-manufacturers, and may be likewise valuable for other purposes; the natives spin it, in their rude manner, into small cord, from which they manufacture their bags called netbuls.*

The opinion which appears generally to prevail, that prisoners of the crown are placed in the colony in a better situation than free men, there is too much reason for regarding as correct. They are well-fed and clothed, take good care to be never overworked, and have an hospital, with the best attendance, when sick. An assigned servant or convict may be correctly defined as an individual who is well fed and clothed—in-solent and indolent—and takes care that the little work he has to perform is badly done. When sick,

* The Hobart Town Colonist of Oct. 12, 1832, contains the following paragraph respecting the capability of the opossum fur being used in manufactures.

“We have been favoured with the sight of a pair of mittens spun and knit by Mrs. M’Kenzie, of the Lower Clyde, from the *fur of the opossum*. In texture and appearance they very much resemble the best sort of Angola mittens, but to us they appear of superior quality. The pair that we saw are now in the possession of Mr. Gordon, of Forcett, to whom they were presented by Mr. M’Kenzie.”

which often proceeds from lying idle too long in the sun, he walks to the hospital ; and, from the exertion, together with the thoughts of “ bleeding, blistering, and physic,” he soon recovers, and returns to his master, to again undergo the fatigue of doing little or nothing. One of these characters applied for his ticket of leave, but soon returned, wishing again to be employed by his former master, if only for his food ; at the same time observing, that he was better off before, in bondage, than he was now, partially free—so his fellow servants persuaded him to send the ticket back, and say, “ *it was all a mistake.*”

The following anecdote may serve to illustrate the *misery* an iron gang occasions to spirit drinkers. A convict was once weighed by his comrades, and the weight at that time marked with chalk upon the barn door. A short time after this took place, he was sentenced for an offence to an iron gang for six weeks. After the term of his punishment had expired, and he returned to his master, he was observed to be in a stouter and more robust condition than before ; his comrades again weighed him, to see what he had gained in flesh, if not in any moral benefit, by his punishment ; when it was ascertained he had gained twenty pounds. As this man had,

when on the farm, been continually toping, and as, when with the iron gang, he had no opportunity of continuing his potations, that circumstance may have occasioned his increased good health and condition. This may be a hint, therefore, to send all the sick whose illness may arise principally from habitual drunkenness, instead of an hospital, to an iron gang for a short period.

The London pickpockets are considered to make the best shepherds in the colony, as it suits their naturally idle habits; the industrious labourer cannot endure the very wearisome and lazy employment of looking after sheep; the petty larcener soon gets attached to his woolly charges, and the sheep, no doubt, by a natural instinct, to him; and thus the animals are tended with some degree of care; but the regular workman, detesting the occupation, (unless incapacitated from a more active employment, by age or accident,) seldom takes any interest in the valuable property entrusted to his care; the former are, therefore, to be preferred. The shepherds, when tending their flocks in the pasturage, wile away their leisure time by manufacturing coarse but durable straw hats.

There is, no doubt, much truth in the re-

mark I have heard in the colony, that some of the lower orders contrive to get government servants assigned to them, ostensibly for the purpose of cultivating the soil, but in reality to assist in plundering. This may also be inferred from the very limited means they can otherwise have for procuring a livelihood. As a veil to such practices, and to lull any suspicion that might be created, they dig, and plant a few potatoes and other vegetables, in a small spot of ground, laid out near their bark residence, as a garden ; and the crown prisoners are procured ostensibly to assist in cultivating this “ bit of earth ;” and thus the vegetable garden affords a cloak to many crimes.

Convicts ought (if by transportation any punishment is intended) to be sent, according to the nature of their crimes, to the whole of our colonies, whether in the East and West Indies, coast of Africa, &c. &c. solely for the purpose of being employed upon the public works, and free emigration to be encouraged to Australia, Cape, &c. on a very extended scale. The influence of the emancipist class of the New South Wales population is great, and they are also possessed of great wealth. As wealth is one degree of power, they must be regarded both as an influential and powerful body. There is also that

system adopted, which is much to be regretted. I allude to no distinction being made between those banished for trivial offences, and those who have committed deeper crimes. Many atrocious characters are assigned to persons of the highest respectability, well clothed and fed; and from them often have I witnessed most unbounded insolence: so that a stranger would imagine the master to be under obligations to the servant, and would be astonished when told that the servant was a convicted felon.

On the 17th of September, I left Raby, in company with Mr. Henry O'Brien, for the Yas country, intending to visit several parts of the Bathurst district by the way. Our mode of travelling was on horseback. We passed "Fleurs," (formerly Baily Park,) the property of R. Jones, Esq.: it is a neat farm, with extensive sheep runs; and several suitable spots of land were in progress of being laid out as vineyards. The vine having now become an object of cultivation over most parts of the colony, and the prolific bearing of fruit* in a very short

* Besides the vine, other fruit-tree cuttings blossom and even bear fruit in a very short period of time. I saw a peach cutting, in a garden near Sydney, about six inches long, which had been planted only ten days, and was covered with a profusion of blossoms.

period of time after the cuttings have been planted evidently proves that the Australian soil is extremely suitable for its cultivation.

From the sameness of the forest scenery in this colony it is difficult even for one endowed with a large development of locality in his cranium to regain the right path, on making a deviation, in however slight a degree, from it. As we, for a short time, were in this predicament, it afforded a practical instance of what I had only heard before, as sometimes occurring: we, consequently, did not arrive at "Erskine Park" the residence of Mr. Campbell, until two P. M., who received us in the kindest manner: this was an agreeable farm, and the view from the mount near the house was extensive and beautiful.

After a short rest and refreshment, we resumed our journey, passed a neat farm, belonging to the Reverend Mr. Marsden, and, coming upon the western road, crossed it, and, taking a bush path for a distance of probably four or five miles, passed the cottage and extensive farm belonging to Captain P. P. King, R. N., and, two or three miles further, arrived at a gate, which had near it a board requesting persons passing to "shut the gate, and oblige John Harris." This, after having attained with our horses the other side of the gate, we acceded to, and, passing "Shute

Park," the property of Dr. Harris, we arrived, late in the evening, at Clydesdale," the farm of Mr. Tompson, where we remained for the night, heartily tired, after a sultry ride across the country of thirty-five miles.

The great deficiency of animation in the Australian vegetation, except when in flower, casts a gloom over, rather than exhilarates the mind of the traveller, producing none of those mental delights which the liveliness of the vegetable kingdom, combined with picturesque scenery, excites in other countries. As the traveller journeys through the Australian forests, there is a sameness, which creates a degree of melancholy feeling, excepting when the *Angophora lanceolata*, or apple-tree* of the colonists is seen, when its more verdant foliage and elegant growth imparts some degree of animation and beauty, particularly when contrasted with the other forest trees about it. When we came upon a cultivated spot, where the young wheat was springing up, together with the lucerne fields, it formed a smiling feature in the landscape, and a most agreeable relief from the sameness of the bush of New South Wales.

* The box-tree of the colonists (*Eucalyptus, sp.*) is used in the colony for the spokes and felloes of wheels, and the "apple-tree" (*Angophora lanceolata*) for the naves.

The *Melaleuca*, or tea-tree, was very abundant in some parts of the forests, attaining the elevation of thirty-five to forty feet, and a diameter of nearly two feet : the bark is nearly as smooth as velvet, and, like most of the Australian trees, is deciduous : the wood is stated to be very durable, and, the leaves being formerly used as a substitute for tea, it still retains the name of "Tea-tree" among the colonists. There is sometimes much difficulty experienced, when travelling through the wild Australian country, in finding the habitation to which the traveller may be proceeding ; for, until he may be close upon it, or a patch of cultivation peeping through a small opening in the dense forest directs him to the farm, as the cultivated land is usually near the house, or, at all events, no great distance from it, he may wander very far from his destined resting place even after having been close to it without its being visible. The remainder of the estate is used as "runs" for sheep or cattle ; but in this country (Cumberland) there are but few sheep-runs, as the proprietors of the estates have, for the most part, "runs" from seventy to two hundred miles inland, where the sheep have better pasturage, and there is more facility for washing the fleeces, during the shearing season. About Clydesdale farm, as well as other estates

in the vicinity of this part of the country called the "South Creek," there are patches of a fine red clay soil, which has been found very productive when laid out as vineyards.

On the following morning we left Clydesdale, retraced our path, came upon the western road, and, continuing our journey, passed Penrith, and arrived at *Emu Ford*, close to which a very handsome and well-furnished inn has recently been erected. Having crossed the Ford (a part of the Nepean river) in a punt, we were on the Emu plains. The appearance of these fertile plains, situated at the base of the commencement of the Blue Mountain range, was very beautiful. The weather had been stormy and showery, but, at this time, the squall having passed away, the sun shone with brightness upon the green fields on and about the Nepean river; and the neat-houses, scattered profusely about this charming spot, produced a very pleasing landscape.

At this part of our journey, we were joined by Mr. Edward Cox, of Mulgoa, who, travelling partly in the same direction as ourselves, had agreed to accompany us. We ascended "Lapstone Hill," where the road commenced over the extensive Blue Mountain range, and soon after arrived, in a heavy rain squall, at the *Pilgrim Inn*, where we enjoyed, from the bleakness of

the weather, a blazing wood fire and an excellent dinner. The view from *Lapstone Hill*, on gaining its summit, was very splendid : a large extent of country appeared from this elevated site : the Nepean river was seen winding its course through lands rich for pasturage, as well as in the cultivation of grain. During the harvest season, the prospect must be much increased both in richness and beauty. The situation of Windsor was pointed out ; but a haze being over the distant village, the houses were not distinguishable. *Regent Ville*, the beautiful residence and farm of Sir John Jamieson, was included in the view.

About this place there was a great variety of flowering shrubs, among which the *Dianella cærulea*, and a variety or species with white flowers, were abundant ; but the season (particularly on this bleak range) was not yet sufficiently advanced for Flora to distribute all her beauties, without the bright sun to enliven them. The rapidly advancing summer will, however, soon strew the earth with a thicker carpeting of floral beauties, which the earlier spring about Sydney had already brought forth in such an infinite profusion. It is difficult to eradicate from our minds early impressions ; thus we find those who have been accustomed to regard plants from foreign climes, nursed in the conservatories at

home, with a certain degree of veneration, even here still retain their former feelings towards them ; until by a residence in a country where they constantly meet the eye, and from their profusion, become annoying weeds, early impressions pass away, and they are regarded as valueless because common. Thus we may say it is with mankind, both in a civilized and savage state of society ; most things are estimated for their rarity.

I recollect, when at the Cape, riding to Constantia ; on the road, flowers gay and magnificent in colour, were passed, and I thought there would be no termination either to their number or variety. On arriving at that little paradise of nectar, an invitation was given me to view the garden. I accepted it with pleasure, thinking that many rare specimens of the Cape Flora would now be laid before me ; but such an expectation, was not, however, to be realized. The beautiful and fragrant rose, the simple pink, or the brilliantly coloured carnation, the sweet scented scabious, the mignonette, and the *Digitalis purpurea*, or Foxglove, (which latter having flowered for the first time in that country was held in very high estimation,) as well as many of the hybrid productions so abundant in Europe, were alone prized here ; the others, so much

admired by the stranger, were regarded only as weeds. All this, however, thought I, on reflection, is perfectly natural; here, our plants are rare, and theirs, worthless to them, are new to us, and, consequently, nursed with care in the green-houses at home. But a lady just arrived from England at the Cape, could hardly be persuaded that she might gather the flowers seen growing in such profusion and beauty around, and which she was accustomed to regard as exotics at home.

The inns in the Australian colony are neat and elegant, well supplied, and charges very moderate. We left the "*Pilgrim Inn*" about three o'clock, P.M., and proceeded on our journey through an excellent road over the Blue Mountains, which is formed upon a dividing ridge of this mountainous range; on each side thick forests, deep romantic glens, occasionally enlivened by beautiful flowering shrubs, formed the landscape scenery around us. After passing a great number of "forest oaks," (*Casuarina torulosa*,) whose dark green filiform foliage had a peculiar appearance, and "turpentine trees,"* (*Tristania albicans*,) which lined the sides of the road, and extended into the interior of the

* The "turpentine tree" attains the elevation of from sixty to ninety feet, and a diameter of three feet.

forest, intermingled with other trees and shrubs, we reached "Springwood," at which place a corporal's guard was stationed, principally for the purpose of escorting prisoners attached to the iron gangs from one station to another.

As we made the gradual ascent of this mountainous but excellent road, the scenery began to develop itself, until the prospect before us had assumed a romantic and in a high degree picturesque appearance : there was a distant view of the Appin, Windsor, and other districts, like a *sea* of country in the distance ; near us were wild deep-wooded glens, to the bottom of which the eye could not reach. On another side were mountains heaped on mountains of various forms, and for the most part densely wooded, all combining to form a landscape of a grand and impressive character. There was, however, a deficiency of water in the view, an element which adds so much to the natural beauties of all landscape scenery ; by its presence the picturesque as well as fertile appearance of the country would have been much increased. The atmosphere upon this elevated range was colder and bleaker than we had experienced on the low land ; it seemed as if we had been removed to another climate, and the wind, which blew fresh, was so piercingly cold, as the sunset approached, as to render our warm cloaks of much service.

As we advanced on our journey, by the continued gradual ascent, the cold increased; even the shrubs had a stunted and miserable appearance, which gave a desolate aspect to the country about us, indicating a great difference of climate in this spot in comparison with the lower part of the range from whence we had departed only a few hours before. The sun-set brought a still keener air, and with joy we hailed the bridge and habitations of a station called the "Weather-boarded Hut," our place of rest for the night, and a termination to our journey of thirty-six miles this day. On hearing the tramping of our horses, the door of a neat little inn (which now supplied the place of a rude bark hut) was opened for the travellers, and a blazing fire cheered us by its appearance in this desolate-looking spot.

It was not long before we were happy to find ourselves seated in the warm room, and busy preparations making for our supper, for which we were prepared, as we found that "the keen air is a marvellous provoker of appetites;" and as, when seated snugly within this dwelling, we heard the cold wintry blast, which in this elevated region is felt through the greater part of the year, passing in gusts, we congratulated ourselves on **the** contrast we experienced in our

present comfortable situation. The "Weather-boarded hut" is a military station for a serjeant's guard, placed to escort prisoners of road and iron gangs, as they are removed from one station to another. It was formerly very unhealthy for the troops, occasioned by the bad construction of their habitations, and the bleakness of situation ; but since more commodious dwellings have been erected, fully capable of resisting the severity of the weather, it has become more healthy.

We enjoyed a plentiful supper of tea, toast, bacon, eggs, &c., but there was no milk ; the excellent reason given for its absence being the death of the cow a few days previous, not that I was surprised at the animal's death, but only how any living creature could subsist even for a few days in such a place. When we asked our attendant why he did not get another cow, he replied, " Because it would not survive long !" No wonder, thought I ; for where in this desolate place could sufficient provender be found for the unfortunate beast to sustain life ?

After seeing our horses fed, and placed in a warm and comfortable stable, with a good bed for the night, (for in the stables at the colonial inns, horses require as much to be looked after when travelling as at home, for ostlers are in this country much of the same species, or per-

haps a worse genus, having similar peculating habits,) we retired to our beds, and slept soundly, in spite of the strong gusts of wind which swept furiously by our little dwelling.

CHAPTER V.

Our journey resumed—The new road—Road-side flowers—Blackheath—The pass through Mount Vittoria—Talent and perseverance of Major Mitchell, the surveyor-general—Appearance of an iron gang—Leave the Blue Mountain range—Arrive at Collet's Inn—Resume our journey towards Dabee—New line of road—Aspect of the country—Arrival at Mr. Walker's farm—Residence of Mr. Dalhanty—Huge mounds of clay—Blackman's Crown—Gum-trees—Bush travelling—Encamp for the night—Caution to travellers—Cherry-tree Hill—A deserted station—Encampment of Aborigines—The musk duck—Produce of Mr. Cox's dairy-farm—Mount Brace—Infanticide—Custom of native women, relative to their dead offspring—Native practice of midwifery—Animal called the Cola—Belief in the doctrine of metempsychosis.

ON the following morning, about seven A.M., after a good night's repose and an excellent breakfast, we resumed our journey ; the air was keen, but not so piercing as on the previous

evening, and the sun shone brilliantly. The road we had passed, and the one we were still upon, are excellent; the new road is a great improvement. From what I had an opportunity of occasionally seeing of the old one it must have been wretched, and the great surprise was how vehicles could have passed it in safety; some parts, however, of a better character, were incorporated with the new road.

As we proceeded flowers again began to deck the road-sides, and the “*Warratah* or *Tulip-tree*” (*Telopea speciocissima*) now made its appearance in great abundance: the buds with which it was covered were not yet, however, sufficiently expanded to display the splendid crimson hue of the blossoms, which make it, perhaps, one of the most elegant and splendid flowering shrubs indigenous to the colony. The *Acacia taxifolia* was abundantly in flower, and diffused a delightful fragrance. The scenery, as we proceeded, increased rather than diminished in its grand and romantic character. At one place we passed a large quantity of a species of *Eucalyptus*, called the “mountain ash” by the colonists, and saw-pits had been erected near the spot for the purpose of cutting it into planks, it being much valued for shafts of gigs, as well as for other purposes, in which the wood

can be better applied than any other kinds of the colonial timber.

We passed an inn, erected on a spot not unappropriately called "Blackheath," and it was truly a dismal, bleak-looking place. After riding a distance of fourteen or fifteen miles, we turned off to the new road, nearly completed, but not yet thrown open to the public, passing through Mount Vittoria, so as to avoid the steep and stupendous pass of "Mount York."* It would be well worth the trouble of the traveller to view both passes, by which he will be enabled to judge of the value that must be attached to an undertaking that ought to confer immortality on its projector and engineer, Major Mitchell, the surveyor-general of the colony. He will then appreciate the immense labour that must have attended the formation of a road through "Mount Vittoria," which was always considered impracticable until the present highly-talented surveyor-general, surmounting all the difficulties, against both public and private opposition, showed what talent and perseverance can attain, and how superior minds can overcome the prejudices of ignorant or self-interested individuals. He has thus given to the colony a road, which,

* Mount York, according to Oxley, is 3,292 feet above the level of the sea.

considering its peculiar situation, is not at present, nor perhaps ever will be, equalled.

Although not entirely completed, we were enabled to pass over it on horseback ; (by leading our horses over one small unfinished portion of it;) the descent is gradual, and the solid rock of " Mount Vittoria " had been cut through in the formation of the road, a most laborious undertaking, as a great portion of it consisted of a kind of freestone. A large iron gang was still employed upon it, in order, as soon as possible, to throw it open to the public, as forming a portion of the splendid new line of road over the Blue Mountain range to Bathurst.

The iron gang employed upon this pass was just leaving for dinner when we passed, so we availed ourselves of the opportunity to visit the barracks, to see them mustered, and the messes served out. The clothes of these men were in bad condition, from the quarry work, in which most of them were employed ; but as far as their personal state was concerned, they appeared plump and thriving. The barrack was a temporary stockade, in which the bark huts were situated, and around these a barricade was erected, outside which sentinels were stationed. It was miserable to see these men in so degraded a state, who, banished for crimes from their

native land, subject themselves to a second punishment, when, by good conduct, they could become, not only useful members of society, but attain independent and comfortable circumstances for life.

Having left the Blue Mountain range by this splendid pass, the features of the country were not found to be materially changed, excepting the occasional appearance of granitic masses, and several trees and plants not seen on the Sydney side of the range. One species of *Banksia* was very abundant, its foliage resembling that of the rosemary, (*B. rosmarinifolia*?) and the subgenus of the *Eucalyptus* with white and opposite leaves, which contain a large quantity of camphorated oil, was now abundantly seen, as well as *Lobelia*, *Gnaphthium*, and other flowering plants. At noon we arrived at Collet's inn, where we refreshed ourselves and horses, after a long ride of twenty-two miles from the "Weather-boarded Hut."

About two P.M. we proceeded on our journey to visit "Dabee," an estate, the property of our travelling companion, Mr. Edward Cox. The road we had to pass was not of the most agreeable description "either for man or horse," having a descent into deep vallies, and a corresponding ascent up steep acclivities; but, fortu-

nately for travellers, Major Mitchell is again at work with his gangs, and a road, in spite of all obstacles, is rapidly progressing; avoiding all the rough places we had now to pass, and also affording a more direct as well as pleasing route. To myself and fellow-traveller, the observation of, "We shall soon pass over some of Major Mitchell's line of road," was a certainty, as far as it might be completed, that it would be good, and the result always verified the correctness of the opinion we formed on this subject.

The country around us abounded in granitic masses, but its features were not interesting, having the usual dismal character of the Australian bush. We passed several rivulets, (or creeks, as they are called by the colonists,) and the little streams, similar to those seen meandering through our fields at home, are in this country dignified with other larger streams by the appellation of rivers. Of the feathered creation, loris, parrots, and white cockatoos, as also the small green parrots with red heads (*Psittacus pusillus*, *Lath?*) were seen in great numbers, and flew away screaming on our approach. At six P.M. we arrived at "Wallerowang," the farm of James Walker, Esq., (after a journey of sixteen miles,) and were kindly received by the persons in charge during the absence

of Mr. Brown, the overseer, and took up our abode in the little cottage for the night. This estate appears, as far as I could judge from a casual view, to have few attractions from its locality, or value from capability of cultivation. The sheep are kept at a station called "Looe," which is nearly fifty miles further distant.

After an early breakfast on the next morning (September 20th) we resumed our journey. The atmosphere was cold, and the season was considered by the settlers more backward than usual this year. After riding six or seven miles we reached "Cullen Bullen," the farm and residence of Robert Dalhanty, Esq. The situation is picturesque, but the land was stated not to be of an excellent description. The cottage (to which a neat garden was attached) displayed both in its exterior, as well as its interior adornments, a degree of taste and neatness, which was sufficient to acquaint the visitor that the more gentle and amiable sex had secluded themselves in this place. After an agreeable but short stay, we continued our journey through a very uninteresting country. During the journey I observed the "black wattle-tree" (*Acacia melanoxylon*) growing abundantly, sometimes on the declivities of the hills, and also in swampy situations. Several species of *Acacias*

were in flower, some merely small shrubs, while others had attained the size of large trees ; but the whole being in full bloom, bestowed a pleasing appearance upon the otherwise dull scenery. These were as yet the only trees which we had seen in full blossom, and indeed every twig was so thickly studded with fragrant flowers of golden hue, as almost to conceal the foliage, proving sources of attraction to a multitude of insects which revelled in the sweets they contained.

Occasionally, among the trees or bushes, a huge mound of clay, conical in form, would attract the traveller's attention ; these were produced by the labours of a species of *Termite*, indigenous to the colony. I have seen the mounds from four to five feet in elevation, and two or three feet in diameter, firmly constructed of red or white clay ; they furnish persons, about to erect a mud-hut, with an excellent material, ready prepared for use ; and then many of them, together with myriads of their inhabitants, are destroyed for the purpose.

About nine miles further, we arrived at a steep hill, up which we were obliged to lead our horses, and there was a corresponding steep descent on the opposite side of the ridge ; near it was a lofty hill, surmounted by a bare mass

of sandstone, and called "Blackman's Crown," by which name the ridge and pass is also known. After passing the ridge and descent, the road continues tolerably good, having about it thickly wooded and brush country, among which white, spotted gums, and box, together with other varieties, or species of *Eucalypti* abounded, with dwarf and other *Acacias*, in full bloom, emu flowers, (*Richea glauca*,) butter-cups, and asters, and among them several purple and yellow flowering plants of the *Orchideæ* family occasionally mingled. The "spotted gum" is usually found in situations, which, lathough in dry weather appearing firm, in wet are boggy; this tree consequently indicates by its presence the quality of the soil. The "white gum" trees have a smooth whitish bark, giving them an appearance as if white-washed.

After travelling some distance, we 'hobelled' our horses, turned them out in some fine pasturage, and set to work, after the bush fashion, to prepare tea, as a refreshment; there being no station between "Cullen Bullen" and "Dabee:" our pocket-knives cut up the eatables we had with us, sharpened sticks served as a substitute for forks, and flat pieces of wood made excellent spoons. Thus we enjoyed our

rustic meal ; and it would be well for fastidious people, who, having every luxury at their command, are contented with nothing, to become bush travellers in Australia for a short period, in pursuit of health and contentment, and there can be no doubt but they would return better in both respects. Tea, sugar, a tin-pot, and a blanket, are the requisites for a bush traveller, other necessaries being left to Providence, or to be supplied at the stations he may occasionally meet with.

Ourselves and horses having had an agreeable feed, we travelled on until about six P.M., when we "brought up" at the "Round Swamp," and encamped on a hill for the night : the horses were hobbled and turned out to graze, while we occupied ourselves in collecting fuel, of which a sufficient supply was soon procured from the quantity of dried wood that was strewed about. Having lighted our fire, chopped down several small trees, forming with their branches a rude hut, as a temporary shelter, and fern and small shrubs made a rough but not uncomfortable bed. The only drawback to the comfort of sleeping in the bush is the fall of heavy rain ; we had a little during the night, but, fortunately, it ceased before sufficient had fallen to penetrate our leafy hut.

In choosing night encampments, it would be well for travellers, if they have any regard for their personal comfort, to be particularly cautious to avoid making their dormitory upon the nest of the red ant, which cannot endure intrusion, and consequently will give them so inhospitable a reception, as to oblige a speedy decampment to take place, leaving painful mementos of their formidable forceps. This happened not to be our lot, and we enjoyed sound repose (after our journey of thirty-three miles) until towards the morning, when the chilness of the air awoke us : the fire not having been kept replenished was nearly extinguished, we, however, soon made it blaze again by an addition of fuel, and as the dawn of day was fast approaching, we prepared tea,—that beverage being always found most refreshing after a fatiguing day's journey, or before commencing one,—previous to resuming our journey.

As day dawned we proceeded on our journey, and arrived at a place called “ Cherry-tree Hill ;” on one side of it there is a steep, almost perpendicular descent, which drays passing this road were formerly obliged to descend at great risk ; but it is now avoided by a lately discovered route, nearly three miles further round. The view, looking from this hill into

the luxuriant little valley beneath, was very beautiful. Having led our horses down, we passed through an open forest country, which presented a more agreeable prospect than any I had yet seen. About this part of the country I remarked the Indigo shrub (*Indigofera Australis*) abundant, and I was told that indigo of good quality has been prepared from it at Bathurst. The species of Eucalyptus, called "manna-tree" by the colonists, (*E. mannifera*,) was now occasionally seen, but the season was not yet sufficiently advanced for its secretion, which is usually about the months of December and January. The Currijong-tree (*Hibiscus heterophyllus*?) was also occasionally seen growing in a granite soil, and more often in elevated than other situations: it has a lively appearance, more especially contrasted with the other trees around it; the bark is rough, greyish, thick, and spongy, and the wood is used by the aborigines for boats or canoes. There are two species indigenous to the colony; from the bark of one, if not of both, the natives manufacture durable rope for nets, &c., as the Polynesian islanders use the bark of another species of *Hibiscus* (*H. Tiliaceus*) for a similar purpose.

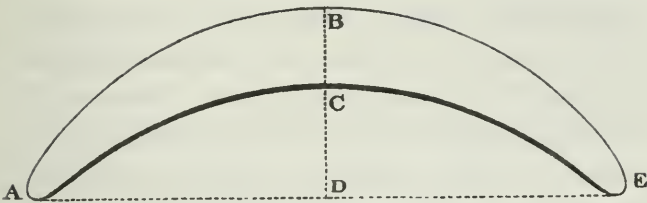
By nine A. M. we passed a deserted station, formerly called, and still known as "Vincent's

Station ;” and by one P. M. arrived at “ Dabee,” which is pleasantly situated near the Cudgegong river, which, I believe, empties itself into the Macquarie. The situation of this farm is picturesque, being nearly surrounded by high-wooded and broken ranges of mountains. On approaching the house, several of the aborigines were seen encamped ; we rode up to them, and found an assemblage of several, of different ages and sexes : the males were armed with spears, clubs, and the “ womera,” or “ bomerang ;” this last is a peculiar weapon thrown by the hand, and possesses the apparent anomalous property of striking an object in the opposite direction from that in which it is at first propelled.

In the “ United Service Journal,” for June 1833, Mr. Wilkinson gives the following explanation of this curious weapon :

“ The *Bommarang* may be formed of any tough, heavy wood, and is about three-eighths of an inch thick in the middle, gradually tapering off towards the extremities, and rounded on each side from the centre until brought to an edge.

“ *Construction.*—Let A B E be the arc of a circle : the chord A D E = 18 inches : the perpendicular B D = 7 inches : the width



$BC = 3$ inches. Thus constructed, the centre of gravity will fall exactly on the edge of its concave surface at *C*. When used as an offensive weapon, it is usually thrown with the *convex* side outwards; but when intended to return, it is held in the reverse position; although it will probably act in either direction, if properly managed.

“ For the latter purpose, however, it should be thrown from the hand at a considerable elevation (45°) with a sudden jerk, so as to combine with the projectile force a rapid rotation round its centre of gravity. The rotation acts constantly in opposition to its line of flight; so that if a similar rotation could be communicated without any projectile force, the instrument would move backwards: now, as the force with which it is thrown is constantly diminishing while the rotation continues, it must always arrive at a certain point where these opposite

forces balance, or equalize each other. At that moment the weapon would fall towards the ground, were it not for its flat surface and rotatory motion ; but in consequence of the centre of gravity being so placed that it will always present its broad surface to the air, it cannot descend perpendicularly, but slides down the inclined plane, up which it has been thrown, in consequence of the whirling motion continuing after the projectile force has ceased ; so that if properly thrown, it will pass over the head of the thrower, and often to a considerable distance behind him. On the same principle, a hoop thrown from the hand with a spinning-motion *inwards*, will begin to return before it touches the ground ; and also the curious, though not so familiar instance, of a ball fired from a musket, the barrel of which has been bent *to the left*, being carried at long distances considerably *to the right* of the object aimed at, in consequence of the rotation of the ball on its axis, caused by the friction against the right side of the barrel overcoming the projectile force, and thus carrying it across the line of aim.

“ The bommarang may be illustrated in a room, by merely cutting a piece of card into the same shape as the diagram ; then holding it between the finger and thumb of the left-hand, at

an inclination of about 45° , and striking one corner with a piece of wood, it will advance several feet and return to the spot from whence it proceeded. I find, however, that this form is not essential to produce a similar effect, although the most convenient to throw from the hand. Any thin, flat body of a semicircular or rectilinear figure, will return in the same manner, if a rotative motion be communicated to it, in conjunction with the projectile force at a considerable angle of elevation."

Among this tribe was an old woman in mourning, which was indicated by her face and breast being painted in white stripes with pipe-clay. The people composing the tribe were well-formed, muscular, extremities well-proportioned, but of slender form : the average height five feet five or six inches ; cheekbones prominent ; nose broad and flattened, with expansive nostrils ; mouth large ; beard copious, and hair long, black, and coarse ; they seem as intelligent, but not so fine a race as the Polynesians, excepting those of the Papuan or Oceanic race, to which they are evidently closely allied. Some physical differences, however, ought to be expected in a people inhabiting so sterile a country, compared with those races inhabiting islands, perhaps

as fertile as any in the world. The males of this tribe (similar to other parts of the colony) knock out the front incisor tooth on arriving at the age of puberty, and being admitted into the council and society of men.

I had an opportunity of examining a male stuffed specimen of the "musk duck," which had lately been shot in the Cudgegong river. I felt desirous of procuring a recent specimen for dissection, to ascertain from what gland the musk was secreted, which diffuses so strong an odour over the body of this bird, and its situation, but did not succeed in securing one fit for the purpose; I felt more desirous of deciding the point, as those persons with whom I had conversed on the subject, and who had seen the bird in its recent state, were much divided in opinion, and gave very contradictory accounts. The bird is of an uniform dark speckled colour over the whole body, except upon the breast and abdomen, where it became lighter; the bill is black and short, in proportion to the size of the bird; the wings are short, and inadequate for the purpose of flight, but assist the animal as it runs over the water; the second penfeather of the wings is the longest; the tail is short, and consists of several very stiff feathers. It is a shy bird, diving the instant it

is approached, and afterwards only elevates its head above water to watch proceedings, disappearing again on the least appearance of danger. It requires a good marksman, as well as much caution, to secure a shot even at the small mark the head of this bird presents. The female is said to be smaller than the male.

This estate is used by Mr. Cox principally as a dairy-farm, and a quantity of cheeses are made upon it, about which some of the men were at this time employed. They had now sufficient milk to make four cheeses, and expected soon to increase to ten, daily. Mr. Cox informed me he has made four tons of cheese on this farm in one season, and expected, during the succeeding one, to make nine or ten tons. The price of this article of course varies at Sydney; but it has been sold at forty-six pounds the ton. Attached to the neat little habitation at this farm is a garden, which contains strawberries and gooseberry bushes in a thriving condition, and was rendered gay by many of our European flowering plants in full bloom.

The day after our arrival, (22d,) I ranged about the farm, and was much pleased with its situation. To procure an extensive view, I ascended an elevated hill, distant about a mile from the house, and known by the name of

“ Mount Brace :” the view from it was extensive, and of much picturesque beauty.—Plains, (varied by wooded patches,) upon which herds of cattle grazed or reposed ;—spots of cultivated land, green with the rising grain ;—the distance terminating to the horizon in mountains of a greater or less degree of elevation and of varying forms,—peaked, rounded, or tabular, more or less densely wooded ; and the Cudgegong river winding its course amidst the tranquil scene, produced, in the combination, a very pleasing landscape. The ascent to “ Mount Brace” was rugged, and huge masses of sandstone, in which quartz pebbles were strongly imbedded, projected in several places as if about to be precipitated on the plains beneath ; the *Liptomera acida*, *Exocarpus cupressiforme*, and the beautiful parasitical *Loranthus* pended from an Eucalyptus were seen ; and other flowering shrubs, among which some small and delicate plants (bearing pink flowers) of the *Orchideæ* family were also profusely scattered about the declivities. I returned from my walk much gratified with the scenery.

It appears far from being an uncommon circumstance for the females of the aboriginal tribes about this and other districts in the colony, when they experience much lingering suffering in labour, to threaten the life of the poor infant

previous to birth ; and when it takes place, keep their word by destroying it. One instance was mentioned to me as occurring at a station at "Cuttabaloo," (a hundred and twenty miles from Dabee,) and near the Castlereagh or Big River ; (and I have since known several similar occurrences ;) the woman had, in this case, been two days suffering from a severe and lingering labour, during which, she often threatened the poor unborn infant with death on its coming into the world, using the expression of "pi, a, cobera ! (break its head !)"* and, on its birth, the unfortunate baby was absolutely killed by its unnatural parent.† This has occurred in a number of instances when the children were half-castes, and seems to be almost an invariable custom among the Australian aborigines,—as it is among the New Zealanders and natives of the Polynesian Archipelago, to destroy the infants produced by intercourse with Europeans, unless the father resides constantly with the female, or else may be near them at the time, to prevent

* "Pi" signifies "to hit or break," and "cobera," "head."

† It has been stated frequently to me, that the females destroying their offspring allege as a reason, that they are too much trouble to carry about : however, it is well known, that, as their children become older, they evince much attachment towards them.

the commission of so horrid and unnatural an act.

During a visit to the Murrumbidgee and Tumat countries, as well as other parts of the colony, I availed myself of every opportunity to procure information regarding acts of infanticide, as existing among the aborigines of this country. I succeeded in ascertaining that infants were frequently destroyed : sometimes the reason assigned was some personal defect in the infant,* (whence we may attribute the fact of a deformed person being seldom seen among native tribes,) or the mother not wishing to have the trouble of carrying it about : the female children were more frequently destroyed than the males. I heard of a weak and sickly child having been destroyed, and even eaten : the reason given by the unnatural parents was, that they were very hungry, and the child no use and much trouble ; one redeeming quality, however, was, that they displayed a sense of shame when acknowledging the fact, and gave the reason for

* This is not confined to the Australian natives, for it also occurs in Polynesia. Spix and Martius also observes, in their *Travels in Brazil*, (Eng. Trans. 8vo. vol. ii. p. 241,) " We did not meet with any deformed persons or cripples among the Indians; for which reason, some people believe that they put them to death immediately after their birth."

which they had committed so barbarous an act. It is seldom they will confess having destroyed their offspring: one, however, who had a child by an European, acknowledged it readily; and the reason given for the commission was its being *like a warragul, or native dog*. This was because the infant, like its papa, had a “carrotty poll,” and thus resembled, in colour, the hair of the native dog, which is certainly not so handsome as the dark black locks of the aboriginal tribes.

Although addicted to infanticide, they display, in other instances, an extraordinary degree of affection for their dead offspring, evidenced by an act that almost exceeds credibility, had it not so often been witnessed among the tribes in the interior of the colony. I allude to the fact of deceased children, from the earliest age to even six or seven years, being placed in a bag, made of kangaroo skin, and slung upon the back of the mother, who, besides this additional burden, carries her usual *netbul*, or *culy*,* for provisions, &c. They carry them thus for ten or twelve months, sleeping upon the mass of mortal remains, which serves them for a pillow, apparently unmindful of the horrid fœtor

* “Netbul,” (the net-bag of the aborigines,) is a corrupted native word; “culy” is one of the native appellations.

which emanates from such a putrifying substance. Habit must reconcile them to it, for a woman carrying such a burden, may be "nosed" at a long distance before seen; and a stranger, unacquainted with this native custom, will see a woman with a large pack upon her back, from which such an odour proceeds, as to make him doubt from what it can be produced. When the body becomes dry, or only the bones left, the remains are burnt, buried, or placed into a hollow trunk or limb of a tree: in the latter instance covering the opening carefully with stones, &c. All the information that could be procured from them respecting this disgusting custom, was, "that they were afraid, if they buried them, the *Buckee*, or devil-devil would take them away." When the adults among the aborigines die, the body is consigned to the hollow trunk of a tree, cave, or in the ground, according to circumstances, and wood, stones, &c. are piled on the entrance, or over the grave, so that, according to the ideas of these poor, superstitious savages, the *Buckee* may not be able to find them.

Even after the relation of this disgusting custom, these people are more degraded by writers than they really appear when seen in the interior, uncontaminated by European vices, in full native independence, hunters, but not tillers

of the soil, from having no natural productions worthy of cultivation.*

The following is the practice of midwifery, as I observed it among the native tribes, more particularly those inhabiting the Yas, Murrumbidgee, and Tumat countries.

When a female is in labour she leaves the camp alone, and, should any assistance be required, she calls another female to her. When the child is born, the afterbirth, or placenta, is separated from the navel-string, or umbilical cord, by scraping or rudely cutting it with a shell, and the cord is left pending to some

* Those philanthropic individuals who think to change the habits of these savage tribes, expecting those who have lived from the earliest period of their existence on the produce of the chase, to abandon their wandering life, and settle down to cultivate the soil—an employment to which they are quite unaccustomed—can never have reflected how difficult, even in our boasted civilized state, it is to change habits acquired in early childhood. “Men,” observes Hartley, in his *Essays on Man*, (page 190,) “are brought to any thing almost sooner than to change their habit of life, especially when the change is either inconvenient or made against the force of natural inclination, or with the loss of accustomed indulgences. It is,” he continues, “the most difficult of all things to convert men from vicious habits to virtuous ones, as every one may judge from what he feels in himself as well as from what he sees in others.” “It is almost,” says Paley, after making the above quotation in his *Evidences of Christianity*, “like making men over again.”

length from the abdomen of the infant. The parent then taking some water into her mouth, throws it over the child, rubbing the infant at the same time with coarse grass; and this, I suppose, they would call cleaning the little new-born creature. The first flow of milk is not given by the mother to the child, as they say it would produce griping. The afterbirth is buried by the mother, and soon taken up again and burnt; it is only buried, however, if they are not prepared to burn it immediately, but it is usually destroyed on the same day or night on which the woman has been delivered, although I could not ascertain correctly whether they entertain any such superstitious notions regarding the placenta, as obtains among the New Zealand females, yet by the care in burning it some such idea no doubt exists among them.* If the placenta is retained long after the birth of the infant, they endeavour to excite uterine contraction, by employing pressure on the lower

* At New Zealand the placenta is named "fenua," which word signifies land. It is applied by the natives to the placenta, from their supposing it to be the residence of the child: on being discharged, it is immediately buried with great care, as they have the superstitious idea that the priests, if offended, would procure it; and, by praying over it, occasion the death of both mother and child, by "praying them to death," to use their own expression.

part of the abdomen over the region of the womb. As soon as the child is born, the forehead of the infant is compressed, by laying the child upon its back and employing pressure with the foot ; I could not find out for what object this was done, as the pressure was not repeated after the day following the birth of the infant.

The labours are sometimes tedious, and the suffering attending them severe ; the presentations are generally natural ; when preternatural labours occur, in most, if not in all such cases, they prove fatal for want of assistance.* After the delivery of the woman a belt of opossum skin, called “ *Cumeel*” (similar to that worn by the males, when adults) is placed around the abdomen, and is removed after being kept on from twenty-four to forty-eight hours ; the day after delivery the woman goes to the river

* At New Zealand the women are attended, during labour, by their husbands ; but, if it is a difficult labour, they suppose the spirits to be angry, and therefore send for the Tohunga, or priest. On the arrival of the Tohunga, he strides over and breathes on the woman, and then, retiring to a short distance, sits down and prays to the spirits ; if the labour terminates favourably, it is looked upon as resulting from the influence of the Tohunga in averting the anger of the spirits ; but should the termination be fatal, the priest is considered to have incurred the displeasure of the spirits, and lost his influence.

for the purpose of ablution. Similar to most native tribes, the females are married at a very early age. I saw one in the Tumæt country, whom I regarded as a mere child, and was surprised on being told that she had been married for eight months.

At “*Dabee*” I had an opportunity of viewing the native animal, called Koala or Cola,* and it immediately occurred to me (this being the first living specimen I had seen) how inaccurately the published representations of the animal were delineated, being probably, like most of the drawings of Australian animals, as well as many of other countries, taken from stuffed instead of recent specimens. The very peculiar droll-looking physiognomy of this little beast was entirely lost in the *mis*-representation. This animal, the *Phascolartos* genus of Blainville, was a young specimen, and covered over the body with a fine grey fur, having a reddish tinge, no tail, ears short and erect, and covered with thick long fur of a light greyish colour, eyes small, irides brown, nose naked and pointed, upper lip divided, upper jaw projecting over the lower, hind feet like the opossum, the thumb wanting the nail. This animal laps when drinking, like a dog, and is very fond of

* This animal is called “Goribun” by the Yas natives.

milk ; it uses the fore-feet in laying hold of the branches when eating the young leaves of the gum trees, (*Eucalypti*). This specimen was a male, and the noise it uttered was a peculiar soft barking sound. It sleeps during the day, running about to feed at night, but when roused will also feed during the day in its present state of confinement.

From many circumstances that have occurred, there is some reason to think that the aborigines of this country believe in the metempsychosis of the departure of the soul of their brethren into the bodies of certain animals ; but as the notes I collected did not satisfy my mind, so as to assert this as a positive fact, I mention it, for others to procure information on the subject. That something like it exists, appears in some degree certain. In one instance, a native, at Béran plains, desired a European not to kill a *Gúnar* which he was then chasing, but to catch it alive as it was “ him brother.” The animal, however, was killed, at which the native was much displeased, and would not eat any of it, but unceasingly complained of the “ tumbling down him brother.”

CHAPTER VI.

Cross the country to Goulbourn Plains—A road-gang stockade—Splendid view—The old Bathurst road—Sidmouth valley—Brisbane valley—Squash field—Bclam Creek—Turril, turril—Gum resin—Swampy country—Mr. Cowper's farm—Anecdotes—Distant view of Goulburn Plains—Mr. Bradley's estate—Cross the plains—Hospitable reception at cardross—The Manna tree—Failure in rearing the tulip tree.

ON the 24th of September, after an agreeable sojourn with Mr. E. Cox, and again accompanied by Mr. O'Brien, we resumed our journey; retracing our road to Wallerowang, and crossing the country to Goulburn Plains. We arrived at Wallerowang on the morning of the 28th, and, after a short stay, proceeded on our journey, taking a bush-road across the country; passed "Honeysuckle Swamp," (so called from abounding in that species of *Banksia*, before mentioned as *rosmarinifolia*,) about which the old grass was on fire. The custom of setting the dry grass on fire is very prevalent throughout the

colony, as the young grass shooting up soon after affords fine feeding for cattle, &c.

After riding about seven miles,* we arrived at a stockade, inhabited by a road-gang, employed upon the new Bathurst road, having a very distant view of the descent at Mount Vittoria, from which the road we were upon was a continuation, and a splendid view of mountain ranges and forest scenery was now before us. We only proceeded a few miles upon this excellent road, when we turned off into a dull bush-path through a portion of country which, from its want of animation, became tiresome to man and beast; there was nothing to excite the attention of either, and the horses always appear to participate, with ourselves, in the want of a lively character in the country.

Emerging from this wild bushy track, we came upon the old Bathurst road, and then the country assumed a better appearance, being thinly timbered, and herds of cattle gave some animation to the scene, increasing the beauty of

* Distance of miles in travelling in the interior of the colony is nominal, and the time occupied in riding the distance is usually taken into consideration; some stages seem often to be over and others under-calculated. "Shepherd's miles," it is a saying in the colony, "are short, those of stockmen long."

the landscape. As we proceeded, the Fish River was occasionally seen winding its course among acacias, swamp oaks, and other trees, which grew upon its banks, and the sight of a river in this badly watered country, was always a pleasing relief. We crossed this river, and deviating from the main road arrived at "*Sidmouth Valley*," the neat farm and residence of Mr. Lowe, by whom we were kindly received, and remained for the night, after a journey this day of twenty-two miles. A distant view of the Bathurst Plains was obtained from this farm.

We left "*Sidmouth Valley*" early on the following morning, through a good bush-road, and arrived at a portion of thinly-timbered country, having a character of park scenery, abounding in fine herbage. This brought us almost immediately upon a cattle station, the property of Capt. P. P. King, R.N. There was no one in the hut, so, after feeding our horses, we again proceeded; and, after a four miles ride, arrived at a cattle station, belonging to Mr. Scarvell, called "*Brisbane Valley*," although from its quality and locality, "*swamp*" would have been a more correct nomenclature. From this station our road led by a bush-path between wooded hills, and through miserable swamps famed for the loss of an immense number of sheep, until

we arrived at a place called "*Squashfield*," and never was a more appropriate name bestowed upon a locality; for although the vegetation, springing up from the swamps, gave a fresh, fertile, and even beautiful appearance to the place, yet the moist, chilly, and raw atmosphere, could excite no other ideas than those connected with rheumatisms, catarrhs, and analogous diseases, to which cold and damp will subject the human frame. From the lateness of the hour we took up our night's lodging in the hut at this station, where every thing was done to make us as comfortable as possible. Squashfield was, for the present, rented by Mr. Imlay, as a cattle station.

This place is an extensive range of swampy flats, of fertile appearance, which was the cause of its being first selected as a sheep station, and its bright features, when the young grass is springing up, charmed many into severe losses; for, not taking into calculation the quality of the soil, or the adaptation of the place for a sheep-run, numerous flocks were placed upon it, and the result was, before any long period had elapsed, the loss of the whole from rot; and yet, notwithstanding these facts more sheep were subsequently placed on the same spot, and, as might have been expected, with similar results, from the

damp and swampy nature of the situation. Even now the stock-keepers stated that cattle could not remain about the place, but wander away to more congenial pasturage in other parts of the country.

We rose at day light to continue our journey ; a hoar frost whitened the ground, and the atmosphere was exceedingly cold and damp : even our horses were impatient to leave this uncongenial spot, having been left by themselves during the night ; for every animal, except those in confinement, which had been collected together with much trouble the previous day, were all reported absent without leave on the following morning.

After a short journey, through a similar swampy country, we arrived at a more elevated and agreeable spot, when we stopped to take refreshments, made a bush fire, prepared tea, turning out our horses to graze in a fine pasturage. Many of the *Eucalypti* trees* were throwing off their dark brown and rough outer bark, appearing in a new one, of a greyish colour. The appearance of the trees, partially denuded, with strips of brown crisped bark hanging about their trunks and branches ready to fall,

* The different trees of the *Eucalyptus* genus are confused, and require botanical arrangement : many, termed species, are merely varieties ; and the botanical characters of but few species are accurately known.

being a general peculiarity of the trees of the country, excites the attention of the stranger. Our road led through a broken but picturesque country, thinly timbered, and appeared good pasture land. We crossed a small river, called the *Bingham*, the country improving very much as we proceeded, abounding in beautiful park scenery, and the distant hills, rising one above the other, both thinly, and, in some situations, densely wooded, was an agreeable change to the uninteresting sameness of the country through which we had, for the most part, journeyed.

The species of *Eucalyptus*, termed "Box Tree," by the colonists, was most abundant: it has a rough, scaly bark, differing in that particular from most of the other species or varieties of the same genus. On the elevated spots, the *Exocarpus cypressiforme*, or native cherry-tree, was seen; but the situation appeared uncongenial to its growth; for, instead of the graceful and elegantly pending branches, with delicate dark-green foliage, such as this tree presents when growing in sheltered situations, it now had a stunted, brown, and wretched appearance. About noon, we arrived at Mr. Murphy's station at Bingham, being seventeen miles from Squashfield.

The approach to marshy land is readily indicated by the melody of the frog tribe, among

which, the peculiar sound uttered by that species known by the name of the “bell frog,” is very often heard: and indeed the name is not inapplicable to the creature, the sound it produces, being very similar to a sheep-bell. Detached clumps of wire grass,* intermingled with the brown-coloured sedge grass,† and at some places reeds (*Arundo phragmites?* Linn.) also point out those watery patches which are often met by the traveller while journeying through this country.

Birds were occasionally numerous, particularly when near a river; but magpies and crows were never found wanting in any part of the country, abounding every where: the former the same impudent, peculating race as at home. As for the parrot tribe, enough may be seen in a day’s ride to supply all the maiden ladies in Europe with polliès sufficient to talk or scream them to death in an inconceivably short period of time; and the peculiar noise of the *laughing* or *feathered jackass*, (*Dacelo gigantea*,) which increases from a low to a loud thrilling gurgling laugh, was often heard.

* The “wire-grass” is said to indicate good soil, being found growing in alluvial soil, in clumps, upon flats, swamps, &c.

† Sedge-grass is used for thatching, as well as beds for the sheep during shearing time, after they have been washed.

We continued our journey over a very beautiful and romantic country, with distant thinly-wooded mountains trending towards the Abercrombie river, which was not far off, reminding me of some of the splendored scenery of Devon. After travelling about four miles, descending a steep hill, we arrived on the banks of the river, which at this part of its course was a rapid, but not broad stream. Swamp oaks (*Casurina paludosa*) grew abundantly on the banks, their dark foliage giving a gloomy character to the scene.*

After crossing the river, (which, not having been lately swollen by rains, was effected without much difficulty,) we had to ascend a very steep hill, which brought us to a gradually ascending road over hills, having a remarkably beautiful, verdant, and romantic appearance. The thinly-wooded hills were thickly clothed with a bright carpeting of verdure, imparting a cheerful feature to the country, which was further increased by a number of flowers scattered about, of various

* The "swamp oak" bears much resemblance to the larch. I know not why this and other species of the casuarina trees have received the colonial appellation of "oaks," as forest-oak, swamp-oak, she oak, &c., as they have not the slightest resemblance to that tree in external character, unless the name may have been given from some similarity in the wood.

tints ; among which were the *Gnaphalium*, with yellow, white, and pink blossoms ; Emu flowers, (*Richea glauca*,) and a great number of the *Orchideæ* family ; their blue, pink, and yellow flowers rising a short distance above the surface of the ground,—all afforded a pleasing variety to the many natural beauties of this place.

As we ascended this road, the sloping declivities of the hills in the vicinity, clothed with rich pasturage, sufficiently wooded to give variety, with an occasional glimpse of the “ Abercrombie,” winding its course between the lofty, smiling hills, increased, as we proceeded, the beauty of the prospect. Even the climate was changed : instead of the damp, frosty, wintry climate we had left only in the morning, we were suddenly *transported* (a word obsolete in the colony) to another region,—the weather fine—clear and serene sky—the sun shining brilliantly upon the smiling scene ; birds carolling, seemed to sympathize in our feelings ; butterflies and other brilliant insects sported over the gay flowers that strewed our path, and the whole formed a scene doubly felt by comparison with the uninteresting country we had left.

After we attained the summit of this hilly ascent, the road led through a more swampy and thickly-wooded country ; but that character did not con-

tinue far, for we again approached an open forest country, and a farm at *Bolam** appeared situated on an opposite hill to that over which the road we were then traversing passed. On descending, we crossed a rivulet or creek, (for the terms are synonymous in this country,) called “*Bolam Creek* ;” and at five P. M., arrived at the neat farm of Mr. James Hassell. We now reached the Argyle country ; and the contrast between this and the portion of the Bathurst district, through which we had passed, was much in favour of the former. The distance of our journey this day was twenty-eight miles ; and our horses, not lately having had good feeding, from the poorness of the pasturage, we here gave them a day’s rest ; and although we had to regret the absence of Mr. Hassell, we yet received every attention from the persons left in charge.

We resumed our journey early on the morning of the 30th ; but the day turned out very wet.

About Bolam Creek, flocks of wild ducks were abundant. These birds were not so wild about creeks as on large rivers. The barn-doors about the farms (in imitation of a similar custom in the

* The granite soil at Bolam is said to injure the teeth of the sheep, the teeth of young sheep being as much worn down by it as in other soils is often seen in the old sheep.

“ old country,”) were decorated by the brushes and tails of that shepherds’ pest, the Dingo, or native Australian dog, and other vermin belonging to the colony. As we rode through the bush, the moist atmosphere occasioned a strong aroma to be diffused from the leaves of the gum-trees, as well as from odoriferous flowers. The country was of a picturesque character ; and, after a distance of twelve miles, we reached a station belonging to Mr. Ellis, called “ Turril, turril,” where we remained an hour to refresh our horses. I remarked the red gum in abundance on most trees of the *Eucalyptus* genus : the red, spotted, and white gum, iron, and stringy bark, manna, box, and others, produced it profusely : it exudes both spontaneously and in larger quantities, when incisions have been made on the trunk, more particularly after rain. It is seen in masses upon the trunk ; but its particles have so little tenacity, that when in a concrete form any attempt to detach them in one entire lump fails, and it crumbles immediately into innumerable minute fragments.

This gum resin has a strong astringent quality, and is one of the varieties of the Kino of commerce, (the other variety of Kino being brought from Africa, and is produced by a tree of the *Pterocarpus* genus.) When first it issues from

the tree, it is of the consistence of very thick syrup, and immediately after rain may be seen flowing from an incision or cleft in the tree very abundantly, being then of a very beautiful light-red colour, becoming of a dark shining red, and hardening, by exposure to the air. The *Angophora lanceolata*, or apple-tree of the colonists, (a genus allied to that of *Eucalyptus*,) also yields a dark-red astringent gum from its trunk and branches.

After leaving Turril, turril, we proceeded through a flat, swampy, and uninteresting country, rendered still more tiresome by the drizzling rain. Having passed "Stony Creek," and descended "Church Hill," we were glad to obtain shelter at the farm of *Mingablah*, the property of Charles Cowper, Esq., after a journey of twenty-eight miles. The soil about this part of the country was of a fertile character, but stony; abounding in the whinstone.

Much of the dull time during our confinement to the house, from the heavy and continued rain, was passed away by the amusing relations of the overseer, who informed us he had, from a very tender age, a "propensity" to keep living animals. Since his arrival in this country, he had succeeded in domesticating a large number of parrots, who went in and out of the house, without

making any attempt to escape from his protecting care. But one fatal day this pleasing domestic scene was changed to one of a tragical nature ; for, at an unlucky hour, a stranger arrived, accompanied by a big dog of a black colour. The result proved that the dog had only one " propensity," and that, to speak phrenologically, was " destructiveness." So, availing himself of the absence of those of human creation, and excited by the aforesaid organ, and the dulness of the times, he began to attack and speedily demolish the frames of the pollies, scattered their limbs and feathers about, and did not leave one survivor to relate the tale. The horrid sight that met the affectionate eyes of the owner on his return, was his favourites, some with bowels protruding from their natural cavity ; others minus heads and limbs ; and all so damaged, as to have life extinguished. The big black dog even then was caught busily occupied in shaking about what remained of those unfortunate feathered bipeds. After this melancholy occurrence, he became disheartened from having any more favourites, and gave it to us as the cause why he had no curious animals at this time to show us, but in my opinion the relation was much more amusing than the animals would have been : so their absence, at least to us, was not a source of regret.

Although the rain still continued, we proceeded on our journey the following morning, being desirous of reaching Goulburn Plains, (which was now only twenty miles distant.) We passed through a swampy, thinly-wooded country, and by noon arrived at "Tarlo," on the banks of the Cockbundoon river. Proceeding several miles further, from the summit of a hill near the road, we were gratified by a splendid distant view of a portion of *Goulburn Plains*, and the open forest land in its vicinity. We passed through the township, which at present contains only a few bark and wooden habitations. This situation for the township not being originally well chosen, it is the intention of government to remove it to a more suitable part of the plains.

We arrived in the evening at the prettily situated dwelling-house and fine estate of J. Bradley, Esq., called Lansdowne Park ; from which there is a fine prospect of a very picturesque portion of the plains. This part of the country, (called "Goulburn Plains" and "Mulwerry" by the aborigines,) is a series of beautiful plains, clear of timber, except where a few scattered clumps of *Banksia rosmarinifolia*, or "honeysuckle," are seen, readily distinguished by its dark appearance, contrasted by the lively carpeting of ver-

dure beneath and around them; hills of moderate elevation, with sloping declivities, and wooded on their summits, divide the plains, and give a pleasing variety to the prospect; while distant mountains, having a blue tinge, terminate the view to the horizon: occasional patches of land under cultivation with grain, innumerable herds of cattle grazing, and flocks of sheep, attended by their shepherds, gave animation to the verdant plains, not yet browned by the parching summer heats.

The following morning we crossed the plains, through a still beautiful country, passing the farms of Messrs. Howey, Rossi, and Moore, near which the Wollandilly river flows in a fine stream; after a ride of nine miles, the weather being unfavourable, we sought shelter, and received a kind reception at "Cardross," the farm of Mr. Kinghorne.

On the road, several of that elegant species of the *Eucalyptus*, the *E. mannifera*, or manna-tree, were seen, having just produced flower-buds; but no manna was yet secreted from the trees. Since leaving the Blue Mountain range, not a single shrub of the Warratah or tulip-tree (*Telopea speciosissima*) has been met with; and I heard from several persons that the attempts as yet made to rear it in the gardens in this part of

the colony had failed. From the splendid beauty of its flowers, the introduction would be desirable, as conducing much to the ornamental appearance of the flower garden.

CHAPTER VII.

Appearance among the natives of a disease resembling the small-pox—Origin and progress of that malady among the aborigines—Medical investigations—Plan of treatment—Variety of forms assumed by the disease—Its duration—The critical period—Dr. Mair's report.

ABOUT two years previous an eruptive febrile disease made its appearance among the natives of Wellington Valley, resembling the small-pox in its principal characters. Some alarm was experienced in consequence among the Europeans, to whose children the disease had as yet been fortunately unknown. About a year after I was informed it prevailed among the aborigines at the Lachlan, Burragorang, and Cox's river, and I remarked that several of the blacks at Goulburn Plains, and also at other parts of the colony, had pits on their faces, resembling those produced by small-pox, and which, they informed me, were caused by the dis-

ease in question. The name that this disease is known by among the aborigines is "Thunna, thunna," or "Túnna, tunna," and they describe it as being attended by sore-throat, head-ache, and high febrile symptoms, upon the day previous to the appearance of the eruptions; the latter were described to me as commencing in a similar manner, and passing through the same stages as is usual in small-pox, covering the face and all parts of the body, even to the soles of the feet and palms of the hands: it was also stated that adults were more covered with eruptions, and suffered more severely from the disease, than children, and the aggravation of the symptoms caused much mortality among them. Among the children it often occurred that only a few scattered eruptions would appear, and the febrile symptoms also assume a very mild character. No deaths occurred in these cases.

As far as our information at present extends, it appears not to be an introduced disease, or at least we have no facts to prove such being the case. It is mentioned in "Tench's Account of the Colony of New South Wales, 1795," that several natives had marks resembling those left by the eruptions of small-pox, and which I have no doubt originated from the disease,

the subject of this chapter. Several old men were marked by it; and I understand that during the time it prevailed among the aborigines at Wellington Valley, they did not regard it as of foreign introduction; they considered it contagious, and when one party was attacked by this formidable disease, the others deserted them, to avoid being infected. None of the soldier's children stationed at Wellington Valley took the disorder, although the blacks about the settlement were suffering from it; the children never had had the small-pox, but I could not be informed whether they had been vaccinated.

This disease excited so much attention during the time it prevailed,* that the government were induced to send a medical gentleman into the interior to report upon, and give his opinion regarding, its nature. Dr. Mair, assistant-surgeon

* In February, 1833, the ship "Prince Regent" arrived at Port Jackson, from England, with emigrants and a general cargo; she was immediately placed under quarantine, on account of the small-pox having occurred at two distinct periods on board the vessel during the passage. The vessel was not released from her unpleasant situation until the commencement of March, having been, previous to her release, thoroughly fumigated, and the clothes of all the infected persons burnt and washed at the quarantine station, before being admitted into the cove of Sydney.

of the thirty-ninth regiment, was deputed to this office. A more judicious selection could not have been made, although it may be regretted that his arrival was too late to observe its progress through the different stages, but he indefatigably devoted himself to procure such information as would place the nature of the disease almost beyond a doubt. The result was a collection of most interesting information upon its progress, character, &c., although several interesting points are still open for further medical observation and inquiry. On my return to Sydney, Dr. Mair kindly favoured me with a copy of the report he made to the colonial government, and I have availed myself of many of his remarks, and have devoted a chapter to the subject, regarding it as one interesting to non-medical, as well as medical readers, as the same disease, or at all events one very closely allied to it, has been, and still too often is, the cause of much domestic misery and suffering.

As far back as the year 1789, says Dr. Mair in his report, an eruptive disorder, resembling the small-pox, broke out among the aborigines, and proved extensively fatal: its marks are still to be seen on the bodies of several of them of very advanced age, corresponding in appearance

with the pits left by the small-pox. From that distant period no similar disease had been observed among them, till about the month of August, 1830, when Mr. Brown, of Wallerawang, first saw this eruptive malady in five blacks, near the river Castlereagh, two in the incipient, and three in more advanced stages. He had, however, heard of its existence among the tribes to the northward six months before. One of these men was afterwards seen by Mr. Brown with pits like those of small-pox, on different parts of his body; and he ascertained that the others had died of the disease. Mr. Brown did not meet with any more cases of the disease till the beginning of August, 1831, when it manifested itself in three blacks, who had been in close communication with some others recently arrived from the Lachlan, and who had but a short time recovered sufficiently to be able to travel. These men stated that the disease had been raging in their part of the country, and that several had died of it. Some of the Wallerawang blacks, convinced of its contagious nature, had fled to Emu plains to escape infection; three of the number having afterwards returned were seized with it.

At Wellington Valley the same malady was first remarked, (as near as could be ascertained,)

in October last year, (1830,) and continued to affect the blacks in that vicinity to December. The poor creatures blamed Captain Sturt for its introduction,* were much alarmed about it, and are represented as having anticipated some grievous calamity; a great fire and flood were predicted by one of their sages, which would come from Mount Harris and destroy them. From the testimony of George Clark, a convict, who had resided with the native tribes, far in the interior, for several years, and was lately taken prisoner by the mounted police the disease proceeded from the north-west coast, and spared none of the tribes as far as Liverpool Plains, attacking twenty and thirty at a time, none escaping its fury. The king, or chief of

* This is not uncommon among savage nations; the introduction of dysentery at Otaheite, or Tahiti, was attributed to Vancouver; and in Beechey's interesting narrative we are told that the Pitcairn islanders had imbibed similar notions with regard to shipping calling at their island, of leaving them a legacy of some disease. Mr. Hamilton Hume, (the well-known Australian traveller,) who accompanied Captain Sturt in his expedition to the northward, says the natives were suffering severely from this eruptive malady, when they arrived among them, and numbers had died, and many more were still dying, from its virulence. The description of the disease he gave me accords in most points with that given by Dr. Mair.

the tribe among whom Clark had been naturalized, was first seized with it, and died, as had been predicted by the kradjee, or physician and soothsayer. He had previously been with a tribe situated near the sea, and it is probable may have seen the disease before, although he disclaimed having any but supernatural knowledge of it.

The plan of treatment followed in the case of the king was immersion in cold water; four persons of less note underwent the same, and only one survived. The consequence was, that other medicinal measures were thought of, and the cold-bath was stigmatized and abandoned. Scorching the hair from the head, and pricking the pustules with a sharp-pointed fish bone, then squeezing out the fluid contained in them with the flat part of the instrument, was the next mode of cure adopted by the kradjee; and it is worthy of remark, that the operation suggested itself to him from the observation that the pustules burst spontaneously, and discharged whitish matter, in the first case of recovery.

It is curious, observes Dr. Mair, that the very same process was recommended by Avicenna, the celebrated Arabian physician, who flourished in the tenth century of the christian era, and gave the first complete history of the

small-pox, with this only difference, that the learned author used a more elegant instrument, a golden needle! and even in the present day the same practice is approved of by the best writers on the subject. The new method of treatment was attended with happier results than the old, only one out of six dying of the malady; and if, continues Dr. Mair, instead of entirely relinquishing the cold-bath, it had still been employed with judicious caution, the mortality might have been further reduced.

The kradjee, priest, soothsayer, or physician, (for he appears to exercise the functions of each,) goes through many superstitious ceremonies to cure his patient, with rods of two or three yards in length, which he fixes in the earth in a crescentic form, and addresses with a variety of gestures. The common people place implicit faith in his predictions; and it is asserted by Clark, that they sometimes bury alive those whom in his medical capacity he has abandoned. They believe the disease to be infectious, but do not shun one another on that account; they name it "Boulol." The Lachlan and Wellington Valley tribes call it Thunna, thunna; and Dr. Mair also says that he heard a most lugubrious dirge chaunted at a Corrobera at Bathurst, commemorative of

this destructive epidemic, and judged accurately of its nature from the melancholy note and solemn manner of the pageant.

Dr. Mair continues to state in his report, that the disease seems to have assumed a considerable variety of forms in different individuals, but from the concurrent testimony of all the observers who were consulted, the following symptoms may be considered as common to all of them. For several successive days the patient feels languid, indolent, and oppressed, loses his appetite, suffers from head-ache, pain of chest or stomach, increased heat of skin, and other febrile symptoms. The usual duration of this incipient stage appears to have been from two to eight days. It was followed by an eruption of small red spots, resembling flea-bites, which generally commenced on the face, and gradually spread more or less thickly over the head, breast, and extremities; the tongue and lips were likewise involved in the eruption, and the soles of the feet have been particularly remarked in many instances to be numerously studded with it.

When the eruption had fully developed itself, which generally occurred in twenty-four hours, a remission was observed to take place in the febrile symptoms, but the patient began to com-

plain much of pain in the throat, and could only swallow liquids. The small red spots, or papulæ, were converted into vesicles or pustules, in periods, varying from three to seven or eight days; the fluid contained in these vesicles or pustules is represented by some as resembling whey, by others milk, and by others to be yellowish or straw-coloured, like the thin pus of sores. It was likewise described as bloody water. When at their height they were about the size of a pea. One very intelligent lady, who had witnessed its effects in several of the blacks, informed me the eruption was very like the cow-pock. The greater number of persons who had watched its progress, and who had likewise seen the small-pox in England, pronounced it to be that disorder. Scabs formed and fell off at different periods, in different cases, according to the length of time occupied by the maturation of the vesicles or pustules; these were occasionally confluent on the nose and cheeks, and frequently left permanent marks or indentations on the skin.

Its usual duration is stated to have been from a fortnight to three weeks in cases of restoration to health; but even after the eruption had entirely subsided, and the disease might be considered over, the convalescents

were unable to walk for a long time, owing to the tenderness of their feet, from which the cuticle had entirely separated. In many cases the other sequelæ of the disease were very distressing; some lost their eye-sight, others had abscesses in different parts of the body, or foul and tedious ulcers, with great debility and emaciation. Death was said to happen generally among the Lachlan and Wellington Valley blacks about the third day after the appearance of the eruption; the tongue became much swollen, and covered with livid spots, the breathing greatly oppressed, and deglutition impracticable. Secondary fever was seldom observed, and when it occurred seemed owing to cold; but the rarity of secondary fever is easily explained by the early fatality of the disease in the severe cases in which only it could have been expected. Some were said to have perished at the very onset of the malady, before there was the slightest sign of eruption.

Among the tribes to the north-west of Liverpool Plains, the disease seems to have approached more nearly to the description of confluent small-pox, as it is met with in Europe. The eruption coalescing on the face, and being followed in a day or two by salivation, (or as Clark describes it, water pouring from the

mouth as they lay on the ground,) about the 10th or 12th day, a sort of convulsive or epileptic fit took place, and afterwards the fluid from the mouth was of a bloody appearance, and more viscid, so as to be discharged with great difficulty.

This was considered the critical period, and was speedily followed by death, unless the patient soon after began to rally. The great difficulty and danger of this disease, (the confluent small-pox,) says Huxham, chiefly comes on at the state or turn of the pox; for however easily matters may have proceeded till this time, we are now (*viz.* the 7th, 9th, or 11th day from the eruption) very often surprised with a very shocking change, and terrible symptoms. The salivation and viscid discharge from the mouth are particularly described by Sydenham, and other eminent writers on this disease.

It has been remarked, by most of the eye-witnesses of this epidemic, that it proved chiefly fatal to adults and old people, seldom to children, and that those who had suffered from it at a former period, as indicated by the marks on their skin, escaped it altogether, while there were few other cases of exemption. Dr. Mair proceeds to give, in his report, cases in which some Europeans were attacked by it,

on which he has made some very excellent observations, and I regret that my limits will oblige me to exclude them from this work. Dr. Mair observes, that he met with no opposition on the part of the aborigines in his wishes to extend to them the inestimable benefits of vaccination ; those who had not suffered from the late epidemic, viewed their escape as accidental, and while its frightful symptoms and dire effects were yet fresh in their memories they were willing to submit to a simple operation, which, they were told, would henceforth protect them against the disease. Dr. Mair thus concludes his interesting and valuable report.

“ 1. The eruptive febrile disease, which lately prevailed among the aborigines, was contagious, or communicable from one person to another, and capable of being propagated by inoculation.

“ 2. It approached more nearly in its symptoms to the character of small-pox than any other disease with which we are acquainted, particularly to that species of small-pox described by Staff-surgeon Marshall, as occurring in the Kandyan provinces in 1819.*

“ 3. The mortality attending the disease varied from one in three to one in five or six, but might have been less if the persons labouring under it

* Quoted in Good's Study of Medicine, vol. iii. page 82.

had been sheltered from the weather, and attended by physicians.

“ 4. Vaccination seemed to possess a controlling power over it, as three blacks who had been successfully vaccinated, although equally exposed to the disease, escaped infection.

“ 5. It was not confined to the aborigines, but in one instance attacked a European in the form of secondary small-pox, and proved fatal to a child with symptoms resembling confluent small-pox.

“ 6. In several cases it occasioned blindness, and left many of the poor blacks in a very debilitated and helpless condition, with marks which could not be distinguished from the pits of small-pox on different parts of their bodies.

“ 7. It was never observed to attack any of the aborigines a second time, and it spread alarm and consternation among them.” Soon after Dr. Mair's report was sent in to the Colonial Government, an official notice was published in the “ Sydney Gazette,” requesting parents to have their children vaccinated.

CHAPTER VIII.

Bredalbane Plains—Forest country—Cockatoos and parrots—Peculiar species of the lizard tribe—Medicinal trees—Bark of the wattle trees—Mr. Manton's farm—Picturesque view—Yas plains—Encampment of natives—Stringy bark, or box tree—Use of that plant—Native method of cooking—The Australian negro—Game—The flying squirrel—Human chimney-ornaments—Cloaks of opossum or kangaroo skins—Barbarous ceremonies—Women not admitted to the confidence of the males.

ON the 3rd of October we resumed our journey, taking a bush path for a short distance, until we emerged upon "*Bredalbane Plains*," a great portion of which is very swampy, and during heavy rains overflow. Passing a cattle station, the property of Mr. Chisholm, we had a view of another plain, or more correctly marsh, (named the third Bredalbane Plain,) abounding in reeds; here several birds of the heron species, known by the name of the "native companion," (*Ardea*

antigone,) were pacing about, in search of food, but rising with heavy flight on being disturbed. After an agreeable ride of fourteen miles, we arrived at “*Mut, mut billy*,” the farm of Mr. Reddal ; here we remained for the night.*

Proceeding on our journey the following morning, we passed an interesting open forest country, possessing some good land for cultivation, and abundance of fine herbage for grazing. Many of the situations appeared too damp for sheep, but all, even to the mountain ranges, had fine feeding for cattle. About noon we arrived at “*Gonnong*,” a cattle station belonging to Mr. Kennedy, of Appin. Our route continued through a still beautiful country, abounding in fine herbage, and for the most part an open forest of much picturesque beauty ; blocks of granite, grouped in various forms and of all dimensions, appeared elevating themselves above the land, crowning the summits of the hills, or protruding through the declivities.

Black and white cockatoos, (*Psittacus funereus*.)

* We tasted some excellent ale which had been brewed on the farm, and it was gratifying to find that so wholesome a beverage could be made by the colonists. The hop thrives well in this part of the colony, and I understand succeeds even better on the farms at the Hunter's River.

Lath and *P. galeritus* Temm.,) with an infinite variety of the parrot tribe, such as ground parrots, (*Psittacus formosus*. Lath.) loris, (*Psittacus eximius*, Shaw.) &c., enlivened the scene, for even their discordant screams are cheering in the depths of an Australian solitude; among them also the "Rosehill parrot," which, for beauty, variety, and harmony of colours, is not to be equalled by any of the other species, was abundant; I picked up one of this species lying dead on the road, still warm, in full and beautiful plumage, and without any external wound to account for its death. The more gentle "Bronze-winged pigeons" (*Columba chalcoptera*) were also very numerous, alighting on the road to pick up food, unmindful of the near approach of the horses. The plumage of this bird varies from a beautiful fawn colour to a dark brown, with several brown feathers near the bases of the wings, from which cause it derives its colonial appellation. Numerous magpies, crows, and the smaller variety of birds of gay plumage, also crossed our path, exciting the admiration and attention of the traveller.

A peculiar, and, I believe, undescribed species of the lizard tribe, of a black colour and repulsive appearance, but perfectly harmless, was occasionally seen; the tail is very short in pro-

portion to the length of the body, having the appearance of a portion of it being accidentally broken off, but on examination it is found to be the natural formation; they crossed the road before us, moving very slow, and did not display any signs of timidity at our presence. This species is said to be eaten by the aborigines.

After passing the Gap,* or opening in the mountain range, through which the road to Yas Plains leads, we continued for a few miles through a still interesting country. About this place several of the varieties or species of *Eucalyptus*, which have opposite leaves of a bluish green colour, their surface being sprinkled thinly with a whitish powder, were very abundant; it is from their foliage that the largest quantity of the camphorated oil, which so closely resembles the *Caju puti*, is produced. Some contain it in such abundance as to cover the hand with oil, when one of the leaves is gently rubbed against it. I am informed that the oil has been extracted in the colony for medicinal purposes, and, I believe, will be found

* This pass in the mountain range was discovered by Mr. Hamilton Hume, (in the expedition made to the south-west of Australia, by those enterprising travellers, Messrs. Hovell and Hume,) and from which the important discovery of Yas (or according to the aboriginal pronunciation, Yar) Plains was made.

possessed of similar properties to the *Caju puti*, so highly esteemed in arthrodial rheumatism as an embrocation. The oil known by the name of *Caju puti** oil is produced from the leaves of a tree of the *Melaleuca* genus, of the species *M. leucadendron* and *M. Caju puti*.

By five o'clock, P.M. we arrived, after a very agreeable day's journey, at the neat white cottage of Mr. Rose, at Mundoona: we had made a journey of twenty-nine miles this day, and were now within a few miles of Yas Plains, although they were not visible from this farm; the fine stream of the Yas river flows through

* Derived from two Malay words, *Kayu puti*, signifying "white wood;" (*Kayu*, wood; *puti*, white). The mode of preparing the oil is as follows:—"The leaves are collected in a hot dry day, and put into thoroughly dry bags, in which, nevertheless, they soon spontaneously heat and become moist, as if macerated in water. They are then cut in pieces, infused in water, and left to ferment for a night, after which they are distilled. The quantity of oil they yield is very small, scarcely more than three fluid drachms being obtained from two bags of leaves."—*Rumphius*.

"When newly drawn it is very limpid, pellucid, and volatile; and *Rumphius* says, smells strongly of cardamoms, but is more pleasant. On account of the high price of real *Caju puti* oil, it is said to be often adulterated with oil of turpentine, and coloured with resin of milfoil."—*Thompson's London Dispensary*, 8vo. page 416.

the estate, only a short distance from the cottage. Since leaving "Goulburn Plains," we had occasionally seen the "Green-wattle tree" still in bloom; its bark is highly valued for the tanning principle it abundantly contains; the bark of another "*Acacia*," called "black wattle" by the colonists, also contains similar properties, but the former bears the preference from producing a stronger liquor, and from the latter imparting a much deeper red tinge to the leather; the bark is used in the tan pits macerated only in cold water, but when there is time and requisite conveniences, a decoction is made, by which a stronger liquor is procured. The aborigines, about the Illawarra district, and other parts of the colony, stupify fish, by throwing the bark of the "green-wattle tree" into the water.

I rode over to Yas Plains, to the farm of Mr. Manton, (a son of the celebrated gunsmith,) about four miles distant on the banks of the Yas river, the house being constructed on an elevated site, commands a fine picturesque view of the extensive plains or downs of Yas, the distant wooded hills, forest scenery, with the Yas river slowly winding its course beneath. This part of the colony appears valuable; the country is for the most part open forest, with luxuriant pasturage, and well watered, (an object

of much importance in this arid country,) combining capabilities of cultivation and grazing land with picturesque beauty. The "Plains," or more properly speaking, extensive downs, are destitute of trees, affording abundance of pasturage for sheep, &c., and the distance is terminated by open forest country, most part of which has already been granted or sold by government to settlers.

Mr. Manton's farm is delightfully situated, having a fine stream of water running through it, every facility for sheep-washing is afforded him—a desideratum of the first importance in this colony, where wool forms the staple article, the settler's main prop, and the cleaner it is brought to market, of course a better price can be obtained. The land about the farm, (as must be expected from all large grants,) is composed of good and bad portions, but the former, I believe, preponderates.

The natives had just arrived in the paddock, and established their temporary village or encampment; their habitations were merely sheets of bark, stripped from the trees in the vicinity, and supported by props, the sheet of bark being placed to windward, and shifted as might be required, the fire for cooking purposes, &c., being made in front. The aborigines are very expert

in stripping large and perfect sheets of bark from the trees, and as this material is used by the colonists for the covering of huts and other purposes, the natives are often employed by them to procure it. The bark of two species of the *Eucalyptus* called "stringy bark" and "box-tree" by the colonists, (more particularly the former,) is preferred, as from them it is more readily stripped in pieces of the large size usually required. If the aborigines wanted to pass a river, I observed them strip off sheets of bark with great expedition, upon which they crossed, paddling themselves with a piece of wood, sometimes placing piles of mud at each end of the rude *bark* to prevent the ingress of the water, if there was any thing in it they wished to keep dry: having all the services they require out of the rudely constructed vessels, they desert and leave them either to be carried down the stream or rot on the banks, being aware that another canoe of the same rude construction is always ready when it may be required.

When the bark of the "stringy bark" (or, according to its native name in this part of the colony, *Dether*) is waved, it is rejected by the stock-keepers, fencers, &c., as unserviceable, the timber being then found twisted, and not capable of being split into straight pieces for

paling, &c. ; but when the fibres of the bark run in a parallel direction, the wood of the tree is also found to correspond, and the grain being straight is readily split into rails, posts, or applied to any other purpose that may be required by the settler. The wood of the "box-tree" (*Eucalyptus marginata?*) is considered very durable for flooring boards, shingles, &c., and the young trees for shafts of gigs ; for the latter purpose it is considered by many persons not to be surpassed by any other kind of wood in the colony.

The usual mode of cooking among the native tribes, is by throwing the food upon the fire to broil, or rather to get half-roasted, in which state it is eaten ; or a native oven is made in the ground, similar to those in use among the New Zealanders, and throughout the Polynesian Archipelago.* The remarks made on the characteristic features and intellectual capacities

* At New Zealand a pit is dug in the ground, in which some stones are placed, and a fire lighted upon them, and suffered to remain until they are well-heated ; after the fire is removed, water is thrown over the stones, and damp leaves placed also upon them, which causes much steam to arise ; the meat, potatoes, &c., are then placed into this oven, enveloped in leaves, and the whole entirely covered with earth ; it remains for nearly an hour, when the cooking process is found to be completed.

of the aborigines, previously seen in the Bathurst district, equally apply to those now seen in this portion of the colony. I cannot consider them so degraded a race as they have been represented. Lesson, alluding to the Australian negro, says, "To judge by his external appearance and intellect, the native of New South Wales would seem to have been degraded from the true rank of man, and to approach the nature of the brute.

"This race does not appear to differ in any thing essential from the Oceanic race, of which the Papuas alone form another somewhat distinct branch; they have a similarity of form and external character to the inhabitants of New Britain, New Ireland, and very probably those of New Caledonia. Poverty of soil and rigour of climate must have exerted an influence upon the race, and deteriorated it, and it is from this source that the slight differences arise, which seem to separate it from the African negro race, with which, however, an attentive examination shows it to be identical." And he further observes, "it is probable that the negroes of New Holland have extended into the Australian continent, by New Guinea and the eastern islands, and that the migration has been made from the coast of Africa by the great island of

Madagascar, which had itself, at a later period, received men of other races."

The races inhabiting, however, the land of New South Wales and Van Dieman's Land or Tasmania, differ; the former, although possessing the African features, have straight hair, whilst those of the latter country are more closely allied to the Papuans. As far as regards their occasionally miserable appearance, (for many are the reverse in the interior,) it may be counted for by a dependence upon a precarious supply of food. Having no natural fruits, they subsist principally upon the produce of the chase, having nothing to induce them to cultivate the soil; they have no fixed habitations, and consequently no villages; the different tribes or families remove to those localities where game may abound, and as too long a stay in any situation would cause a scarcity of game, they seldom remain in one spot longer than three or four days. How different then they are, in respect to country and climate, from those races inhabiting the Polynesian Archipelago, who live in a luxuriant and fertile country, abounding in all the vegetables and fruits of tropical countries, as well as having hogs, fowls, &c.*

* Among the Coroados Indians in the interior of Brazil,

Polygamy is permitted among the Australian aborigines: each takes as many wives as he pleases, or can maintain, and can dismiss or assign them over at pleasure; but many have only one wife, not taking another until she is dismissed. Some of the women of the interior tribes have fine forms, tolerably handsome features, and fine curled hair; the generality, however, of both males and females, are not conspicuous for personal beauty.

After wet weather they track game with much facility, and from the late rains the hunting expeditions had been very successful; game was therefore abundant at the camp, which consisted of opossums, flying squirrels, bandicoots, snakes, &c. I purchased, for a small piece of tobacco, the skin (the fur of which is remarkably fine) of a very handsome light grey flying squirrel, called by the natives *Min, ugo*,

“it is very common for several families to quit their abodes and settle where new fruits are ripening, or where the chase is more productive.”—*Spix and Martius Travels in Brazil*, 8vo. Eng. Trans. vol. ii. p. 248.

And why, we may ask, do the inhabitants of civilized countries emigrate? It may be answered, to gain recompence for their labour, and to be able to maintain themselves and families. Yet we blame savages for acting upon the same principle, their wants causing them to lead a wandering life.

(and also *Bango* and *Berat*.) It is surprising the distance these animals “fly,” or spring, aided by the membrane extending from the sides between the fore and hind legs. The little sugar squirrel has been known to leap a distance of forty yards, from an elevation of *thirty feet* to the butt of a tree, across a river. One of the opossums among the game was a female which had two large-sized young ones in her pouch; the delicate morsels were at this time broiling, unskinned, and undrawn, upon the fire, whilst the “old mother” was lying yet unflayed in the basket.

It was amusing to see with what rapidity and expertness the animals were skinned and embowelled by the blacks; the offal was thrown to the dogs, but as such a waste on the part of the natives does not often take place, we can only presume it is when game, as it was at present, is very abundant—the dogs are usually in poor condition, from getting a very precarious supply of provender: the liver being extracted, and gall-bladder removed, a stick was thrust through the animal, which was either thrown upon the ashes to broil, or placed upon a wooden spit before the fire to roast; whether the food was removed from the fire cooked, or only half-dressed, depended entirely on the state of their

appetites : the flesh of the animals at this time preparing for dinner by our tawny friends appeared delicate, and was no doubt excellent eating, as the diet of the animals was in most instances vegetable.

The natives are as dirty in general habits as in cookery, and this *unclean* race were often seen as “chimney ornaments” in the settlers’ habitations, placing themselves on each side of the fire-place, or almost in the hearth, to get warm, looking like a huge piece of charred wood, and forming objects neither useful nor ornamental ; they have a great antipathy to any thing like labour, (I do not mean to disparage the race by this observation, for all uncultivated tribes are similar in this respect,) and the only way to get rid of them whenever they became troublesome, was to set them to work.

Both sexes wear cloaks made from several skins of the opossum, kangaroos, or other animals joined together. In cold weather the fur is worn turned inwards, making a warm and comfortable garment ; neither males nor females appear to regard it as a covering required for decency, but merely as a protection against the inclemency of the weather, as it is frequently thrown aside. The skins of either the opossum or kangaroo are used for cloaks,

and are prepared, when recently taken from the animal, by stretching them out upon the ground with small wooden pegs, the inner side being scraped with a shell, until they are rendered perfectly clean and pliable. The skins when dry are stitched neatly together, with thread made from the long tendons of the muscles about the tail of the kangaroo; (which when dried are capable of being divided into threads of almost any degree of fineness;) the needle is formed of a piece of bone; and a number of these skins sewn together form the cloaks in general use. Among both males and females many have a sort of *tatauing*, or ornamental marks scratched upon the inner part of the cloak, according to the taste of the owner.

Both sexes have the *septum naris* perforated, in which a piece of straw, stick, or emu-bone is worn, looking like what Jack would term a "sprintsail yard;" this practice is universal among the whole of the tribes seen in the colony, and is regarded as highly ornamental. I have before alluded to the loss of an incisor tooth of the upper jaw, observed among the adult male natives; this, on inquiry, I found proceeded from a custom existing among them, (which is attended at the time with much ceremony,) of a male, on attaining the age of manhood, having

to undergo this operation, receiving at the same time the "cumeel," or opossum-skin belt, after which he is admitted into the society of men, permitted to attend the *corroberas*, or consultations when any marauding or war expedition is in contemplation, or when the tribe is about to remove from one part of the country to another : previous to this, they are considered only fit society for women, and associate principally with them. A son of a chief at Yas Plains, who had not yet undergone this ceremony, necessary for his admission, attended one of their meetings : on being discovered, he was obliged to leave the assembly.

The females among the native tribes have little confidence reposed in them by the opposite sex, from fear that their secret plans and expeditions might be divulged by them : when, therefore, they form a plot to steal or kill cattle, they are careful to conceal their schemes from the weaker sex, and boys associate with them ; for in instances not a few, when plans for marauding excursions have been overheard by the females, the latter have betrayed them to the stock-keepers, and thus frustrated their intentions. But may not this proceed from the want of mutual confidence between the parties ? Among the tribes a chieftain does not preserve an hereditary

rank, chiefs being chosen for superior bravery, being the best hunter, or having a superior mind.* Thus men in a state of nature choose their leaders; and we may observe a similar order of things among gregarious animals.

* It is also recorded of the Coroados Indians in the interior of Brazil, according to Spix and Martius, "When they carry on war, their leader is the best hunter, he who has killed the greatest number of Enemies, Ounces, &c., and has the greatest share of cunning. At home his commands are not attended to—every body commands at home, according to his own pleasure."—*Travels in Brazil*, 8vo. Eng. Transl. vol. ii. p. 245.

CHAPTER IX.

Perch, and other fish—An elegant couple—Kangaroo dogs—Black and white cockatoos—Vegetable productions—Mr. O'Brien's farm—Herds of cattle—Bush life—Proceed towards the Murrumbidgee river—A bush track—Romantic country—Arrive on the banks of the Murrumbidgee—Cross the river—Swamp oaks, and other trees—Remarkable caves—Return to Yas—Superstitious ceremonies—Crystal used in the cure of diseases—Mode of employing it.

LARGE quantities of native perch are caught in the Yas and Murrumbidgee rivers ; their flavour is delicious : their average length is nineteen inches, and the weight from three to six pounds : they have however been taken from two and a half to three feet in length, and weighing seventy pounds ; and some even of the enormous size of one hundred, and one hundred and twenty pounds :* the breadth is great in proportion to

* This fish is of the family of perches, and probably the same as described by the French naturalists, as a new genus, under the name of *Gryptes Brisbanii*.

the length of the fish. Those I examined were of a yellowish-green colour, covered with irregular black spots, with a silvery abdomen. They are named by the colonists, "river cod;" and by the aborigines, "Mewuruk."* In the stomach of this fish I frequently found shell-fish, of the genus *Unio*, in an entire state. The larger kind of these shells the natives of the Tumat country call "Nargun;" and the smaller, usually found in rivulets or creeks, "Pindaquin, or Bucki." Occasionally half-digested masses of green caterpillars, and other insects, were also found in the stomach of this fish. In the Tumat country, varieties of the "river cod," are called by the natives Bewuck, Mungee, &c. Another fish of the family of perches is also caught in the Yas, Murrumbidgee, and other large rivers in the colony: it is called the "perch" by the colonists, and "Kupé" by the natives. I preserved a specimen, caught in the Murrumbidgee, measuring seventeen inches in length, and six inches at its greatest breadth, containing a fine roe:

* The aborigines are expert fishermen; and I have seen them capture a number of fish, when Europeans trying near them have not had even a nibble. About the Fish river, the aborigines have a novel manner of fishing—by placing a bait at the end of a spear, when the water is clear, and on the fish approaching, they transfix it with much expertness.

twenty inches was the greatest length they had as yet been taken in this river; but, like the "river cod," it increases more in breadth, in proportion to its weight, than in length. The colour of the Kupé was inclining to bronze; the ends of the scales being black, gave to the fish a checkered appearance.

Among the native inhabitants of the Yas district was a pair of originals: the man was called Daraga, and his lady the "beautiful Kitty of Yas." Neither of them had pretensions to beauty. The lady had ornamented her delicate form (for all the ladies are fond of adornments) with two opossum tails, pendent in a graceful manner from her greasy locks; pieces of tobacco-pipe, mingled with coloured beads, adorned her neck; an old, dirty, opossum-skin cloak was thrown over the shoulders; a bundle of indescribable rags around the waist; and a netbul or culy hanging behind, (filled with a collection of "small deer," and other eatables, that would baffle all attempts at description,) completed the toilette of this angelic creature. Of her features I shall only say, they were not such as painters represent those of Venus: her mouth, for instance, had a striking resemblance to the gaping entrance of a Wombat's burrow. The husband also had decorated the locks of his cranium with opossum

tails, with the addition of grease and red ochre ; a tuft of beard ornamented his chin ; and the colour of his hide was barely discernible, from the layers of mud and charcoal covering it : he wore a "spritsail yard" through his "apology for a nose ;" the opossum-skin cloak covered his shoulders ; and the "cumeel," or belt of opossum-skin, girded the loins : the pipe was his constant companion, as the love of tobacco among those who have intercourse with Europeans, is unbounded, and no more acceptable present can be made them.

At meal times it was curious to observe the conduct of this interesting couple and the kangaroo dogs : it was evident that no good feeling subsisted betwixt the parties : the dogs regarded the former with an expression of anger, and the opposite party looked both sulkily and anxiously at the canine species ;—the dogs appeared instinctively to fear that the human creatures would devour every morsel of the food, and that they should be minus their share ; whilst the latter seemed to know, either by instinct or practical experience, that large dogs bite tolerably hard when angry.

Black and white cockatoos had lately become very numerous about this part of the country : the former appeared to have been attracted by some trees that had been felled when clearing a

spot of land for cultivation—as these birds visit the dead or fallen trees to procure the larvæ of insects that breed in them. I have seen, more than once, small trees lying prostrate, occasioned by the powerful bills of the large black cockatoos, who, observing on the trunk, externally, indications of a larva being within, have diligently laboured to extract it; and should the object of their search be situated (as often occurs) far in, before they reach it, the trunk is so much cut through, that the slightest puff of wind lays it prostrate.*

Among some of the few vegetable productions in use among the Australian blacks as food, is the root of a species of bulrush, which they name “Cormiork.” It grows abundantly on the banks of the Yas, Murrumbidgee, Tumat, and other rivers: the roots are eaten only when young: they are prepared by being baked, and the epidermis removed. Europeans who have partaken of it, say it has an agreeable farinaceous taste. The roots are collected in spring, when the young plants have just commenced sprouting.

* The black cockatoo (of which at present there are only two species known) feeds on the larvæ of insects, or seeds of the *Banksia*, *Hakea*, and even those of the *Xanthorrhoea*, or grass tree.

Among other farms about Yas Plains is "Mount Lavinia," the property of my late fellow-traveller, Henry O'Brien, Esq., at whose place I passed many agreeable days during my sojourn at Yas. The house has been erected in a picturesque situation, upon a hill of moderate elevation, near the base of which the Yas river winds its course : the effect, on the approach to the house, is extremely pretty ; the view from the hill overlooks a good extent of picturesque country, the greatest part is devoted to sheep pasturage ; and some portion of arable land is alone wanting to make this spot still more charming. From another hill, on the plains, a short distance from that just mentioned, the view is still more expansive, overlooking the extensive verdant downs, surrounded in the distance by thinly-wooded hills, terminated in the southwest direction by distant blue mountains, near which flows the fine stream of the Murrumbidgee.

The plains were animated by herds of cattle, flocks of sheep, and troops of horses, grazing, reposing, or exercising : the whole combination of this beautiful scenery excited the most pleasing sensations, which were heightened by its English character, and cause the settler to reflect less on the remoteness from home ; when surrounded

by his family circle, and a few select friends—language, manners, customs, being all in accordance with his own “native land :” his farm once under cultivation, and stocked, he feels but few, if any wants. Above all, he has no anxious moments about the future welfare of his children, as there are few difficulties, in a new country, in providing for them ; and although many complain of the “dulness of bush life,” it is seldom the case with those who are practically acquainted with it, for time rapidly passes away in the various enjoyments of a rustic life, and the superintendence of duties which the farm imposes on a settler, each tending to advance his prosperity. The farm produces the necessary daily supplies for the tables ; and the sale of the wool gives a cash income for the purchase of other articles, as wearing apparel, tea, sugar, agricultural implements, &c. ; Sydney is therefore usually visited once annually to dispose of the wool, or ship it to England, and to purchase any supplies that may be required for the use of the family or farm of the settler.

Early on the morning of the 11th of October, in company with Mr. Manton, I left “Mount Lavinia” to visit a part of the country about the Murrumbidgee river, and fourteen or fifteen miles

distant from Yas. We crossed the extensive plains, and entered a bush track leading through a fine open forest country; some of the land was boggy, but the most part consisted of open forest, with rich pasturage, and was well circumstanced for the several sheep and cattle stations we passed. From the general excellent quality of land on and in the vicinity of the Yas plains, as well as being well watered, extensive purchases from the government have been made by the settlers already having grants here, and nearly the whole, with water frontage, has been purchased; I am inclined to think that this part of the colony will prove the richest and most valuable of almost any of the present known portions.

On approaching the Murrumbidgee river, the character of the scenery increases in beauty, assuming even a romantic appearance,—the broken country adding to, rather than diminishing the effect: the day was cloudless, with a brilliant sun, so the prospect extended to a great distance;—green sloping hills, thinly timbered, only wanting the addition of mansions to the natural lawns and parks to perfect the landscape; flowers of great variety and gay colours strewed the ground in the utmost profusion; the indigo shrub (*Indigofera australis*) was also abundant in

flower, with numerous other flowering plants; green natural fields decked the level land; the songs of birds, and their increased numbers, were sufficient to acquaint us that we were approaching a river. The scene was of the most animated description; in the distance long lines of "swamp oaks," (*Casuarina palludosa*,) readily distinguished by their dark, peculiar appearance, indicated to us the course of the river. Having enjoyed the prospect from the elevation, we descended a steep hill, proceeded through a luxuriant pasturage, which was bounded by thinly-wooded hills, carpeted with verdure, and soon arrived on the bank of the Murrumbidgee stream, which may be, at this part, forty or fifty yards wide. On the opposite side of the river Mr. Manton possessed a grant, which he had just commenced to stock and cultivate: the locality appeared excellent during the cool months, but liable to be soon parched by the fervent summers.

Having hobbled our horses, that eagerly fed on the luxuriant grass surrounding them, we crossed the river in a canoe which had been scooped by Mr. Manton's servants from the solid trunk of a "water gum" tree, (*Eucalyptus sp.*) and was capable of carrying four or six persons. Arriving on its opposite side we were now

beyond the acknowledged limits of the colony, although numerous cattle and sheep stations extend to a great distance further. On the banks of this fine stream, besides numerous flowering shrubs, the elegant "swamp oaks" towered to the elevation of fifty or sixty feet, their dark filiform foliage giving them the character of the larch : besides these, (which were by far the most numerous,) there were some enormous trees of the *Eucalyptus* genus, called "water gum" by the colonists ; they attain from ninety to one hundred feet in height, with a diameter of from six to eight feet ; the wood is of a reddish colour, and very hard : on account of the latter quality, it is less frequently used, being difficult to cut. The currijong (*Hibiscus*) also grew about the limestone rocks in the vicinity, and was readily to be distinguished from other trees by the lighter and more vivid green of its foliage. A number of European genera of plants indigenous to the country, or at all events from their situations giving reason to suppose so, grew in the vicinity of this river ; among others, the "sow thistle," (the young tops of which are eaten by the natives just before the plant commences to blossom,) a small red poppy, the crow-foot, a rumex or dock (*R. lancifolia* ?) geranium, and "shep-

herd's purse," (*Thlaspi bursa pastoris*,) were abundant, and they are seen very far in the interior beyond this place.

Some caves have been lately found in the limestone rocks about this selection; and since the valuable discovery of fossil bones in those at Wellington Valley, by Major Mitchell and others, limestone caverns have become one of the *colonial lions*; these, therefore, were pointed out to me as objects of great curiosity; I found them however very small, and they did not repay the trouble of getting into them. They resembled the small caves often seen in the limestone quarries of Plymouth and Oreston, in Devonshire, from which some valuable fossils have been procured: stalactites of course abounded, but neither fossils nor any red calcareous earth, in which those remains have usually been found deposited. Among a quantity of dust were several loose bones, which had been at first described to me as fossils, but which were the breast bones and tibiæ of the emu, and skulls, and other bones of dogs, which no doubt had been placed there by the natives, for the tibiæ of the emu (here called Béréban by the blacks) had a hole at the upper and anterior part; this perforation is made, as many of them

afterwards told me, to enable them more readily, by admitting air, to suck out the rich marrow from the lower end, which was broken for that purpose. The extent of the cavern was from fifteen to twenty feet ; the entrance so narrow, that the explorer could only enter feet foremost, nor was it sufficiently large in the interior to enable him to stand erect. About sunset we returned to Yas, having a fine moonlight night for our journey.

The aborigines have many superstitious ceremonies connected with their practice of the healing art, as we find among all primitive nations ; those persons who take upon themselves the occupation to attend upon the sick or wounded, unite the offices of priest, soothsayer, and physician. The few medicines administered by them are from the vegetable kingdom ; they also make use of a crystal for the cure of diseases, not by administering it to the sick person, but the physician employs its aid, to act upon the superstitious mind of his patient ; it is the common quartz crystal, and is called by the natives, in the vicinity of Sydney, Krardgee Kibba, or Doctor Stone.* This name, borrowed from

* “ Krardgee,” signifying a person who attends on the sick ; and “ kibba,” a stone.

the Europeans, is sometimes employed by the Yas natives, but that by which it is characterized by them and likewise by the natives of the Murumbidgee and Tumat countries, is “Merrúdagalle.” The aborigines say they manufacture it, but would not mention the *ingredients of which it is composed*; *this was a secret!!* The women are never permitted to look upon it, and the priests impose upon their minds a belief, that, should their curiosity prompt them so far, they would instantly die.

These crystals are valued by them according to their size, and it is not easy to procure a large one from them. They are not only regarded as a charm by which wounds and diseases of the human frame can be cured, but they advance another step, by declaring, that when thrown at a person (accompanied, I suppose, by certain incantations) it will have the power of causing his death. This power, said by them to be possessed by the stone, having been mentioned one day by a native to a European settler, the latter ridiculed it, and desired the black to put it to the test by throwing it at him. This, however, was refused, “he being good man;” alluding to the European, “he no want kill him;” and, after using every endeavour to

induce blackee to make the trial, he shuffled out of the dilemma, by acknowledging "that it would have no effect upon the white fellers."

The following account of the manner in which the crystal is used by the physician, may be considered interesting. In the Tumat country, a native black, named Golong, was suffering from a spear wound, received a short time previous in a skirmish with a hostile tribe; it was in the evening, (for the stones are only used after dark, as at that time their efficacy is considered greater,) when a native of his tribe, named Baramumbup, employed the crystal for the purpose of healing the wound in the following manner.

The patient was laid at a distance of twenty or thirty yards from the encampment, after which the physician commenced the examination of the wound, which he sucked; then, without spitting, he retired to a distance of ten or fifteen yards from the invalid, muttered, or appeared to mutter some prayer or invocation for about a minute; on concluding, he placed the crystal in his mouth, sucked it, and then, removing the stone, spat upon the ground, and trampled upon the discharged saliva, pressing it

with his feet firmly into the earth. This ceremony was repeated several times on this and subsequent evenings, until the patient's recovery, which, of course, was considered to have been effected by the wonderful curative properties resident in the crystal. On making inquiry, why the physician is so careful in trampling the saliva discharged from his mouth into the ground, no satisfactory reason could be obtained, a vague answer only being returned to the query ; but it is not improbable that they consider, by this operation, they finally destroy the power of the evil spirit, extracted by the operation, through the virtues of the stone : some such reason for this proceeding may be inferred from an observation made to any European, who may be present at this part of the ceremony, that " He no come up again."

A somewhat analogous custom exists among the aboriginal tribes of Brazil, called " Gua-chos," as related by Spix and Martius in their *Brazilian Travels*. (English Trans. 8vo. vol. ii. page 77.) " Their Payés, or physicians, (called in their language, Vunageneto,) are conjurers and exorcists of the evil principle, which they call Nanigogigo. Their cures of the sick are very simple, and consist principally in fumi-

gating, or in sucking, the part affected ; on which the payé spits into a pit, as if he would give back the evil principle, which he has sucked out, to the earth, and bury it.”

CHAPTER X.

Leave Yas Plains for Sydney—Mr. Shelly's farm—Splendid new road—Mr. Barber's farm—Shoalhaven gullies—Interesting spot—Mr. Campbell's farm—Journey resumed—Settlement of Bong, Bong—Bargo Brush—Profusion of flowering shrubs—View from the summit of Mount Prudhoe—The cow pasture road—Farms of Mr. M'Arthur, and Captain Coghill—Flowers—The white cedar—Government hospital at Liverpool.

ON the 13th of October, I left Yas Plains on my return to Sydney,* retracing my route by Gonnong, Mut, mut, billy, I arrived at Goulburn Plains on the 14th. Resuming my journey on the following morning, accompanied by some friends, they carried me a different route from that by which I arrived at the plains: the road led over a rather hilly but open forest and good pasture land, and, travelling a distance of fifteen miles, (when close brush asserted its triumph over the former fine country,) we ar-

* Yas Plains are distant one hundred and eighty-six miles from Sydney.

rived at Mr. Shelly's farm on the "Grampian Hills." Proceeding six miles beyond, we crossed the splendid new road, forming a portion of the great southern line: it was wide, yet unbeaten; a dense forest bounding it on either side as far as the eye could reach, the felled trees being placed along, to point out the breadth of the road. This did not appear requisite, as the thick forest sufficiently indicated it.

At a short distance further on, we turned off the more direct road, and arrived at Mr. Barber's farm, close to which commences the extraordinary and extensive fissure, called the "Shoalhaven Gullies," extending through a large tract of country to the sea coast. This farm possesses natural beauties of a sublime and romantic character; but the soil is principally rocky, and does not seem to possess the valuable requisites to a settler, that of arable land and good sheep pasturage, in any quantity. To a visitor, however, the romantic beauties of the Gullies are sufficient objects of attraction; and, accompanied by Mr. Hume, senior, I was taken, at a very short distance from the house, to as splendid a scene as has been perhaps yet discovered in this interesting and peculiar country. I much regret that time did not permit me to make a closer examination of these gullies,

which appear to owe their existence to some sudden convulsion of nature that had violently rent the hills asunder ; down the steep sides, a dense vegetation concealed their depth, although the eye could reach, unimpeded, sufficiently deep to enable some idea to be formed of the profoundness of these chasms. The largest and most extensive gully, said to possess the most beautiful scenery, was five miles distant.

The Shoalhaven river, which runs beneath, was not visible, although its murmuring, broken torrent could be heard. The wooded hills, varying in denseness, some trees overhanging the abyss, still further increased the sublimity of the scene ; and occasionally in the evenings, a small species of kangaroo, called " rock kangaroo" by the colonists, was seen skipping about the hills. To a geologist, the examination of these localities would be highly interesting, as there are several caverns, in their limestone formations, with indications of fossil remains. Highly gratified by the view, I departed ; and after leaving this farm, crossed a small, insignificant rivulet : this was the river (or, according to the colonial vocabulary, " creek") which empties itself into the Shoalhaven Gullies ; and its first fall into them was at no further distance than a

hundred rods from this place. The first fall is from a height of perhaps sixteen feet; and there are several falls, altogether of about eighty feet, until the stream reaches the first gully; when in its progress, it receives tributary streams from the westward, forming the Shoalhaven river, which flows through these romantic glens, until it terminates by discharging its waters into the sea.

Our journey continued through a dull, uninteresting country; and late in the evening we arrived at "Wingelo," the farm of Robert Campbell, Esq., by whom we were received with the kindest hospitality, and remained the night, after travelling rather more than twenty-miles this day.

The next morning found us again "en route" over a good road; but gloomy forests and brush produced a dull scenery,* until, as we progressed, it became enlivened by the gay blossoms of *Acacias*, *Patersonia*, *Daviesia*, *Pimelea*; the long spikes of the grass-tree, with tufts of white flowers; and a few small and elegant trees of the

* Forest scenery in Australia is of a very dull character; with all my admiration of the vegetable kingdom, I could find but very little that was interesting in their appearance, unless flowering shrubs and plants were in profusion.

Eucalyptus corymbosa, which were profusely covered with clusters of snowy blossoms. The large forest trees in this country have very small roots in proportion to their size and elevation, so much so as to excite surprise how they are capable of standing against the severe gusts of wind to which they are frequently exposed; and yet for trees to be uprooted by that cause is comparatively rare,—showing that nature is always correct in her work, however it may at first appear to our judgment.

On approaching the settlement of “Bong, Bong,” the wild forest had, in most places, given way to a cleared, cultivated, and beautiful country, forming a strong contrast to the gloomy bush we passed not long before. The vivid green of the fields of grain, in ear, but not yet mature, gave promise of a plentiful harvest; and clumps of trees, scattered about the pastures, sufficient to shelter the cattle from the parching heats of summer, added to the pleasing character of the scenery. The neat cottages, to which barns, stables, &c. were attached, sprinkled over the landscape; the distant wooded hills; and smiling fields, animated by cattle,—could not fail of exciting pleasurable sensations, and a favourable impression of this “land of promise,” sufficient to banish the disappointment

which the dulness of many of the wild parts of the country is too apt to produce.

Numerous small farms, with fields of grain, pasturage land, abounding in cattle, horses, and sheep; neatly fenced paddocks, (for hedges are unknown,) continued more or less from this, which is called the settlement, to the township of "Bong, Bong," a distance of five or six miles. At one of the farms we passed, the overseer did not appear to have yet received much benefit from the "march of intellect;" for on a board the following notice appeared:—*No Thorrofaer Hear.*

Arriving at the Argyle Inn, in the township of "Bong, Bong," we thence proceeded, after remaining sufficient time to refresh ourselves and horses, intending to continue the night at "Mittagong," ten miles further on. The weather was fine, but sultry; roads dusty, scenery dull and uninteresting, until descending to the valley in which the "Kangaroo or Cutter's Inn" is situated, (after ascending the Mittagong range,) it was an agreeable change to behold a prospect of cleared and cultivated land, surrounded by dense forests, and ranges of densely-wooded hills in the distance. There was a quantity of land under cultivation for grain, pasturage, &c., animated by herds of cattle and flocks of

sheep ; and a windmill, made an excellent addition to the landscape. Neat cottages, with gardens, were scattered about ; and, as it was near sunset at the time we arrived, the scene was still further increased in beauty. We soon reached the neat and comfortable inn, to which an excellent garden is attached, well stocked with rose trees, in full bloom, pinks, and other European flowering plants, as well as a number of European fruit trees ; many of which, at this time, were profusely covered with snowy blossoms.

At dawn the next day, we were again on our journey : the morning proved delightfully cool and agreeable, and nature seemed refreshed by the night dews. A grateful fragrance emanated from the plants and shrubs around, and the birds, by their carolling, seemed to enjoy the cool atmosphere. The remainder of the " Mit-tagong range" was passed over, and a rugged road led through " Bargo Brush," which is a dense forest, small portions only being occasionally seen cleared, on which a farm or inn is established. Adjoining, was usually a garden and land under cultivation. Although, for the most part, the dense and sombre forest prevailed, yet often the soil beneath was spread with a great number as well as variety of gay

and beautiful flowering shrubs, and plants ; among the most numerous of those at this time, in full bloom, were *Gnaphalium*, *Crowea*, *Bossia*, *Pomaderris*, *Patersonia*, *Persoonia*, *Daviesia*, *Banksia*, *Hakea*, *Xylomelum*, *Pimelea*, &c. &c.

The new line of road we entered upon, was broad, straight, and in excellent condition. After travelling thirteen miles, we arrived at "Lupton's Inn," and did not find early rising, with a long morning's ride, injuriously affect our appetites. Having breakfasted, we again proceeded over an excellent road, along which were neat houses, with gardens gay with the profusion of flowers, cleared patches of land under cultivation with grain, or forest land, animated by flowers ; among them a beautiful *Clematis* was conspicuous, covering the bushes with a profusion of white blossoms, or pendent in graceful festoons from the dead trunk of a tree. Having crossed the "Bargo River," an inconsiderable stream, and passed "Myrtle Creek," which has several pretty farms about it, we reached "Stonequarry Creek," which at this time was in a dangerous state for vehicles, more particularly for heavily laden drays, the road being much out of repair. There are several farms about this place, and

some quantity of land under cultivation for grain.*

We passed the new line of road over the "Razor-back Mountain," which was in an unfinished state; and, at first, some doubt existed whether this line would be completed, or another adopted; but it has been decided to finish it; for which purpose, road gangs were about to be employed upon it. On attaining the summit of Mount Prudhoe, an extensive and beautiful panoramic view of Appin, the Cow-pastures, farms, together with cultivated and forest lands, &c. was laid before us in one extensive landscape. We descended by an excellent road, passed through "Camden," the property of J. M'Arthur, Esq., came upon the Cowpasture road, crossing the Nepean river by a good wooden bridge, and arrived at Raby farm in the afternoon, after a long ride of forty-three miles. After occupying a few days in this vicinity, I proceeded to Sydney.

During my stay at the Cowpastures, I visited the fine farm at Kirkham, the residence of Captain Coghill, and his amiable family: this

* The settlers in Australia, as in America, call wheat, barley, &c. grain; and when Englishmen speak of corn-fields, they consider he alludes to maize, which is alone called corn in this country. This often leads to mistakes in conversation.

farm is valuable, consisting principally of rich arable land ; the Nepean river also running by the estate, is a valuable acquisition for sheep-washing, &c. The summer was more advanced at this part of the country than further in the interior. Strawberries and cream was not an uncommon dish, and the fruit was very abundant this season. Green peas were also in large quantities, and the gardens bloomed with English, and the more delicate, but evanescent China varieties of roses, and in such profusion, that one might have died of "roses in aromatic pain." Pinks, stocks, and other European flowers, caused the atmosphere to teem with fragrance, and charmed the eye. At some farms, the beautiful rose-tree, covered with its carnation-tinted blossoms, adorned the verandahs ; the white and pink *Robinia* was attractive from the exquisite beauty imparted by its pendulous clusters of blossoms and the ornamental growth of the tree.

But another, combining beauty of growth with fragrant flowers, must not be omitted : it is the "white cedar" of the colony, and is indigenous to this country, as well as most parts of India : it is the *Melia azedarach* of botanists. The tree is deciduous, and was now covered by pendulous clusters of lilac-coloured blossoms, adding

to the beauty and fragrance of the gardens, its lilac blossoms being elegantly contrasted by the dark green glossy foliage: the fragrance of the flowers so closely resembles those produced by the tree known in England as the "lilac," that the same appellation is given to it in this colony. In the evenings, and night more especially, this tree may be known to exist in the vicinity by the powerful fragrance it emits for some distance.* The sweetbriar and quince is often used about the farms as hedges for gardens, &c., and the appearance they give is extremely neat; the fragrance of the former is very agreeable. The Cape and English mulberry trees thrive well in the colony; the former is said to bear fruit two or three times annually, the latter only once.

In my way to Sydney, I availed myself of the kindness of Dr. Hill, the colonial surgeon, to visit the government hospital at Liverpool; it is the finest in the colony, but in my opinion of too large and expensive construction for the purpose required. The wards were spacious, well ventilated, and in excellent order, such indeed as

* It is the beautiful Neem tree of India; the root is stated to be bitter and nauseous, and is used in North America as anthelminthic.

might be creditable to any of our metropolitan hospitals. The patients receive every attention and comfort that their situation may require.* There are sometimes one hundred and fifty in the hospital, but the wards are capable of containing more. When it is considered that patients come to this hospital from a distance of two hundred miles, (that is, from the Murrumbidgee country, and even beyond,) including a large extent of district, a large building may have been thought requisite ; but the more convenient and less expensive method would have been, to have built two hospitals of moderate size, one at Goulburn Plains, and the other at Liverpool ; for it was a sad mistake to compel an invalid to travel a distance of two hundred miles for medical assistance ; and affords a facility for many to feign sickness, that they might have a journey down the country to see their friends, causing much inconvenience to the settler, who has no other means of ascertaining the man's complaint, but by taking him to this distant hospital.

* The patients are persons only under the employ of government, or assigned servants of the settlers ; for the latter the master pays a shilling daily for a month, or as many days less as the man may remain in the hospital ; but should he remain longer than a month, no further charge is made.

The scheming of the assigned servants is very annoying to the settler: the men often feign sickness, to be revenged upon their masters: several instances of this kind I have seen at a distance of one hundred and eighty-six, and two hundred miles from Liverpool. When requested, during my visit to the interior, to see these men, some were ill, but unable to undergo the fatigue of travelling so far to the hospital; others suddenly got well, and went to their work, when medical assistance was so near them: one boasted, that by methods known to himself he could produce appearances of disease so as to deceive any medical practitioner; he had but just returned from the Liverpool hospital, and was always ill, his master informed me, during the most busy times. The establishment of an hospital at Goulburn Plains would obviate most of this just cause of complaint made by the settler.*

There is a lunatic asylum at Liverpool, which I also inspected: there were several patients of both sexes within its walls. The establishment was small, and the building did not appear to have been originally constructed for the purpose for which it was used.

* Since the above was written, this inconvenience has been obviated, by government establishing an hospital at Goulburn Plains.

CHAPTER XI.

Second Journey into the interior commenced—Land of roses—The grape vine—Foreign grain—Missionary rewards—Bargo brush—Small species of Lobster—Another species—Snakes—Leeches—Mr. Dutton's farm—Proceed on the journey to Gudarigby—Native plants—Magnificent mountain view—Our repast—The laughing jackass—A spacious cavern—Its interior—Black swans and other birds.

ON the 8th of November I left Sydney for Yas Plains on a second visit to that interesting part of the colony ; again passed over the “ Razor-back Mountain,” upon which road gangs were busily employed in finishing that line of road,—and arrived in the afternoon at “ Abbotsford,” a very pretty farm belonging to Mr. Harper, near “ Stonequarry Creek :” it was in excellent order ; a large quantity of land was cultivated with grain, having every prospect of a productive harvest, the whole being in full ear, and verging towards maturity. The neat garden in

front of the dwelling-house bloomed with a profusion of roses ; and at this season of the year so abundant is this elegant and fragrant flower in the colony, that we may term it a “ Land of Roses,” as well as a “ *land of promise* ;” pinks, stocks, and other European flowers, gave an additional beauty to the scene.

Some portions of land were laid out as vineyards ; much attention being now paid to the cultivation of the vine in the colony. In the garden a number of gooseberry bushes had been planted, which were in flourishing condition, and loaded with fruit : it was considered rare to see them so productive near Sydney, although they thrive and bear abundance of fruit in the Argyle and Bathurst districts ; but here it was only one part of the garden that was favourable to their growth, being that where the influence of the sun was not too powerful during the hot summers : care has also been taken to shelter the bushes, by small sheets of bark placed upon sticks at some elevation over them, giving a protection above, but at the same time not covering them so much as to cause any deprivation of the vivifying influence of light or moderate solar heat.

Mr. Harper has been trying a great variety of foreign grain on different colonial soils ; among

others the Leghorn wheat, the ears of which are six inches in length, and from the straw the Leghorn bonnets so well known to the fair sex are manufactured.

Proceeding on my journey ; between this farm and Lupton's Inn, I was accosted by a native black, who asked me, whether " I white feller parson,* for me want shilling ;" but not being of the clerical profession, I did not consider myself liable to be placed under contribution, more particularly upon the highway. It occurred to me at the time, that he must have heard of the five hundred pounds, granted annually from the colonial funds for their conversion, and concluded that all clergymen should bestow their shillings on himself and comrades. We parted with this conditional bargain, that if he brought me birds and other animals, he should have shillings in return.

Passing through " Bargo Brush," the forest was still gay with flowers, with the additional beauty of the splendid proteaceous shrub, called the " Warratah " or " tulip tree " of the colonists, which now displayed its brilliant crimson flowers.

* The following is the definition of a clergyman, as once given by one of the aborigines : " He, white feller, belonging to Sunday, get up top o' waddy, pile long corrobera all about debbil debbil, and wear shirt over trowsel."

I remained for the night at "Mittagong," and on the afternoon of the 10th arrived at "Arthursleigh," the extensive and beautiful farm, the property of Hannibal M'Arthur, Esq.; I passed here two very agreeable days in the society of this gentleman and his friends. On the 12th I arrived at "Goulbourn Plains," and on the evening of the 14th at "Yas Plains."

The plains still retained their verdant appearance, although down the country vegetation was much parched. The river had fallen considerably since my previous visit. In the river, besides the quantity of fish there is a small and new species of lobster, which is also procured in large quantities from the muddy ponds on the Yas Plains; they are delicious eating, and taken readily by placing a piece of raw meat on a bent pin: when one is felt at the bait, it is to be dragged gently to the margin of the pond, (which is very muddy, but not deep,) and taken on the back by the hand: a number can thus be caught in a short time. The aborigines call them "Murugonan." They burrow deep into the mud, and the blacks capture them by thrusting the hand into the holes, and dragging them out, although they often extend to such a depth that the whole length of the arm is inserted before

the animal is secured.* The ponds in which the lobsters are taken are always full of water, being supplied by springs: one of them was about fifty yards in length by twenty in breadth, but of no great depth at any part. They form a chain along the plains during the dry season of the year; but during heavy rains they unite into a running stream, which empties itself into the Yas river. It is only at the season, when there is merely a chain of ponds or swamps, with but little water, that the lobsters can be caught with facility.

In the Murrumbidgee, Yas, Tumat, and other

* The largest specimen measured—

	Inch.
Length of the body	$4\frac{1}{2}$
Length of the claw	$3\frac{6}{8}$
Breadth of the shield	$1\frac{3}{8}$
Breadth of the claw	$1\frac{1}{8}$
Breadth of expanded tail	$1\frac{7}{8}$
Length of the anterior antennæ	$4\frac{2}{8}$
Length of the posterior antennæ	$1\frac{1}{2}$

The colour of the upper part of the body, in the large specimens, was brownish green; the upper part of the claws blueish green, occasionally mottled; under surface, whitish; joints, red. The smaller specimens had the upper surface of the body of a dark green colour, claws blueish green and mottled: several of the females had a quantity of ova in the usual situation.

large rivers, there is a different and larger species of lobster which is frequently found in the stomachs of the "river cod." This kind is called "Mungola" by the aborigines, and they are captured, measuring a foot and a foot and a half in length, and weighing three or four pounds. I examined a small one, captured in the Murrumbidgee at Jugiong; its dimensions were as follow :—

	Inch.
Length of the body	4
Length of the tail	4
Length of the claw	$5\frac{1}{2}$
Breadth of the body at the broadest part	2
Breadth of the claw	$1\frac{3}{8}$
Length of the anterior or external antennæ	7

The colour of the upper surface of the shield was dark green, with reddish tinges on the sides, the rings of the tail studded with short, thick spines, and similar but smaller spines on the sides of the shield: the spines and claws were white: the legs having been pulled off by the blacks, to prevent their escape during the time they were employed in catching others. I could not ascertain their colour. They are found under the large stones in the river, and are taken by the hand when the rivers are low. The natives usually seek for them in the even-

ing, or at night by torchlight, and say it is difficult to get them during the daylight.*

Snakes are numerous in various parts of the colony. Those known among the colonists as the "black and brown snakes," are found about the banks of the rivers, or in swampy situations: the natives (they are not, however, the best authority for the extent of danger a venomous snake produces) say that its bite is not deadly, but causes the person to feel *sick and sleepy* for a short time, which passes off without producing any further ill effects, even if no remedy be applied.

It would be interesting to institute experiments, so that the extent of danger attending the bites of the venomous reptiles in the colony might be ascertained with some degree of correctness. As far as regards this snake, I am well informed by persons who have been bitten, that the effects are as above stated; but still it would be interesting to know the degree of violence the poison is capable of producing in each of the venomous reptiles. I examined a "black

* In March the season commences, at Sydney, for "cray-fish," which are caught in large quantities, and of enormous size, about the sea-coast, and are hawked about the streets at a cheap rate; therefore, in this colony, cray-fish abound in the sea, and lobsters in the river.

snake," which had been just killed at the farm of Gudarigby, upon a "flat" near the river: it was of a shining, silvery, black colour above; the abdomen being dark red: it measured three feet and a half in length, and at its largest circumference, three inches: it was a male specimen. The stomach was filled with a quantity of green frogs with golden spots; (the *Rainette dorée* of Peron?) some having the appearance of being just swallowed, whilst others were half digested: there was also a mass of digested matter, in which the remains of frogs could be distinctly seen. This snake appears to be a species of the genus "*Acanthophis*." By the natives of Yas, the black snake is called "Bulbuk."

The "brown snake," which I examined, is also venomous, and, according to popular opinion, the effect very dangerous upon the human constitution. The specimen measured nearly five feet in length, and five inches at its largest circumference; the upper part of the body was of a brown colour, (from which no doubt its name is derived,) with a few light shades of black; the abdomen was of a light, bluish black. In the stomach were found several half-digested lizards, and a quantity of worms, which in some parts had even perforated the coats: on a further examination, the lungs were also found per-

forated by, and had attached to them, a number of these worms, varying from one and a half to two inches in length, and of a bright red colour : I preserved them, together with the lungs, in spirits, and sent them to the museum of the Royal College of Surgeons, in London.*

There is another dangerous snake, called "yellow snake" by the colonists, and "Jaruk" by the Yas natives : it attains a large size, and has the reputation of being very venomous, the bite producing almost immediate death.† The most deadly snake in appearance, and I believe also in effect, is one of hideous aspect, called by the colonists the "death adder," and by the Yas natives "Tammin," from having a small curved process at the extremity of the tail, or, more correctly, the tail terminating suddenly in a small curved extremity, bearing some re-

* Both the black and brown snakes take to the water on the appearance of danger ; indeed they evidently procure their food from the banks of streams, and may be considered both land and water snakes.

† From the following paragraph, copied from the "Sydney Herald" newspaper, the bite of this reptile does not prove so immediately fatal as had been represented to me.

"The overseer of Mr. Cox, at Mulgoa, *a few days* since, was bitten by a *yellow snake*. The piece was cut out, but the unfortunate man still remains in a dangerous state."—*October 25th, 1832.*

semblance to a sting, it is considered by popular rumour to inflict a deadly sting with it.

This hideous reptile is thick in proportion to its length; the eye is vivid yellow, with a black longitudinal pupil; the colour of the body is difficult to be described, being a complication of dull colours, with narrow, blackish bands, shaded off into the colours which compose the back; abdomen slightly tinged with red; head broad, thick, and flattened. The specimen I examined measured two feet two inches in length, and five inches in circumference. It is, I believe, an undescribed species.* A dog that was bitten by one, died in less than an hour. The specimen I examined was found coiled up near the banks of the Murrumbidgee river; and being of a torpid disposition, did not move when approached, but quietly reposed in the pathway, with its head turned beneath the belly.

The "diamond snake" is handsome, attains a large size, and I believe is not considered venomous. It is said, that when cattle are bitten by a venomous snake, they resort immediately to the water. A cow was found lying dead near the river, at "Gudarigby," during the time I

* There is a fine stuffed specimen of this reptile deposited in the Colonial Museum, in which the colours are well retained.

visited the farm, and from appearances the body presented, the stock-keepers formed an opinion that its death was produced by the bite of a venomous snake.

Leeches are abundant in all the "water holes" about this part of the colony, and are used for medicinal purposes : they are of a black colour, with longitudinal orange lines extending the whole length of the body, the abdomen being of a dark orange colour. They are in great demand at Sydney, as few or none are found in its vicinity.

On the 19th of November I visited the farm at "Gudarigby," the property of W. H. Dutton, Esq., in company with his brother, Mr. F. Dutton, and Mr. Manton. We remained the first night in the bark hut erected on Mr. Manton's farm. Snakes of the black and brown species were numerous at this place, no doubt arising from the location being close to the Murrumbidgee river. We had sufficient proof of the existence of these reptiles, from seeing several which had recently been destroyed by the men on the farm ; one had dropped from the back shed upon a man's bed during the night, and occasioned him to quit, and leave the reptile in undisturbed possession for the remainder of the night : in the morning, search was made, the

reptile discovered among the blankets, and killed: it was a "black snake," and measured full three feet in length. The warm valley in which the farm is situated, as well as its being near the river, must make it an agreeable retreat to the reptiles. We, however, slept through the night without experiencing any visits from them, although we often expected to feel their cold bodies gliding over and awakening us, from pleasant dreams to disagreeable realities.

The following morning we proceeded on the journey to "Gudarigby," over a hilly and broken, but still romantic and beautiful country; with a variety of flowering plants spread over the luxuriant, verdant declivities and flats, casting different hues over the soil; among them the delicate and beautiful orchideous plant called "fringed violet" by the colonists, the *Thysanotus junceus* of botanists, was particularly abundant: its elegant lilac-coloured flowers, in clusters of from three to six upon the same stalk were very conspicuous. The "native hyacinth," and others of the *Orchideæ* family, with white, dark red, yellow, and pink flowers, were abundant.

After proceeding full six miles over a rich but broken country, fertile flats, and limestone hills, the declivities rich in herbage, but the summits arid, rocky, and bare of verdure,—we arrived

at "Narrángullen," a fine flat, abounding in excellent pasturage, with thickly wooded hills. This was formerly a sheep station, but deserted from the great losses sustained by the sheep devouring their lambs.*

From this place we passed up a gully, bounded by lofty mountains, thinly-wooded, which brought us to the almost perpendicular ascent of an elevated mountain, which certainly gave me a few ideas of what Nature's roads may have been in this colony before the formation of new ones came into fashion. This I was told, was *one road* to the farm, and the shortest, but there was another for drays not so steep, but many miles further round; by that one we proposed returning as soon as the visit to the farm was concluded. We led our horses, or rather they scrambled up this steep acclivity, to the summit of a ridge of mountains, from which the view was magnificent; it seemed as if Nature had sported with her superfluities in the formation of this country; mountains over mountains heaped: some were thinly and others densely covered with timber; the *tout ensemble* formed a splendid specimen of wild and romantic sce-

* For an account of this unnatural fact, and the supposed cause that produced it, see a separate account in the Appendix, at the end of the second volume.

nery. About the elevated ridges, the black-wattle acacias, in full bloom, were numerous, and their fresh and verdant foliage was well contrasted by the arid melancholy appearance of the *Eucalypti* trees around. A descent more gradual than the ascent, with the soil covered by long thick grass, brought us to a well-watered flat through which the Murrumbidgee river, and large creek, flowed ; and in this place (completely surrounded by the river and creek, and consequently rendered impassable during floods produced by the rains) the farm was situated.

This place, secluded by lofty-wooded mountains, and in a situation of great romantic beauty, cannot be valuable except as a cattle run, for which, from the abundance of grass and excellent supply of water, a better selection could not be made, but for sheep the situation is too moist. After rather a laborious and fatiguing journey, we enjoyed, in a neat and clean hut, some fine river cod fish, tea, and delicious rich milk, and our horses had, in this fine valley, excellent grass. Among the feathered animals which abound here, is the *Dacelo gigantea*, Temm., better known to the colonists and strangers by the appellation of “ Laughing or

Feathered Jackass.”* Its peculiar gurgling laugh, commencing from a low, and gradually rising to a high and loud tone, is often heard by the traveller in all parts of the colony, sending forth its deafening noises whilst remaining perched upon the lofty branch of a tree watching for prey ; it is respected by gardeners for destroying grubs, &c. The natives at Yas call the bird “ Gogera,” or “ Gogobera,” probably from its peculiar note, which has some resemblance to the sound of the word. It is said that one seldom laughs without being accompanied by a second, forming a very harmonious duet.

This bird, from its devouring mice and venomous reptiles, deserves protection ; (hawks also destroy snakes in this colony.) A gentleman told me that he was perfectly aware of the bird destroying snakes, as he had often seen them carry the reptiles to a tree, and break their heads to pieces with their sharp strong beaks ; he also said he had known them destroy chickens soon after they were hatched, and carry away eggs, breaking the shell with their sharp beaks, to get at their contents. One of these birds,

* This occasioned a lady at home to declare, that of all the wonderful productions of Australia, she thought nothing could equal the “ feathered donkey.”

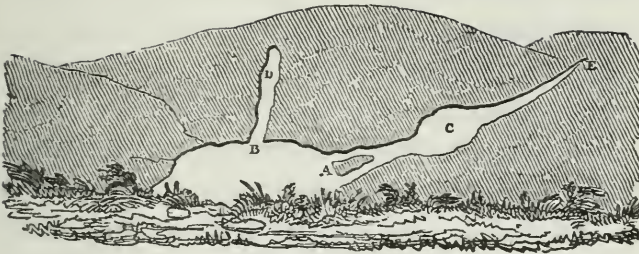
seen upon the branch of a tree near a river, looking so stupid, and nodding as if asleep, was shot, and it was then found that this peculiar manner proceeded from having swallowed a small snake, which had got into the stomach, throat, and bill, but had not yet accommodated itself in the former cavity.

It is not uncommon to see these birds fly up with a long snake pending from their beak, the bird holding the reptile by the neck, just behind the head; but as the snake hangs down without motion, and appears dead, it is probable that the bird destroys them upon the ground before it conveys them into the tree. From these circumstances, although they may now and then "make away" with an egg, or recently hatched chicken, by mistake for other food, yet there ought to be a prohibition against their being injured, as the vermin destroyed by them amply repay such trifling losses. This is the first bird heard in the morning, and the last (among the day-birds) at night; it rises with the dawn, when the woods re-echo with its gurgling laugh; at sunset they are again heard, and as that glorious orb sinks in the westward, a last "good night" is given in its peculiar tones to all within hearing.

At this farm, close to the Murrumbidgee river,

and on the almost perpendicular side of a limestone hill, which rises in the midst of this wooded valley, the rocks partially scattered with herbage, shrubs, and stunted casuarina-trees, is the entrance to a spacious cavern ; there are others of smaller size sprinkled about different parts of the same mass of limestone, but this seems to be the most spacious ; they were originally pointed out by the natives to the overseer of the farm, but were first explored by Mr. Dutton, and some friends.

The day after our arrival we visited the cave, taking materials to produce a light, by which we might explore these recesses with more facility. The approach to this cavern is through a thick jungle of grass, reeds, veronica, fern brake, (*Pteris*,) &c. : much caution is required, more particularly when on horseback, on account of the number of wombat burrows which abound about the spot. A slight ascent brought us to the spacious and lofty entrance into which the horses were easily led, and conveniently stabled ; this may be truly said to form the waiting-hall for admission into the two ranges of chambers which branch off in different directions, as seen in the accompanying diagram of a supposed section.



GUDARIGBY CAVERNS.

- A. Entrance to the great cavern.
- B. Entrance to the lesser cavern.
- C. The "Grand Hall" of the Cavern; lofty and most spacious.
- D. Second Cavern, not extensive, but there are several small caverns above it.
- E. Termination of the great cavern.

The entrance is probably about eighteen or twenty feet broad, and thirty or forty feet high, abounding in large stalactites, incrusting and pending from all parts of the interior, as well as separate masses like columns, supporting the roof. Having made a fire and lighted our torches, we entered the cavern to the right, [A in the diagram,] and ascending over some loose earth, entered a narrow vestibule, capable of admitting only one person at a time; it was encrusted above, and on all sides, by stalactites of various

forms which presented a glittering appearance, as the light from the torches fell upon them. A number of a small species of bat, disturbed by our presence in their dark retreat, flew about, and we captured many of them : several of their skeletons pending from the rocks, indicated that it afforded them a mausoleum, as well as a retreat during life.

As we proceeded, the cavern became more lofty and expansive ; but although able, from the elevation, to walk erect, we were obliged to take care of occasional projections from the rocks on each side. As the light from the torches fell upon the white glittering fantastic forms of the stalactites which hung from the roofs and covered the sides, the effect was highly pleasing. We came at last to a descent of fine loose earth, in which some wombats had been burrowing, and much care was necessary to avoid falling into the gaping entrances. The descent having been effected, we found ourselves in the most lofty, beautiful, and spacious part of this extensive cavern ; we termed it the “ grand hall :” immense masses of stalactites, (to which fancied resemblance of forms had occasioned the names of the altar, organ-pipes, &c., to be given,) had a beautiful appearance : enormous pending

stalactites adorned the lofty roof, and the whole scene had by torch-light an inconceivably grand and splendid effect. At several places the ground upon which we walked gave a hollow sound when struck, and masses of decomposed limestone were abundantly mingled with a fine black earth. Proceeding some distance further, we arrived at the termination.*

After our return from exploring the great cavern, we entered the smaller one; [B in the diagram ;] its extent is limited, but the stalactites within were of great beauty and variety of forms; my attention was here attracted by the multitude of small bones mingled with dust, which lay near and about the entrance of this cavern; how they came in this situation merits enquiry, for here alone did I observe them; they appeared belonging to some animals of the *Rodentia* family, consisting of skulls and other portions of the skeleton, some, indeed nearly the whole, were in a perfect condition: near the spot I picked up a small mass of stalactite, which appeared to have been broken off from some portion of the cavern, but its exact position I could not discover, in which small bones, similar to

* From secondary limestone rocks on Yas Plains, about one mile and a-half distant from the river, I collected large masses of what appears to be fossil *Rotularia*.

those scattered about, were imbedded. The specimen I preserved and sent to England.*

The atmosphere of the inner chamber of the large cavern is at times so close and confined as to produce sickness and violent head-ache, and cause many to faint who visit it, but we experienced no inconvenience, for although a hot wind blew outside from the north-east in strong and oppressive gusts, the inside of the cavern was cool and agreeable. The length of the cavern may, at a guess, be one hundred and twenty yards, or even more; and the large entrance is

* The fossil bones found in the cave at Wellington Valley refer to eight species of animals, of the following genera:—

Dasyurus, or Thylacinus.	
Hypsiprymnus, or Kangaroo Rat.	
Phascalomys	one species.
Kangaroo	two, if not three species.
Elephant	one species.
Halmaturus	two species.

Of these eight species, four belong to animals unknown to zoologists; viz.

Two species of Halmaturus.
 One species of Hypsiprymnus.
 One species of Elephant.

Kangaroo—three species not easily ascertained.
Dasyurus is doubtful, no head having been found.

Edinburgh Journal.

about sixty yards distant from the Murrumbidgee river. The view, from the front of the cavern, of the exterior country was beautiful: swallows' nests, as well as the restless birds themselves, were numerous; and the "Currijong-tree" was also seen growing about the limestone ranges. The swamp oaks, or "Plow'y," of the aborigines grew here in abundance, indicating by their presence the course of the river.

The aborigines will not venture into the dark recesses of the cavern for fear of the "dibbil-dibbil," as they express it. In a small cave attached to this cavern a number of human bones had recently been found, which it was afterwards ascertained were those of a native female, and had been deposited here, (in accordance with a custom among the aborigines, of placing the bodies of deceased friends and relations in caverns, hollow trunks of trees, &c.) about twenty years before.

The black swans (*Anas plutonia*) were at certain spots numerous about the river; they lay several eggs of a light bluish tinge, but at this season the young birds were seen in the river, as also the young of the different species of wild ducks, teal, &c., which are numerous in the colony; although neither the young of the black swans or ducks can yet fly, still nature

has provided them with a rapidity of motion in the water which baffles pursuers: this excites surprise in those who witness the manner these little half-fledged creatures swim and dive, so as effectually to avoid their numerous enemies. A tyro, thinking it an easy task to capture them, "as they cannot fly," enters the river for the purpose of taking some of the ducklings, but returns exhausted after a fatiguing chase, without procuring one to reward his trouble, marvelling, as he directs his steps homeward, completely crest-fallen, how the little imps could have escaped.

CHAPTER XII.

Native dogs—Their tenacity of life—Return to Yas Plains—
 The Australian raspberry—Native cherry-tree—The summer season—Tree hoppers—Their clamour—Gannets—
 Country about the Tumat river—Bugolong—The Black range—A storm—Vicinity of rivers—Native blacks—
 Their costume and weapons—Wheat-fields—Destructive birds—Winding course of the Murrumbidgee.

THREE dingos, or native dogs, (the “Warragul” of the aborigines, *Canis Australasiæ*, Dem.*) were seen about the hills at “Gudarigby,” and the howling of the kangaroo dogs during the night, was the first indication of their prowling about; they are the wolves of the colony, and are perhaps unequalled for cunning. These

* But little doubt exists in the minds of naturalists that this animal is not indigenous to Australia; its not being met with in Van Dieman’s Land (when all the other genera peculiar to Australia are found there) will rather tend to confirm the hypothesis.

animals breed in the holes of rocks ; a litter was found near Yas Plains, which the discoverer failed to destroy, thinking to return and catch the mother also, and thus destroy the whole family ; but the " old lady " must have been watching him, for on his returning a short time after, he found all the little dingos had been carried away, and he was never able, although diligent search was made in the vicinity, to discover their place of removal. The cunning displayed by these animals, and the agony they can endure, without evincing the usual effects of pain, would seem almost incredible, had it not been related by those on whose testimony every dependence can be placed. The following are a few among a number of extraordinary instances.

One had been beaten so severely that it was supposed all the bones were broken, and it was left for dead. After the person had walked some distance, upon accidentally looking back, his surprise was much excited by seeing " master dingo " rise, shake himself, and march into the bush, evading all pursuit.—One, supposed dead, was brought into a hut, for the purpose of undergoing " decortication ; " at the commencement of the skinning process upon the face, the only perceptible movement was a slight quivering of the lips, which was regarded at the time as

merely muscular irritability : the man, after skinning a very small portion, left the hut to sharpen his knife, and returning found the animal sitting up, with the flayed integument hanging over one side of the face.

Another instance was that of a settler, who, returning from a sporting expedition, with six kangaroo dogs, they met a dingo, which was attacked by the dogs, and worried to such a degree, that finding matters becoming serious, and that the worst of the sport came to his share, the cunning dingo pretended to be dead ;—thinking he had departed the way of all dogs, they gave him a parting shake, and left him. Unfortunately for the poor dingo, he was of an impatient disposition, and was consequently premature in his resurrection, for before the settler and his dogs had gone any distance, he was seen to rise and skulk away, but on account of the rough treatment he had received, at a slow pace ; the dogs soon re-attacked him, when he was handled in a manner that must have eventually prevented any resuscitation taking place a second time.

These instances may account for the fact why skeletons of the animals are not found in places where they have been left supposed dead. I have more than once been taken where one had been *killed*, as I desired to have a skeleton ; but

no remains of the beast were visible in the majority of instances ; and crows and hawks do not devour animals, bones and all, in this country.* The following anecdote proves that the " dingos," although cowards when chances are against them, will, like the Chinese, stand battle when numbers and chance of victory are on their side. A native dog attacked a calf, which was driven by

* The Australian dog never barks ; and it is remarked by Mr. Gardiner, in a work entitled the " Music of Nature," " that dogs in a state of nature never bark ; they simply whine, howl, and growl : this explosive noise is only found among those which are domesticated. Sonnini speaks of the shepherds' dogs in the wilds of Egypt as not having this faculty ; and Columbus found the dogs which he had previously carried to America, to have lost their propensity to barking. The ancients were aware of this circumstance. Isaiah compares the blind watchmen of Israel to these animals—' they are dumb, they cannot bark.' But, on the contrary, David compares the noise of his enemies to the dogs round about the city. Hence the barking of a dog is an acquired faculty—an effort to speak, which he derives from his associating with man. It cannot be doubted, that dogs in this country bark more, and fight less. than formerly. This may be accounted for by the civilization of the lower orders, who have gained a higher taste in their sports and pastimes, than badger-baitings and dog-fights ; and it may with truth be asserted, that the march of intellect has had its influence even upon the canine race, in destroying that natural ferocity for war which (happily for the world) is now spent more in words than in blows."

a man having a kangaroo dog with him. The hound immediately set upon the dingo, but four more coming to the assistance of their comrade, they tore the kangaroo dog very severely; but the man, by aid of shouting and sticks, drove them away, after much difficulty.

On the 26th of November I returned from "Gudarigby" to Yas Plains, by a longer but better road than that by which I came; passing through a fine open forest and luxuriant pasture land, the distance being eight or nine miles further than by scrambling over the ranges. The *Rubus australis*, or Australian raspberry, (char, mut'h, mut'h of the Yas natives,) was abundant. The fruit is small, devoid of flavour, but might, perhaps, be improved by cultivation. It may also be an interesting experiment to ascertain how far the *Exocarpus cupressiforme*, or native cherry-tree, may be made to produce a good edible fruit by grafting or culture. The greatest elevation I have seen this tree attain has been thirty to forty feet, and a diameter of a foot to a foot and a half: the fruit is insignificant, and almost tasteless. There is another species of *Exocarpus* abundant about Goulburn Plains, and other parts of the colony, shrubby, seldom attaining more than five or six feet elevation; bearing a white, instead of a red fruit, as in the

other species just mentioned. The Eucalypti trees were now covered with a profusion of white blossoms, attracting multitudes of parroquets, who revel in the sweets afforded by the nectaries.

As the summer season was now fully set in, (December,) the previous silence of the woods was broken by the incipient, shrill, chirping noises which resounded over them, occasioned by the male *Tettigoniæ*, or tree hoppers, emerging from the larva into the winged state; the cases the fly had left, being seen on almost every tree or post. This genus is remarkable for the instrument with which it cuts grooves in the wood for the purpose of depositing its eggs. The musical organs, or drums, only found in the males, are not less interesting; and the best published account respecting them is that by Reamur, quoted in the very interesting work, entitled "Insect Miscellanies." The aborigines call these insects "Galang, galang," and formerly used them as food; first stripping off the wings, they ate them in the raw state; that is, as the native blacks told me at Yas, "*when no white feller here, and black feller no get bread or yam.*"

My notice was particularly directed by the natives to the drums in the male insects, as the means by which they produced their thrilling

sounds; at the same time adding, in their peculiar English, “*Old woman Galang, galang, no got, no make a noise;*” implying that the females do not possess these musical instruments. There are several species of this genus known in Australia. During rain, these insects are silent; but recommence their clamour on the re-appearance of fine weather. The native blacks at Goulburn Plains told me that the manna produced by one of the Eucalypti trees, (*E. mannifera*,) was the excrement of this insect: this, probably, arose in their minds, from these insects appearing on the trees in the winged state, about the same time that the manna is secreted.

Several gannets had lately been shot, about the Murrumbidgee and Yas rivers, with plumage of a brownish black colour, bills and legs black: there was, also, a bird occasionally seen in this part of the colony, bearing a close resemblance to the swift, but only seen during the months of February and March, frequenting spots where the grass was on fire, to catch insects, &c. The aborigines of Yas name it “*Kriolon*,” or “*Kriola*.”

On the 7th of December, I left Yas for the purpose of visiting the but little known country about the Tumat river. The roads were in excellent condition at this season, and the country

around resembled an extensive park. The grass was luxuriant and verdant, having not yet been parched by the summer heats ; and travelling was now very agreeable. After passing “ Durramgullen,” (a station belonging to Mr. Barber,) and Bowning Hill, or Mountain,* (a conspicuous object from all parts of the Yas Plains,) I arrived at “ Bugolong,” a cattle station, at the distance of thirteen miles from Yas, belonging to Mr. Hunt, but better known as “ Carrol’s Station,† from the name of the overseer or stock-keeper in charge.

I remained here a short time to refresh the horse, as at this station there was abundance of fine grass. The roads were now good ; but in the winter season, during wet weather, are almost impassable. The country in its general appearance is broken, but very picturesque ; abounding in grass, but in most parts too moist for sheep, although excellent for cattle, which

* Upon this mountain, and some other parts of the hilly country in the vicinity, but not, I believe, very common, is a species of kangaroo rat ; (“ Narru ” of the aborigines ;) but I was not sufficiently fortunate to procure a specimen.

† Most of the stations in the interior have the native names of the place given them ; but they are often better known by the name of the stock-keepers in charge, as in the above instance, to which many others might be added.

fatten amazingly upon these "runs." The "Black range" of mountains was passed at the "gap," through which the road passes before arriving at this station. The waters, flowing from the east side of the "Black range," fall into the Yas, and those from the west into the Murrumbidgee river; and the Yas empties or unites itself with the Murrumbidgee only a short distance from this station. I was soon again on my journey, being desirous of reaching "Jugiong" by the evening, from which I was now distant eighteen miles.

Before I had proceeded many miles, some heavy clouds which had collected from the westward, poured down a deluge of rain, accompanied by violent peals of thunder and vivid lightning: the electric fluid burst with such crashing sounds, that I expected to see the trees shattered in ten thousand pieces by my side. Not having encumbered myself with a cloak, I was fully exposed to the pelting for nearly half an hour, when wind, rain, and accompaniments subsiding, the re-appearance of the sun soon dissipated the moisture from the ground, as also from myself; and by the time I arrived at the end of my journey, my apparel was as dry as when I set out. Although this would have been in our English climate an occurrence injurious to health, yet

here it is rare that any ill effects arise from it; the same remark may equally apply to the custom of sleeping in the bush at night when travelling, from which no traveller has been known to sustain injury. The road continued excellent as I proceeded; but during the wet season is probably (being similar to that before passed over) nearly impassable. The feature of the country was open forest, abounding in luxuriant grass: occasionally a denser forest would vary the scene; the hills were thinly wooded, and the declivities carpeted with verdure.

At last, the gloomy appearance and peculiar growth of the "swamp oaks" indicated the vicinity of a creek, which emptied itself into the Murrumbidgee river; and, on ascending the hill near it, the ripe wheat field, and mud hovel appeared; and large "swamp oaks," "water gum," and other trees, directed my attention to the situation where the Murrumbidgee river flowed: this was the station named "Jugiong," the property of Henry O'Brien, Esq.; and, descending the hill, I arrived at the dirty hut of the station, my only place of rest for the night, after a journey of thirty-six miles.

I found in this, as in other instances, more animation and beauty in the vicinity of a river, than in other portions of the land; imparting

cheerfulness to the traveller, as well as to the whole animal creation. The numerous feathered tribe welcome him with songs and chirpings, rarely heard in the less watered and gloomy places, so much abounding in the colony: a livelier green is seen in the foliage of the trees; pasturage and flowering shrubs cast a beauty over the soil, and the journey about such places is less fatiguing, because it is more interesting and cheering. It was not long since that marked trees alone guided the traveller to these stations; whereas, now a well-beaten road, passable even for gigs, has been formed, making travelling upon it very agreeable.

On my arrival at this station, I found a number of the native blacks collected about, all, even the ladies, in a state of nudity, "naked, but not ashamed:" some were busily employed in making rude spears, by sharpening the point of a long stick, which was afterwards hardened in the fire: they were preparing to hunt their "evening prey." "Give them," the men at the stations observe, "ever so much bread or meat, still they will hunt opossum and other game." The spears they used, were twelve or fourteen feet in length. On a sunny day, when there is little wind, the water clear, and com-

paratively tranquil, the aborigines go on the river in small bark canoes to spear fish, more particularly about the rocky parts of the river, and usually return with a large quantity : they also spear the “ water-mole,” (*Ornithorynchus*,) if they observe any during the river excursion. Nothing comes amiss to the blacks for food : they may be said to devour “ every living thing that runs upon the surface of the earth, or in the waters beneath.”

I was examining the fine muscular structure, and the raised cicatrices, which were numerous over the arms and chest, of one of the natives, (and which he regarded as highly ornamental,) when, puzzled to ascertain the meaning of my curiosity, after I had finished, he whispered to the stock-keeper, if “ he white feller gentleman ever see black feller before.” But as for procuring an examination of their phrenological organs, it was a labour of some difficulty, and even danger ; for they seemed to regard it as witchcraft, or some magic ceremony : and when they even did submit, they evinced much fear, and preserved a very serious countenance during the operation, as if dreading the result ; similar to young ladies, when under Deville’s hands for the same purpose, their secretiveness

and caution being overcome in some degree, by curiosity.*

The field of wheat at this station being just ripe, a man was obliged to be almost constantly on the watch, to prevent the "white cockatoos" from attacking and destroying it. These birds are named "Wagara," or "Muruen," by the aborigines: they were not yet very numerous, as the harvest was earlier than usual; but last year, I was told, the season was later,

* When on one occasion the head of a native was under examination, a gentleman present asked the wondering black, "if he knew what was doing to his head?" Blackee answered in the negative. "Why you will no more be able to catch kangaroos or opossums." No sooner was this said, than the black started away in anger, seized and flourished his spear, exclaiming, "What for you do that? What for you do all the same that!" And the unfortunate manipulator of savage craniums, as also his companion, began to be apprehensive, that the practice of the science was in a high degree dangerous among uncivilized beings.

On another occasion, the temporal muscle was found unusually large in the head of a native black under investigation: this was remarked by the phrenologist to a gentleman who stood near him, at the same time squeezing it, and saying to blackee, "Cobbong (large) this." "Ah!" exclaimed the black as he made off at a rapid pace, "me now see what you want; you want patta," (eat) and escaped as quickly as possible from the ravenous cannibal appetite he supposed the phrenologist to possess.

and the crops were nearly destroyed, for they came in immense flocks; and although many were killed, it did not deter the others from attacking the grain. The reason given, why they were not now so numerous, was, that the young cockatoos were not sufficiently fledged to leave the nest; so the reaper's song might be, "Fly not yet, little cockies;" for the old birds, rearing their progeny in a way to provide themselves with the necessaries of life, bring them in multitudes to attack a field of corn or grain, and are then so bold, as to be with great difficulty frightened away, although the deaths of hundreds may be the consequence; but, fortunately for the settler, the harvest was this season in a more forward state, and the little cockies not being in "full feather," there was comparatively but few marauders.

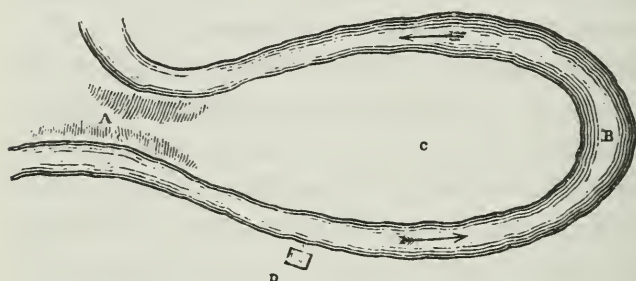
The way "the mob" of these screaming and destructive birds attack a field of grain, (or the cobs of corn in a maize field,) is to fly against, bear down the stalks with their weight, perch upon the fallen ears, and speedily destroy them.* Like all the parrot tribe, they construct no nest, but lay their eggs in a hollow branch or "spout" of a tree, clearing it of the rotten wood within,

* The black cockatoo usually feeds on the trees; the white species almost invariably upon the ground.

except a small quantity at the bottom, on which the eggs are laid, and the young ones afterwards repose.

It was related to me, that formerly such multitudes of parrots would beset a field of grain, as to oblige a settler to employ a number of men expressly to drive them away; and even then it was done with difficulty. This is now rare: which circumstance is not attributed to any depopulation of the "Polly" tribe, but from cultivation having become more extended; the parrot population being now divided in flocks about the different fields, when formerly they made their formidable attacks upon one or two only, and then in such numbers, that, left undisturbed for only a few hours, it would suffice to destroy the hopes of the settler, at all events for that season. It was computed that thirty or forty thousand of these birds were about the field at one time; and from what I saw, I do not consider the numbers were exaggerated. It is not only ripe grain that suffers from them, but, when it commences to vegetate, they assemble in immense flocks, to root up and devour it. The Loris are said to migrate from the Yas country in the summer, returning in the winter season: whether for food, or from what cause I could not ascertain.

Near this station, (Jugiong,) the Murrumbidgee river takes a peculiar winding course, so as to form an extensive piece of excellent grazing land, almost into an island. By standing on the hill (marked A, in the following diagram,) the river is seen flowing on each side, after having made an extensive circuit.



- A The Hill.
- B Murrumbidgee River.
- C Good grazing land.
- D Jugiong Station.

CHAPTER XIII.

Devoted attachment of Women—Remarkable instance of this, exemplified in the tale of an Australian savage—Journey resumed—Botanical productions—The Munne-munne range—Luxuriant plain—Mr. Warby's farm—The bell bird—Junction of the Murrumbidgee and Tumat rivers—Native names of rivers—Soil—River cod—Aquatic fowl—The Tumat country—Fertility of the plains—Assigned servants—A mountainous range—The Murrumbidgee Pine—Geological character of the vicinity—Mr. Rose's cattle station.

How agreeable it is at all times to see a strong feeling of attachment, more especially when conspicuous in a female. Who has read that beautiful tale, "Waverley," and failed to admire this feeling, so well displayed by Flora M'Ivor towards her unfortunate brother! And other instances, equally beautiful and correct, are scattered over our literary productions, founded "on o'er true tales." It is met with, emanating from the human heart, both in savage and civilized life; and it is correctly stated by an elegant writer, that "there is a latent intellectual force in woman, capable of being called into action only by cir-

cumstances of the deepest moment, and on occasions of peculiar excitement :” and it is further observed, that “she who complains the airs of heaven visit her too roughly, will undergo, without a murmur, more acute sufferings than man may know : and the seeming heartless coquette, who wins our contempt at the assembly, will prove, in the hour of sorrow and affliction, a benign and ‘ministering angel.’” Perhaps some may feel disappointed when they find this digression only introduces a brief tale of one of that degraded race—an Australian savage, in whom this feeling was strong, and which occurred in this part of the colony—not in one of that amiable and gentle variety of the sex who grace the assemblies and parks, and form the domestic happiness in our native land.

A female of one of the aboriginal tribes in the Murrumbidgee country formed an attachment and cohabited with a convict named Tallboy, who, becoming a bush-ranger, was for a long time sought after by the police for the many atrocities he had committed, but always eluded pursuit. This female concealed him with true native ingenuity, and baffled his pursuers—she would fish and hunt for him, whilst he remained secluded in the retreat she chose. She often visited the stock-keepers’ huts at the different stations, and whatever provision she

received from them was immediately conveyed to the unworthy object of her devoted attachment. Although many knew she was privy to his concealment, yet it was found impossible to elude her vigilance, by following her, and thus discover his retreat :—she evaded all attempts; and seemed ever watchful for his safety, probably knowing the fate that awaited him, if taken. Neither promises of rewards—enough to excite the cupidity of any individual, but one in whom a higher feeling was paramount—nor threats could induce her even to acknowledge she was acquainted with his place of concealment, much more betray it. Nay, it has occurred more than once, when there was a fear of discovery, that she has given voluntary information to the police of having seen him thirty or fifty miles distant, when, in fact, his place of concealment was in the immediate neighbourhood. The brute, however, manifested no kindred affection with this female, but would frequently beat and ill-use her.

Whilst she administered to him the refreshing cup of kindness, he bestowed on her misery in return. He had in one instance given way to his natural brutish disposition, by ill-treating the being who had done so much for him, —when he was on the verge of discovery, indeed had himself given up all hopes of escape,

when she again saved him, by engaging to point out to the police his place of retreat, and absolutely led them away, under that pretence, in a contrary direction, affording her paramour both time and opportunity to seek out a safer asylum. When she arrived with the police at the spot she had informed them he last was, he of course was not there, and a strict search in the vicinity was equally unsuccessful : she then left them to continue their pursuit after the criminal, pretending to know nothing further respecting him or his place of concealment. At last he was captured by venturing out too boldly during her absence, was tried, condemned, and expiated his offences on the scaffold at Sydney.

She wished to follow him, on hearing he was a prisoner ; but that was impossible : so, reclaimed by her tribe, she was obliged to become an unwilling wife of one of the blacks. It is but too well known in what degradation the female sex are held among savage nations, so different from the deference and respect so justly given to that amiable and gentle portion of the creation in civilized life. This unfortunate female was ordered by her husband, whose word is law, to follow him, at a time when she was rendered incapable by illness :—on her hesitating, he struck her with savage barbarity with his toma-

hawk so severely over the head and legs, that she fainted from loss of blood. She was found lying on the ground, and taken to the house of a settler residing on the banks of the Murrumbidgee river, and every kindness and attention shown her ; but after lingering, suffering severe mental and bodily anguish, she expired. There is a son by this female and her convict paramour about three years old, living with the tribe, who are so attached to him, that for the present it has been found difficult to get him away from them, so that he may be brought up in a civilized state of society.

On the following morning I left Jugiong, and resumed my journey through a very interesting portion of country. The banks of the Murrumbidgee stream were adorned with large "swamp oaks," (Plow'y of the aborigines,) magnificent water gum-trees, (Dad'ha and Yarra of the aborigines,) and immense quantities of a species of mallow, rising to the height of from two to six feet, and which at this time was profusely in flower, decorating the banks, mingled with other flowering plants. This mallow is named "Cum-ban" by the natives ; and upon the banks, or in the vicinity of the river, is a species of *Urtica*, ("Cundalong of the aborigines,) resembling the European species, "butter-cups:" the small red poppies, geranium, and other plants, similar to,

or closely allied to the European species, were abundant. After riding a distance of seven miles, "Cuney's Station" was passed, situated at a fertile spot, called "Kitagarary Creek."

Passing by the Munne-munne range, the scenery consisting of picturesque but broken country, thinly wooded, abounding in rich pasturage, the whole appeared a fine grazing land, some parts being also well calculated for sheep—the whole for cattle.

After leaving this range, an extensive, beautiful, and luxuriant plain or flat, surrounded in the distance by gradually-sloping verdant ranges of hills, was entered upon: this flat was carpeted by thick grass and gay flowers; and near a small creek, a quantity of plants with pink flowers, having at a distance some resemblance to our well-known "red clover," attracted my attention: it seems to be of the natural family *Ameranthaceæ*, probably of the genus *Nissanthes*. Although the ground was strewed with flowering shrubs and plants, but very few appeared peculiar to this portion of the colony. The "kangaroo grass" (*Anthisteria australis*) was the most lofty and luxuriant among the native grasses,*

* The Murrumbidgee natives call grass by the general name of "Narluk," but they bestow different names on distinct species. Those among the native blacks, who have pretensions to an acquaintance with the English language, call our *hair* grass.

covering the soil, about which different species of *Eucalypti* were scattered ; among them the " Box tree " of the colony, (Berre of the natives,) " Bastard apple tree," (Carbut of the natives,) " Bastard box tree," (Bargan of the aborigines,) and " iron bark," (" Mucker " of the natives,) were most numerous. At this season they were covered with a profusion of white blossoms, which attracted flocks of parroquets, to sip, like the puny humming-bird, nectar from the flowers. Occasionally the " Green wattle," or " Wundua " of the natives, was seen loaded with its fragrant yellow blossoms ; and also a few trees of the " Bum, billerang," or *Banksia rosmarinifolia*.

I rode for a few miles through this fertile flat, which continued undiminished in picturesque beauty, until again the dark foliage of the " Plow'y," or swamp oaks, indicated the proximity to the fine stream of the Murrumbidgee ; and, arriving at its banks, crossed to the farm of Mr. Warby, called " Darbylara," where I was glad to rest after a long and sultry ride of thirty miles. This farm, situated in a beautiful spot, is close to the junction of the Tumat and Murrumbidgee rivers.

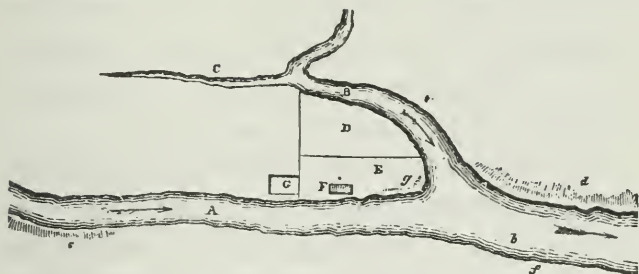
On approaching the river, the feathered creation in mingled harmony animated the scene ; the tinkling note of the " Bell-bird," or " Gil-bulla," of the natives was heard, a certain har-

binger of the vicinity of water ; and these birds were very numerous.* Perched on a lofty tree, the "razor-grinder" bird of the colonists may be heard uttering its peculiar sciz, scizaring notes, which so closely resembles the noise of the "razor-grinder's machine," as to render its appellation well deserved. The bird first commences with a rather prolonged whistling note, which is succeeded by the peculiar grinding notes, continued for some time without intermission, resembling in some degree the noise produced by the drums of the male *Tettigonix*, whose dinning notes resound through the woods during summer; almost to the exclusion of all other harmonious or inharmonious sounds.

I visited the spot, situated not many yards distant from the house, at which the junction of the Murrumbidgee with the Tumat river takes place. Many persons consider the latter to have the more direct course, and consequently to be the main stream which is continued to the sea, (according to the discovery of Captain Sturt,) and that the Murrumbidgee empties itself into the Tumat. Others differ from this opinion ; but in point of fact, both streams unite at this place, and form

* The plumage of this bird is green ; legs and bill of an orange colour, with an orange mark under the eye ; irides brown. Length of the male specimen seven inches and a-half. Its food is insects.

one continuous river, as seen in the accompanying diagram, the water supplied by each being



- | | |
|-----------------------|-------------------------------------|
| A Murrumbidgee River. | <i>b</i> Pebbly bed of river. |
| B Tumat River. | <i>c</i> High Banks. |
| C Creek. | <i>d</i> High declivities of hills. |
| D Wheat paddock. | <i>e</i> Low reedy bank. |
| E Paddock. | <i>f</i> Low banks. |
| F House. | <i>g</i> High banks. |
| G Stock yard. | |

nearly of equal proportions. The Tumat river (which I saw as high as Mr. Rose's cattle station at "Been," and a distance of twelve or fourteen miles beyond that station, making a distance from the junction of forty or fifty miles) was equal in breadth and depth of stream to the Murrumbidgee, had numerous creeks emptying their waters into it, and also swamps about its banks, overflowed during floods, and even now absorbing a large quantity of water. Among other creeks which empty themselves into the Tumat is a fine stream, called by the aborigines the "Been," or "Gheek," from which

the station has received its name. The Tumat may probably rise from a mass of mountains to the southward, divided from "Monaro" or "Menero" Plains, by a lofty ridge of mountains. Neither the origin of this, or the Murrumbidgee river, however, is ascertained.

It was stated to me in this part of the colony, that the natives call all large rivers Murrumbidgee,* and I certainly heard it applied by them equally to the Tumat and Murrumbidgee streams; but I found they usually name the river after the country through which it flows, so that on demanding the name of the river at different places, many names are bestowed upon it: a person unaware of this circumstance is surprised at the number of names the same

* The following extract, from the introduction to "Tuckey's Unfortunate Expedition to explore the River Congo," is curious as coinciding, as regards another portion of the globe, with the above remark.

"He named it" (alluding to Diego Cam) "the Congo, as that was the name of the country through which it flowed; but he afterwards found that the natives called it the Zaire, two names which, since that time, have been used indiscriminately by Europeans. It now appears that Zaire is the general appellative for any great river, like the Nile in North Africa, and the Ganges in Hindoostan; and that the native name of the individual river in question is Moienzi enzaddi, or the river which absorbs all other rivers."—*Introduction*, page xi.

stream obtains. Thus, the Yas river at one part is called "Gondaroo" by the natives, and this occasioned many to suppose the correct name of the Yas river was "Gondaroo," until it was ascertained that it received that appellation from the portion of country of the same name through which it passed; afterwards receiving the name of "Yas," or "Yar," when flowing through its plains: by the latter name, however, the entire stream is known to Europeans, which is a better method of nomenclature than that adopted by the natives. The Tumat at Mr. Warby's farm was called "Bewuck," and as a variety of the "river cod" receives the same native name, the river might either be named after the number of the fish found in it, or the fish from being found abundant in that particular part of the river; for a very short distance further up the stream, the aborigines bestow a different name upon it from the country through which it flows. I mention these circumstances, hoping some future traveller may have opportunities of further inquiry, confirming my statements if correct, or refuting them should they prove erroneous.

The sand in and about the banks of the Murrumbidgee river has a glittering appearance, which led many to report that gold dust

abounded ; but those who made the assertion have yet to learn " that it is not all gold that glitters," for on examination the glittering particles are found to be merely talc. When a well was about to be sunk, at a distance from three to four hundred yards from the banks of this river, opposite to, and not far distant from, Mr. Warby's farm, at a depth of thirteen feet, in an alluvial soil, a quantity of charcoal was found, and at a further depth of twenty feet more was discovered.

Abundance of " river cod" was taken from the river, and I had usually plenty of fine fish as long as I remained in this or the Tumat countries, in those parts adjacent to the fine rivers. Aquatic fowl were not less abundant, more especially the " Black duck," or " Buddin-bong," of the natives ; a species of teal, the " Towrodey" of the natives, and " Wood ducks," (which from their peculiar note the aborigines name Ku-náruk, resembling the sound those birds utter,) all afforded an excellent meal, oftentimes even with the addition of green peas, as most of the stations have small vegetable gardens attached to them. The " Wild turkey" of the colony, Kumbul of the natives, (a species of bustard,) is occasionally seen about this part of the country and Yas Plains,

but they are so very shy, as to render it difficult to get within shot of them.

The following morning (December 9th) I proceeded through the "Tumat country." On leaving Darbylara much swampy land was passed, varied by plains and hills, abounding in pasturage, in which the kangaroo-grass (*Anthisteria australis*) grew to the height of four feet, and numerous creeks emptying their waters into the stream of the Tumat. The numerous lagoons and flats, swamps or marshes, (for by all these names they seem equally known,) had a fresh green appearance, occasioned by the young reeds springing up, which are greedily devoured by cattle and horses, as in that stage of growth they are sweet, and contain abundance of muci-lage; as they advance in growth, the verdure they possessed is succeeded by arid brown stems, surmounted by feathered blossoms, which wave and bend with a rustling noise to the breeze that sweeps by them. The road continued through a pleasing country, abounding in vales rich with vegetation, about which hills, thinly scattered with trees, but densely clothed with herbage, rose, of different forms and heights, varied by the "Swamp oaks," "Water gum," and other Eucalypti, which, by their greener

foliage, indicated the proximity and course of the Tumat river ; or a reedy swamp would be seen near the banks of the stream, from which often some large cranes, with lead-coloured plumage, called "Gungaroo" by the natives, would arise. After riding a distance of eight miles, we arrived at a station named "Brungul," the property of a Mr. Keighern, and were refreshed by some milk ; indeed, the excellent milk that can always be readily procured at any of the stations in this luxuriant grazing part of the colony is a great comfort, with the additional ones of excellent butter, cheese, and damper.*

The flats or plains near the stations are seen animated by immense droves of cattle, revelling in all the luxury furnished by a rich herbage. This part of the colony may be correctly termed a land flowing with milk, and even, we may say occasionally, with honey, as the latter is sometimes procured by the native blacks from the hollow trunk of a tree ; by watching the direction in which the bees fly when proceeding homeward, and following them, they thus discover

* "Damper" is merely a cake of flour and water, or milk, baked in the ashes ; it is the usual mode of bread-making in the bush ; it is sweet, wholesome, and excellent eating.

and rob the industrious insects of the "sweets of their life."*

I remarked with some degree of pleasure, that although most of the stations are solely under charge of assigned servants, (convict is an obsolete word in the colony,) yet the huts are

* The Americans employ several well-known methods to track bees to their hives. One of the most common, though ingenious modes, is to place a piece of bee-bread on a flat surface, a tile for instance, surrounding it with a circle of wet white paint. The bee, whose habit it is always to alight on the edge of any plane, has to travel through the paint to reach the bee-bread. When, therefore, she flies off, the observer can track her by the white on her body. The same operation is repeated at another place, at some distance from the first, and at right angles to the bee line just ascertained. The position of the hive is thus easily determined, for it lies in the angle made by the intersection of the bee lines. Another method is described in the *Philosophical Transactions* for 1721. The bee-hunter decoys, by a bait of honey, some of the bees into his trap; and when he has secured as many as he judges will suit his purpose, he encloses one in a tube, and, letting it fly, marks its course by a pocket compass. Departing to some distance, he liberates another, observes its course, and in this manner determines the position of the hive, upon the principle already detailed. These methods of bee-hunting depend upon the insect's habit of always flying in a right line to its home. Those who have read Cooper's tale of the "Prairie," must remember the character of the bee-hunter, and the expression of "lining a bee to its hive." —*Insect Architecture*, pp. 145, 146.

clean and well arranged. The men in most instances take care of the property entrusted to their charge, and are surrounded by every comfort; many of them (particularly those from the sister kingdom) have frequently assured me they never were so happy and well off before; and regarded their transportation as a blessing from Providence; and it certainly appeared to be a delightful change to many of the poor fellows, from the previous wretched lives they must have passed, both from their "unvarnished tales," as well as what we know to be too true in unhappy Ireland.*

Proceeding on my journey, the Tumat was occasionally visible; the road often leading away from it, to avoid the extensive reedy swamps which abound close to its banks, in some places, whilst in others fine meadow land, with profuse and rich herbage, about which herds of cattle

* When travelling as a stranger in the most secluded part of the colony, and sometimes obliged to seek refuge for the night in a hut, of whom the person in charge and those about him, were convicts, or having to depend upon them for directions as to the road, having my watch and other property with me, I never missed the most trifling article, and always found them ready and willing to afford every assistance: there are, of course, always exceptions among a multitude; but I state the result of my own experience, after travelling upwards of six hundred miles in the colony.

were feeding, was seen. The trees near the river, from being constantly refreshed by the water, had a vividness of foliage, which enlivened the prospect, and imparted a smiling appearance to the country: travelling was excellent; but the places now passed with so much facility, are, during the heavy rains in winter, overflowed, and rendered nearly, if not totally impassable.

After crossing several creeks, (emptying themselves into the stream of the Tumat,) and riding about eight or ten miles, I arrived at a mountainous range, called "Mejungbury," upon which were growing large quantities of a species of *Callitrys*, called the "Murrumbidgee pine" by the colonists, from having been seen first on the hills in the vicinity of that river: it is named *Kara* by the aborigines. The timber is described as close-grained and durable: the native blacks use it for fish-spears, on account of its lightness, which occasions it to float on the surface of the water: the white and rather fragrant gum-resin which exudes spontaneously in tears or drops from the trunk, is also used by them for several purposes; and the largest tree I saw about this range was thirty-five feet in elevation, and one to one and a half feet in diameter.

The geological character of the range upon which they grow, as far as I was capable of ascertaining, consisted of granite and quartz: they were readily distinguished from other trees on the same range, by their dark-green foliage and peculiar form. I collected several specimens of the tree in a state of fructification. The "Currijong-tree" was also occasionally seen about the range: it is named "Bundine" by the aborigines, who eat both the young roots and shoots of the tree, and use the bark in the manufacture of a small cordage, for nets, &c. Some of the roots are described to be a foot in circumference, like the stalk of a cabbage, consisting of medullary and fibrous substance, having a sweetish and agreeable taste.

A station situated in a fine fertile flat, called "Bumboly," the property of Mr. Shelly, was next passed; and a few miles further brought me to Mr. Rose's cattle station, called "Been," located in a fertile, picturesque situation, surrounded by verdant hills and wooded mountains; the Tumat river and a fine creek running through the estate: it is excellent in situation, and has capabilities for a valuable farm. I remained here a few days to examine this but little known country, as also to observe the objects of natural history, which abounded in the vicinity.

CHAPTER XIV.

Wooded hills—Base of the Bugong mountains—Multitudes of the Bugong moths—Timber trees and granite rocks—Snow mountains—Method of collecting the moths—Use of these insects—Crows—Height of the Bugong mountains—The aborigines—Dread of ridicule in the females—Native fine arts—Lyre-bird of the colonists—Destruction of kangaroos and emus—The station of Been—Sanguinary skirmishes—A fertile plain—Cattle paths—Shrubs on the banks of the Tumat.

NEAR this station is a lofty table-mountain, rising above numerous wooded hills, varying in their degrees of elevation, as seen in the accompanying engraving: it forms the commencement of a mountainous range, extending in a south-west direction. It is named the "Bugong Mountain," from the circumstance of multitudes of small moths, called Bugong by the aborigines, congregating at certain months of the year about masses of granite on this and other parts of the range. The

months of November, December, and January, are quite a season of festivity among the native blacks, who assemble from far and near to collect the Bugong; the bodies of these insects, contain a quantity of oil, and they are sought after as a luscious and fattening food. I felt very desirous of investigating the places where these insects were said to congregate in such incredible quantities, and availed myself of the earliest opportunity to do so.

I was prevented, by the unfavourable state of the weather, from undertaking the journey until the 12th of December, at dawn of which day, accompanied by a stock-keeper and some of the blacks, I commenced my excursion. The day was fine; and by taking a circuitous path on the declivities of the hills, we were able to ascend on horseback.* After riding over the lower ranges, we arrived a short distance above the base of the Bugong Mountain, tethered the horses, and ascended on foot, by a steep and rugged path, which led us to the first summit of the mountain; at this place, called Gúnundery by the natives, enormous masses of granite rock, piled one

* A small species of *Xanthorrhæa*, or yellow gum tree, called Modandara by the aborigines, was abundant on the ranges. The bases of the young leaves of this plant are eaten by the natives, and the taste is agreeable.

upon another, and situated on the verge of a wooded precipice, excited our attention. An extensive and romantic view was here obtained of a distant, wooded, mountainous country.

This was the first place where, upon the smooth sides or crevices of the granite blocks, the Bugong moths congregated in such incredible multitudes; but from the blacks having recently been here, we found but few of the insects remaining.* At one part of this group of granite rocks were two pools, apparently hollowed naturally from the solid stone, and filled with cool and clear water; so, lighting a fire, we enjoyed a cup of tea previous to re-commencing our further ascent. On proceeding, we found the rise more gradual, but unpleasant from the number of loose stones and branches of trees strewed about: several of the deserted bark huts of the natives (which they had temporarily erected when engaged in collecting and preparing the Bugong) were scattered around. Shrubs and plants were nu-

* Mr. Hamilton Hume informed me that the Bugong is found also by the aborigines inhabiting the country about the Snow Mountains, to the southward; forming their principal food during the summer. These insects are said to ascend from the lowland to the more elevated spots, only during the summer season.

merous* as we proceeded ; but, with few exceptions, did not differ from those seen in other parts of the colony.

Near a small limpid stream, a species of *Lycopodium* grew so dense as to form a carpet over which we were able to walk. The timber trees towered to so great an elevation, that the prospect of the country we had anticipated was impeded. At last we arrived at another peculiar group of granite rocks, in enormous masses and of various forms : this place, similar to the last, formed the locality where the Bugong moths congregate, and is called " Warrogong†" by the natives : the remains of recent fires apprised us that the aborigines had only recently left the place for another of similar character a few miles further distant.

* Among the botanical specimens collected in this part of the country, were *Eryngium*, resembling *vesiculosum* ; *Utricularia dichotoma*, (with blue, and also a variety with white flowers,) in the swamps ; *Drosera peltata* ; and species of the following genera :— *Westringia* ; *Grevillea* ; *Croton* ; *Convolvulus* ; *Leptospermum* ; *Dillweynia* ; *Malva* ; *Linum* ; *Brownea* ; *Davisea* ; *Juncea* ; *Loranthus* ; *Cyperus* ; *Veronica* ; *Senecio* ; *Callytris* ; *Centaurea* ; *Sida*, &c. &c.

† This second group was situated on a gradually declining part of the mountain, in many parts densely wooded ; but from which we commanded a fine view of the continuous range to a great distance.

Our native guides wished us to proceed and join the tribe ; but the day had so far advanced, that it was thought more advisable to return, because it was doubtful, as the blacks removed from a place as soon as they had cleared it of the insects, whether we should find them at the next group, or removed to others still further distant.

From the result of my observations, it appears that the insects are only found in such multitudes on these insulated and peculiar masses of granite ; for about the other solitary granite rocks, so profusely scattered over the range, I did not observe a single moth, or even the remains of one. Why they should be confined only to these particular places, or for what purpose they thus collect together, is not a less curious than interesting subject of inquiry. Whether it be for the purpose of emigrating, or any other cause, our present knowledge cannot satisfactorily answer.* The view from this second group was

* Captain Cook mentions, that at Thirsty Sound, on the coast of New South Wales, he found an incredible number of butterflies ; so that, for the space of three or four acres, the air was so crowded with them, that millions were to be seen in every direction, at the same time that every branch and twig was covered with others that were not upon the wing : and Captain King observes, (*Survey of the Coasts of Australia*, vol. i. p. 195,) “ Here, (Cape Cleveland,) as well as at every other place that we had landed upon within the

open to the southward, and was a continued series of densely-wooded ranges, differing in their degrees of elevation. When standing on these enormous masses of granite, I thought some of the most distant mountains, in a south-west direction, appeared, some covered and others streaked with snow: I was correct; for the beautiful clearness of the weather had afforded me a view of the "Snow Mountains," the existence of which has been doubted by many. Whilst looking at them, one of the blacks came near me, and pointing in their direction, informed me, in English, it was snow.*

The Bugong moths, as I have before observed,

tropic, the air is 'crowded' with a species of butterfly, a great many of which were taken. It is, doubtless, the same species as that which Captain Cook remarks as so plentiful in Thirsty Sound. The numbers seen by us were indeed incredible; the stem of every grass tree, (*Xanthorrhœa*,) which plant grows abundantly upon the hills, was covered with them; and on their taking wing, the air appeared, as it were, in perfect motion. It is a new species; and is described, by my friend Mr. W. S. Macleay, under the name of *Euploea hamata*."

* The atmosphere, sultry on the plain below, was cold upon this mountain, although the sun shone brilliantly. I was told, that last year, in December, (one of the summer months in the colony,) some snow fell, in a small quantity, at this place.

collect on the surfaces and also in the crevices of the masses of granite in incredible quantities : to procure them with greater facility, the natives make smothered fires underneath those rocks about which they are collected, and suffocate them with smoke, at the same time sweeping them off frequently in bushels-full at a time. After they have collected a large quantity, they proceed to prepare them, which is done in the following manner.

A circular space is cleared upon the ground, of a size proportioned to the number of insects to be prepared ; on it a fire is lighted and kept burning until the ground is considered to be sufficiently heated, when, the fire being removed, and the ashes cleared away, the moths are placed upon the heated ground, and stirred about until the down and wings are removed from them ; they are then placed on pieces of bark, and *winnowed* to separate the dust and wings mixed with the bodies : they are then eaten, or placed into a wooden vessel called a “Walbun, or Culibun,”* and pounded by a piece of wood into masses or cakes resembling lumps of fat, and may be compared in colour and

* The “Walbun,” or “Culibun,” is usually made from one of the knotty protuberances so commonly seen upon the trunks of the large Eucalypti trees.

consistence to dough made from smutty wheat mixed with fat. The bodies of the moths are large, and filled with a yellowish oil, resembling in taste a sweet nut. These masses (with which the "Netbuls" or "Talabats" of the native tribes are loaded, during the season of feasting upon the "Bugong,") will not keep above a week, and seldom even for that time; but by smoking they are able to preserve them for a much longer period. The first time this diet is used by the native tribes, violent vomiting and other debilitating effects are produced; but after a few days they become accustomed to its use, and then thrive and fatten exceedingly upon it.

These insects are held in such estimation among the aborigines, that they assemble from all parts of the country to collect them from these mountains. It is not only the native blacks that resort to the "Bugong," but crows also congregate for the same purpose. The blacks (that is, the crows and aborigines) do not agree about their respective shares, so the stronger decides the point; for when the crows (called "Arabul" by the natives) enter the hollows of the rocks to feed upon the insects, the natives stand at the entrance, and kill them as they fly out, and afford them

an excellent meal, being fat from feeding upon the rich Bugong. So eager are these feathered blacks or Arabuls after this food, that they attack it even when it is preparing by the natives ; but as the aborigines never consider any increase of food a misfortune, they lay in wait for the Arabuls, with waddies or clubs, kill them in great numbers, and use them as food.

The Arabul is, I believe, not distinct from the common crow found on the low lands, and which is called "Gundagiar" or "Worgan" by the natives : the distinction, according to native report, is, that the "fat fellers," or those who feed on the Bugong, are called Arabul, and the "poor fellers," or those who pick up what they can get on the low lands, are designated by the latter names. About February and March the former visit the lowland, having become in fine plump condition from their luxurious feeding. The assemblage of so many different tribes of natives at this season about the same range, and for similar objects, causes frequent skirmishes to take place between them ; and oftentimes this particular place and season is appointed to decide animosities by actual battles, and the conquered party lose their supply of Bugong for the season.

The height of the Bugong mountain may be

two thousand feet from its base, and upwards of three thousand feet above the level of the sea. The quantity of moths which may be collected from one of the granite groups, it is calculated would amount to at least five or six bushels. The largest specimen I obtained measured seven-eighths of an inch with the wings closed, the length of the oily body being five-eighths of an inch, and of proportionate circumference; the expanded wings measured one inch and three quarters across; the colour of the wings dark brown, with two black ocellated spots upon the upper ones; the body filled with yellow oil, and covered with down.*

We returned by nearly the same route we came: the descent was however much more tedious than the ascent; but after slipping over stones, stumbling over innumerable logs that strewed the path, and a few other trifling mishaps, we rejoined our horses, and arrived at the station in the evening.

* When the natives about the Murrumbidgee river heard, on my return, that I had visited the "Bugong Mountain," they expressed great delight, and wished to see what I had collected. On showing them the few insects I had, they recognized them instantly; but I thought there was a feeling of disappointment at their curiosity only, not appetites, being gratified by my little entomological collection.

The aborigines manifested a strong desire to see the new "white feller" who had come among them, which it seemed was a rare occurrence in this secluded place: they were all eager for tobacco—some proof they were advancing towards civilization. Both males and females were in a state of nudity, wearing the opossum-skin cloaks only as a protection from the weather; and the *septum naris* had the usual perforation and ornament through it. Some of the females had tolerably pretty features, with dark hair, short, and having a natural curl, not, however, in any respect like the frizzled hair of the African negro, or the spiral twist of that race so closely allied to them—the Papuan, but that curled appearance often seen in the hair of European races. Many of the females wore the front teeth of the kangaroo as ornaments attached to their hair, and esteemed them for that purpose. The native weapons are clubs, spears,* the bomerang, and shields, which latter have rude ornaments carved with the incisor tooth of a kangaroo upon them.

The numerals in the aboriginal language at this

* The spears are six to twelve feet long; the shorter are made of reed pointed with hard wood; the longer are rude sticks sharpened at the extremity. They use a throwing-stick, similar to the one seen among the natives in the vicinity of Sydney and other parts of the colony.

place proceed as far as three. Thus : one, Metombul—two, Bulla—three, Bulla metong; and Biolong, which signifies any quantity.*

The dread of ridicule prevails to as extensive a degree among the females of this savage as among our more civilized races. One of the naked Venuses at this place was induced some time since by a European, during the absence of her tribe, to array herself in drapery ; a petticoat was the portion of a lady's dress selected, but the garment was as often thrown over the shoulders as around the waist. When the tribe returned it happened to be the latter, and they made most particular inquiries respecting the reason that she was so clothed—and whether she was ashamed to be naked, according to the custom of her forefathers? So much ridicule was levelled against her costume, that

* According to Spix and Martius, "The Coroados Indians in the interior of Brazil have their language, in respect to numbers, very imperfect. They generally count only by the joints of the finger, consequently only to three ; every greater number they express by the word 'many.' Their calculation of time is equally simple—merely according to the returning season of the ripening of the fruits, or according to the phases of the moon,—of which latter, however, they can express in words only the appearance, without any reference to the cause."—*Travels in Brazil*, 8vo. Eng. Transl. vol. ii. p. 255.

being unable to parry their jokes, she threw the garment aside, and never afterwards resumed it; she then went about perfectly naked, innocent, and unconscious of shame.

To express delight the natives utter a quick or rapid succession of whistling sounds. They have some idea of the fine arts, as I judged from some rude sketches made by a native lad in my presence. He took a piece of charcoal and sketched some figures upon a sheet of bark, which formed part of the roof of the low hut; blackee called them "white fellers," and seemed much amused at the idea.

The "Native or Wood-pheasant," or "Lyre bird" of the colonists, the "*Menura superba*" of naturalists, and the "Béleck, béleck," and "Balangara" of the aboriginal tribes, is abundant about the mountain ranges, in all parts of the colony; the tail of the male bird is very elegant, but the remainder of the plumage in the male, and the whole of that of the female, is destitute of beauty. The tail of the male bears a striking resemblance, in its graceful form, to the harmonious lyre of the Greeks, from which circumstance it has received the name of the "Lyre bird" of Australia. The tail-feathers, detached entire from the bird, are sought for by collectors for their beauty, and are sold in the

shops of the zoological collectors at Sydney, in pairs, formerly at a cheap rate, as the birds then abounded in the mountain ranges of the Illawarra district ; but now that the bird, from its frequent destruction, has become rare, these tails have attained a price of from twenty to thirty shillings the pair. About the ranges, however, of the Tumat country, where they have been seldom destroyed, they are seen more frequently ; at this season of the year, (December,) it has its young ; indeed this is the season that the young of all the wild animals are produced in the colony, and can consequently be procured with facility.

It is much to be regretted that human beings are so eager to destroy, even to extermination, the races of animals useful or dangerous, which may be found in a new country. In the settled parts of the colony, the harmless kangaroos and emus are rarely seen, when they might easily be domesticated about the habitations. The same remark applies to the lyre pheasant. Why are they not domesticated, before, by extermination, they are lost to us for ever ?

The Lyre pheasant is a bird of heavy flight, but swift of foot. On catching a glimpse of the sportsman, it runs with rapidity ; aided by the wings in getting over logs of wood, rocks, or

any obstruction to its progress, it seldom flies into trees, except to roost, and then rises only from branch to branch : they build in old hollow trunks of trees, which are lying upon the ground, or in the holes of rocks ; the nest is formed merely of dried grass, or dried leaves, scraped together ; the female lays from twelve to sixteen eggs of a white colour, with a few scattered light blue spots ; the young are difficult to catch, as they run with rapidity, concealing themselves among the rocks and bushes.

The “ Lyre pheasant” on descending from high trees, on which it perches, has been seen to fly some distance ; it is more often observed during the early hours of the morning, and in the evenings, than during the heat of the day. Like all the galinaceous tribe, it scratches about the ground and roots of trees, to pick up seeds, insects, &c. The aborigines decorate their greasy locks, in addition to the emu feathers, with the splendid tail-feathers of this bird when they can procure them.

The station of “ Been” is situated on an extensive plain, or flat ; is very wet during the winter season, from the flooded state of the Tumat river and adjoining creek ; the soil, however, is not usually swampy. The river running down one part of the estate, and the “ Been” or

“Gheek” flowing down in another direction, (emptying itself into the Tumat,) gives the flat a heart-shaped form. It is surrounded by lofty mountains, small fertile flats and thinly-wooded ranges, abounding in rich pasturage. Nature has made it a beautiful spot, and it is capable of much improvement from the labour of man. The aborigines, among the tribes in this part of the colony, having found out that by killing the cattle of the settlers, they can procure a larger supply of food with less trouble than by hunting, have commenced spearing cattle; it was this which formerly led to the sanguinary skirmishes with the Bathurst natives, the stock-keepers shooting the blacks, and they, in return, murdering any Europeans who fell in their way, the lives lost on both sides were numerous.

About ten or twelve miles from this station there is a small fertile plain, or flat, called “Blowrin;” it abounds in rich herbage, and is surrounded by woody and verdant ranges of hills, with the Tumat river flowing through it, besides being irrigated by numerous rivulets. In the vicinity of this plain, small mountain rills would be seen gushing over the abrupt declivities into the vales beneath, refreshing the vegetation, so profuse about these spots. On the rich grassy plain, the “sparkling cowslip”

was profusely scattered, and a multitude of other flowers, vying with each other in beautiful tints, adorning the soil.

The roads, or rather cattle-paths, to this plain, led through defiles of hilly and picturesque scenery; hills towered above us, clothed at some parts densely, and at others thinly, with various kinds of timber; a number of trickling streams ran murmuring through the vales, their banks covered with a luxuriant vegetation, while the rich pasturage afforded abundance of food for the herds of cattle located here, and for the kangaroos and emus, which are numerous in these valleys and ranges.

On the banks of the Tumat stream, shrubs of the genus, *Pomaderris*, *Westringia*, *Grevillea*, *Veronica*, and *Acacia*, were profusely in flower; and the flax plant, (*Linum Australis*?) called "Warruck" and "Brangara" by the natives, grew luxuriantly about the flat, attaining the height of from two to five feet, and the largest circumference of stem, half an inch. This plant, by cultivation, might form a valuable article of commerce, and could be procured in any quantity. The natives first pulling the bark from the stem, remove the epidermis from the flax, and dry it in the sun; they then manufacture it into small cord by rolling upon the thigh; (a similar

method is adopted by the New Zealanders when manufacturing their flax into twine ;) it is afterwards employed in the formation of nets, and for a variety of other purposes.

CHAPTER XV.

Kangaroo hunt—Ferocity of that animal—Use of its tendons—The culinary parts—Haunts of the kangaroo—A death struggle—Dissection of a kangaroo—Preservation of human fat—Ascent of trees in pursuit of game—Parrots and cockatoos—The emu—The native porcupine—Species of ophthalmia, termed the blight—Leave the Tumat country—Banks of the Murrumbidgee—Aborigines—Water gum-tree—Kangaroo rat—The fly-catcher—The satin bird—Sheep stations—Colonial industry.

ON arriving at the plain, having the dogs with us, we started a kangaroo;* (the common

* The natives name the kangaroo “ Bundar and Wumbuen,” but have separate names for each species. At Goulburn Plains the red species is called “ Eran and Warru;” and, although the language of the different tribes vary in other respects, there is often a similarity of the names of animals among them, each having two or three distinctive appellations, which may have been the cause of so much confusion existing among this genus of the mammalia; for Mr. Ogilby, who devoted much time and research to the marsupial quadrupeds of Australia, correctly observes respecting the kan-

species, or *Macropus major* of Shaw ; *Kangurus labiatus*, Geoff. ;) the dogs pursued, but we stopped our horses, for a young kangaroo was lying tranquilly upon the grass, apparently unconscious of danger ; the stock-keeper, who accompanied me, alighted and secured it. To prevent escape, he tied the hind legs, and then placed it upon the ground ; the animal, however, contrived to make off, and we had some difficulty in re-capturing it. Occupied with the young, we forgot the old one, and, as the dogs returned unsuccessful from the chase, it must have either outrun them, or perished in the river which was near ; for when closely pursued, these animals run towards a river, (when one is near,) and dash into it without hesitation. Should the water be deep, they instantly sink and perish ; if shallow, they remain in it, keeping their pursuers at bay.

The following anecdote was related to me

gareos, "They are at present involved in the greatest confusion, and are mentioned in catalogues in the most vague and general, as often incorrect terms, without any distinguishing marks. No department of Australian mammalogy has given me so much trouble as the history of the kangaroos ; in none have I arrived at a less satisfactory conclusion." I only regret that the brief sojourn made in Australia, would not permit me to investigate the subject to the extent I desired. From what I observed there does not appear so much difficulty to ascertain the different species, as has been supposed.

respecting an animal of this species. A man went out to hunt kangaroos, and having started a large male, the pursued animal took refuge in a water-hole, sufficiently shallow to enable him to keep his head and fore-paws above water, and here awaited the attack of the dog, which he soused fairly under water, when he came within reach. Pat, (for the gentleman was from the sister kingdom,) in a great rage at the threatened death of the dog, would have shot the kangaroo, but the gun missed fire; he then entered the water-hole "to bate the brains of the baste out" with the butt-end of the gun; but the "baste," not fancying to be thus treated, turned from the soused and now senseless dog to his more formidable adversary, and a struggle took place, in which the man was often thrust under water, and victory was promising much in favour of the kangaroo, when some of Pat's companions fortunately coming to his assistance, attacked and killed the animal with clubs, and rescued him in almost an insensible condition; on recovery he vowed not to hunt the "big bastes again." This circumstance occurred some years since at Yas Plains, on its first settlement, and when kangaroos were exceedingly abundant. It is now a rare occurrence to

see one upon these plains. Happening to meet the hero of the above tale, (I mean the man, not the kangaroo,) I asked him how he felt when the beast hugged him; he replied, "Not very comfortable; he tumbled me about famously; they are mighty strong bastes, and don't seem to like being meddled with." Indeed, many persons when alone are afraid to face a large "old man" kangaroo. A man recently arrived in the colony, was sent after cattle; he returned in great terror, having, it appears, come suddenly on the ranges upon a kangaroo, as "large," he said, "as a horse." I asked him the colour of the animal; he replied that he did not recollect it; he only wished to get away from the beast, and running down the hill, was glad when he saw the animal *warn't* following him; it is probable when he went down one part of the range, the animal, equally, if not more frightened, descended another. We passed over the ranges close to the stream of the Tumat, a rugged route, at some parts dangerous for horses, but the sure-footed animals carried us safely over places which would have astonished European horsemen.

After leaving Blowrin Plain, we saw several kangaroos on the ranges; one was pursued, and

after a short chase overtaken and killed by the dogs. It was a female of the common species,* (the males of this species are called by the colonists "foresters," the females "flyers.") The weight of the animal was seventy-six pounds, but many have been killed in the neighbouring ranges weighing two hundred and twenty pounds: this specimen was conveyed to Been, where I dissected it.

We returned through a picturesque and fertile country, watered by the Tumat river; many of the Grey cockatoos, with red crests, known by the native name of "Gang, gang," were seen, and a beautiful white hawk was quietly perched upon the lofty dead trunk of a tree. The methods employed by the natives to capture kangaroos, is either driving them into a river and killing them with spears; or on observing one approaching, by remaining perfectly quiet, they are mistaken by the animals for the charred trunk of a tree, and fearlessly advancing, are speared or killed by clubs.†

* I was informed that a white kangaroo had been seen; it was an Albino, with the usual pink eyes, and is extremely rare.

† A ludicrous instance of this mistake once occurred (and it may be said there is scarcely an individual who has travelled in the bush but has made a similar mistake

The tendons of the muscles about the tail of the kangaroo, and those of the legs of the emu, are converted into thread by the natives, who manufacture from it a neat net ornament, called "Bollombine." One of these ornaments, made for me by a native female, of the tendons procured from the kangaroo, was executed in the following manner:—The longest tendons selected from the tail were laid in an extended position to dry in the sun; they were afterwards divided into threads; (when dry they are capable of producing threads of considerable fineness;) the cord intended for this ornament was made by two of these threads being rolled upon the thigh, additions being made until a sufficient length was obtained for the purpose required, usually extending to several yards. The netting process is executed in a manner somewhat similar to our own; the ornament, one inch and a-half in breadth, extends like a fillet

although, perhaps, not to the same extent.) A settler lost himself in the bush, and thinking he saw a native at a distance, he hailed with the usual "Cu, he; cu, he," (which can be heard at a great distance, and is borrowed from the natives,) until he made the woods resound; but receiving no reply, he galloped up to the object, and then discovered it was merely *a charred stump of a tree*; so this may be some apology for the poor kangaroos.

around the front part of the head, being tied behind by strings of the same material: it is worn by males and females, and coloured with red ochre or pipe-clay, according to the taste of the wearer; the stock-keepers value the tendons for whip-lashes, and say nothing can surpass them for durability.

The part of the kangaroo most esteemed for eating is the loins; and the tail, which abounds in gelatine, furnishes an excellent and nourishing soup; the hind legs are coarse, and usually fall to the share of the dogs. The natives (if they can be said to have a choice) give a preference to the head. The flesh of the full-grown animal may be compared to lean beef, and that of the young to veal; they are destitute of fat, if we except a little being occasionally seen between the muscles and integuments of the tail. The colonial dish called a *steamer*, consists of the flesh of this animal dressed, with slices of ham. The liver, when cooked, is crisp and dry, and is considered a substitute for bread; but I cannot coincide in this opinion.

While visiting the "Blowrin Flat," on hunting and other excursions, I frequently observed marks upon the grass where kangaroos had been herding; at one place the grass was beaten down, and a quantity of their fur strewed about

the ground, an indication of their having been recently engaged in active warfare, leaving behind them, like the Kilkenny cats, only some morsels of flue. Although we had many indications of these animals having visited the flat, we rarely saw them, except upon the ranges, particularly those spots where, the grass having been recently burnt, the young herbage was springing up.* It is usual for kangaroos to frequent the high land during the summer, seeking the more sheltered situations during winter.

The females are not permitted to eat the flesh of the kangaroo, for if they did (the selfish males observe) "our dogs would die;" nor are the women, it is said, allowed to eat the flesh of the "Bandicoot" (called Kudjun, Mandu, or Gorun, by the natives) until they have borne a child.

The dying kangaroo would afford a subject worthy of the inimitable pencil of Landseer, as it lies prostrate on that ground, where, but a few minutes before, it fed and gambolled, un-

* These animals, like the cattle, frequent those places where the grass, having been recently burnt, they meet with the sweet young herbage. This may account for our finding them so numerous about those situations, in preference to the plain, although the latter seemed to offer the temptation of more luxuriant but coarser feeding.

conscious of danger, moaning piteously under the unmerciful fangs of the hounds: its eyes, dim with tears, seeming to upbraid the hunter for his cruelty. No one can behold the tragic scene without feeling pangs of regret, as the dogs worry the animal until the hunter dismounts, and passing his knife across the creature's throat, the crimson stream flows, and the fixed glassy eye indicates the termination of life.

One day, while hunting kangaroos over the ranges, we started a female, reposing during the heat of the day under a tree; she was soon seized and destroyed by the dogs. A short distance further on the same range, we came upon a large male kangaroo, which bounding away, we had a fine chase after him over stumps of trees, bushes, loose wood, and rocks, and found these impediments, over a naturally irregular ground, any thing but safe; but the horse I rode was accustomed to such places, and, being sure-footed, he carried me safe over all difficulties in sufficient time to witness the death-struggle. The kangaroo had been arrested in his progress by the hounds, on ascending a steep acclivity. When descending a hill these animals make surprising leaps, and bound with great speed also upon level ground; but when ascending a hill they are soon captured. The dogs had judiciously divided

their attack upon the large and now furious animal, two having seized each a hind leg, and firmly kept it down, as if instinctively knowing the danger of its claws; another firmly grasped the throat; the animal in return hugging him between his fore-paws; the fourth made his attacks upon any part where an opportunity offered.

Although the kangaroos have so pretty and innocent a physiognomy, yet when attacked, and defending themselves in the "strife of death," they display a fierceness of disposition which would not be supposed from their gentle nature. The "old man," as a full grown male is called by the colonists, is really a formidable opponent when at bay, either for man or dogs; and although the engagement usually terminates against the unfortunate animal, yet the struggle is often violent and protracted before its death is accomplished. The object of our chase stood erect, braving the unequal contest, which he had endeavoured to, but could not, avoid; the victory was strongly disputed, and three of the hounds being young, I doubt whether it would have terminated in their favour, as they began to be exhausted, when the overseer, dismounting, overturned the animal, and keeping its hind legs down with his utmost strength, the dogs at-

tacked the throat, and its existence was soon terminated.

The weight of this animal was one hundred and sixty pounds. On the inner side of each knee-joint I observed a collection of several hundreds of worms,* long, thin, and of a white colour, inclosed in a cyst of cellular membrane, through which they could be seen. It was situated external to the knee-joint. I dissected a cyst as perfectly as possible, and placed them in spirits; at the same time regretting that I had no means of preserving the joint with the cyst attached entire. Similar worms are said to exist in the stomach and intestines of the animal. These cysts, I understand, are not uncommon; some persons have asserted that they have never killed a kangaroo without them, whilst others declare they are more common in males than in females,† and are found in two kangaroos out of three.

When examining the body of the kangaroo last killed, the attack of mosquitoes, horse-flies,

* They are mentioned in the catalogue of the museum of the London Royal College of Surgeons, "Preparations of Natural History in Spirit," Fasc. 1, part 4, p. 37, as a doubtful species of *Filaria*. "*Filaria Macropi majoris*."

† This assertion accords with my remarks, for I did not observe these cysts in the females, but only in the male specimens I dissected.

and others, nearly obliged us to abandon our game, for portions of the animal were almost immediately covered with white maggots, (the "blow flies" in this country are viviparous,)* and on the conclusion of my investigations, we were glad to take our departure, and leave the carcase to myriads of tormenting insects that were fast increasing from all directions. I observed the molar teeth of the two female kangaroos had a layer of metallic substance incrusting them, and could readily be knocked off; it re-

* The maggots can be produced alive from the parent fly by pressure upon the lower part of the abdomen; the annoyance of these flies is great during the summer season; depositing their progeny upon every thing, even blankets. Specimens of natural history, in the preparation of which arsenical soap had been used, the larva of this fly has been deposited, and found lying dead in clusters, from the effects of the poison. This renders dissection so difficult during the hot season of the year, and for some portions of the anatomy it is the only time for examining them in the recent state. I have even seen game "blown" a minute after it has been killed. During my journey, a man at one of the stations complained to me of a dull pain in his ear, and as if something was moving in it; he first felt it after sleeping in a hut a few nights previous. By pouring brine into the ear, a large white maggot crept out, and afterwards some smaller ones. The ear being well washed out, he suffered no more pain or inconvenience; no wound or disease of the ear appeared to exist.

sembles the "golden teeth" often observed in sheep and other herbaceous animals.*

The aborigines have a custom of preserving human fat. I observed it among the Yas, Murrumbidgee, and other tribes. They show it with reluctance to Europeans. I could not ascertain the motive with certainty. Some said it was as a charm—others that it was used in the cure of diseases: that it is applied to the latter purpose I believe, from having seen it smeared over or near the place at which a patient complained of pain, or had received injury. The fat is not taken from particular individuals, that from any human body being considered equally efficacious. The aborigines, when young, have the foot arched, becoming flattened as they advance in years; †

* On the surface of the tooth there is sometimes deposited a substance termed the *tartar* of the teeth. It frequently assumes a yellow colour, with a smooth surface, in the ox and the sheep, and has been ignorantly considered as gold derived from the pasture. It is merely a precipitation from the saliva. Berzelius found it to consist of earthy phosphate, 79.0; mucus not yet decomposed, 12.5; peculiar salinary matter, 1.0; and animal matter, soluble in muriatic acid, 7.5=100.0.—*An. Phil.* vol. ii. p. 381.—*Quoted in Fleming's Philosophy of Zoology*, vol. ii. p. 166.

† It is remarked (in a pamphlet of a Journey of Discovery to Port Philip, New South Wales, by Messrs. Hovel and Hume, Sydney. 8vo. 1831, undertaken in 1824 and 1825,)

and the children, as among all savage, and perhaps even civilized, races, when able to provide for themselves, are careless of parental regard or protection.

It is surprising with what facility the natives ascend, in pursuit of game, trees of large circumference, without a branch to aid them except near the summit, merely by making small notches with their tomahawks upon the trunk, in which the feet are placed. I even saw a female ascend a lofty tree for the purpose of taking a nest of the "Juliong," or Rose Hill parrot, from the hollow branch or "spout" of the tree: she brought down in safety five full-fledged young ones. The natives eat them, as they do all living things. The eggs of this species of parrot are of a light bluish colour, with small, pale, brown spots. The young of all the parrot tribe were now abundant. One evening a sound met my ears, resembling the harmonious voices of swine at a

that "the impressions of the feet of the aboriginal natives may be readily distinguished from those of Europeans, by the narrowness of the heel, the comparative broadness of the fore part of the foot, the shortness of the toe, and a peculiar bend of the internal edge of the foot inwards, (a form very probably incident to the method employed by these people in climbing trees,) and the smallness of the entire impression, compared with that of an European."

distance; but it appeared the noise proceeded from a batch of young "Wagaras," or cockatoos, in an adjoining tree, which were either disturbed by flying squirrels and opossums,* or, as a black "feller" observed, "'pose got no supper, *merry hungry.*"

The Emu, or New Holland cassowary, (*Casuarus Novæ Hollandiæ*, Lath.) were abundant about this part of the colony, more particularly at a place not far distant, called "Naganbilly." It is, however, to be regretted, that the birds are becoming rarer as settlements advance, as they could be readily domesticated. The same remark applies also to the kangaroo and other animals, against whom a war of extermination seems to have been declared. The emu is principally valued for its oil. The natives in this part of the colony call them "Gorin," and "Berebine." The skin of a full-grown bird produces six or seven quarts of oil, clear, and of a beautiful bright yellow colour: the method of extracting or "trying" the oil, is to pluck the feathers, cut the skin into pieces, and boil it; but the aborigines prefer the flesh with the skin upon it, regarding it, as the Es-

* The common opossum is called by the aborigines, in this part of the country, "Wille," and "Wadjan;" the ring-tailed opossum, "Bokare," and "Kindine."

quimaux do the flesh of whales and seals, as a highly luscious treat. The oil is excellent for burning ; it produces no disagreeable smell : it is also considered a good liniment for sprains or bruises in horses and cattle, either alone, or when stronger stimulating properties are required, mixed with turpentine.

The emu crops herbage like the cow or horse, and possesses great keenness of vision. The flesh is eaten by Europeans, and preferred by some to the kangaroo : the rump part is considered as delicate as fowl ; the legs coarse like beef, but still tender : the *fibula* bone of the leg is used as an ornament by the natives. The best time to hunt these birds is at an early hour in the morning. They are swift of foot ; but when once the dogs get up to them, they are speedily overthrown and dispatched. The formation of their nest is simple : they usually select a situation, in a scrub, upon the hills, where a space is scraped similar to those formed by brooding hens ; sticks and leaves, which alone form the nest, are left round the cleared place : here the eggs are deposited without regard to regularity, the number varying from nine to thirteen ; and it is a curious circumstance, that there is always an odd number ; some nests having been discovered with nine, others with eleven, and

others again with thirteen. It is now ascertained beyond doubt that the eggs are hatched by incubation. They are of large size, and of a beautiful bluish green colour.

Among other extraordinary animals furnished to the naturalists in this interesting country, is the *Echidna*, or "native porcupine," the Nickobejan and Jannocumbine of the natives. It inhabits mountain ranges, burrowing with extraordinary facility; and at this season (December) produces its young. It forms a link between *Hystrix* and *Myrmecophaga*, differing but little in external characters from the genera *Manis* and *Myrmecophaga*; a new genus has been therefore formed for it—*Echidna*, in the order *Edentata*, tribe *Monotrema*. It was named *Myrmecophaga aculeata*, by Shaw; at the same time that he considered the external character sufficiently distinct to place it in a new genus. He thus correctly describes the animal.

"The whole upper parts of the body and tail are thickly coated with strong and sharp spines. The snout is long and tubular, having only a small *rictus*, or opening, at the tip, from whence is protruded a long, lumbriciform tongue, as in other ant-eaters. The nostrils are small, and seated at the extremity of the snout: the eyes are small and black, with a pale blue iris. It

burrows with great strength and celerity underground when disturbed ; it will even burrow under a pretty strong pavement, removing the stones with its claws, or under the bottom of a wall. During these exertions, its body is stretched or lengthened to an uncommon degree, and appears very different from the short or plump aspect which it bears in its undisturbed state."

At Goulburn Plains, the natives brought me a young living specimen of this animal, which they had just caught upon the ranges : they called it " Jannocumbine," and fed it upon ants and ants' eggs. It was often taken to an ant-hill, to provide itself with food : from being so young, it had an unsteady walk, and was covered with short sharp spines, projecting above the fur. On expressing a fear to the natives of not being able to keep it alive, they replied that " it would not now die, as it had prickles on : " meaning, I suppose, that it could feed and provide for itself, not requiring the fostering care of its parents. On asking whether it was a male or female, they examined the hind feet for the spurs, and, seeing them, declared it to be a male. It sleeps during the day, running about and feeding at night. Its movements are tardy, the principal exertions being made when burrowing. When touched upon the under surface, or uncovered

parts of its body, or when attacked by dogs, it rolls, like the hedge-hog, into a spherical form, the prickly coat forming a good defence against the canine race, who have a decided aversion to have their noses pricked. When attacked, it has been known to burrow to a great depth in a surprising short period of time. I do not think that either this animal, from its coat not bearing caresses, or the large lizard, called Guana, from its repulsive form, will ever be admitted into the nursery of favourite animals by the ladies of the colony.

The *Echidna* is eaten by the natives, who declare it to be "cobbong budgerec" (very good,) "and, like pig, very fat." Europeans who have eaten of them, confirm this opinion, and observe that they taste similar to a sucking pig. This animal, when scratching, or rather cleaning itself, uses only the hind claws, lying in different positions, so as to enable it to reach the part of the body to be operated upon. The animal is pentadactyle, the two first claws of the hind feet being long, the first the longest; that of the great toe the shortest: they seem to have the power of erecting their spines, and, rolling themselves into a spherical form, making an excellent defence against many of their enemies.

I consider there are two species of this genus

existing :—first, *E. hystrix*, Desm., or Spiny Echidna, which is found on the mountain ranges in the colony of New South Wales ; and the second, *E. Setosa*, Desm., or Bristly Echidna, which is found more common in Van Dieman's Land. The first species attains a large size : it is stated in our works of natural history as being the size of a hedge-hog : my young specimen was fully that. At "Newington," the residence of John Blaxland, Esq., I had an opportunity of seeing a specimen full fourteen inches long, and of proportionate circumference : it fed upon milk and eggs, the eggs boiled hard and chopped up small, with rice ; its motion was heavy and slow ; it was of a perfectly harmless disposition. When disturbed from its place of retreat, it would feed during the day ; but was difficult to remove from the cask in which it was placed, on account of its firmly fixing itself at the bottom : it feeds, by thrusting out the tongue, to which organ the food is attached, and then withdrawing it. Mine moved about, and drank milk at night, taking little other food. After keeping it for nearly seven months, I found it one morning dead.

There is an affection of the eye, which much prevails at this season of the year in the interior of the colony, attacking both European settlers

and natives, and is called by the colonists the "blight:" it occurs only during the summer season: the attack is sudden, no doubt proceeding from the bite of a gnat, or some other insect. I had an opportunity of witnessing a case of this malady, which occurred in a native. The integuments surrounding the orbit were puffed up so much, as totally to close the eye, which was found much inflamed, as in acute ophthalmia, and attended with symptoms, in some degree similar, with severe itching and pricking pain, as if sand had been lodged in it, with a profuse flow of tears. This disease seldom continues for more than three days, even if no remedy be applied. A spirit lotion has been found the most beneficial application. Last summer every individual at one of the farms was attacked by it in both eyes, occasioning temporary blindness, and much inconvenience was experienced from all being attacked at the same period.*

On the 14th of December, I left the Tumat

* The men at one of the farms, when occupied in shearing, complained of a small green-coloured fly annoying them exceedingly, by flying about their eyes; so much so, as frequently to oblige them to discontinue their labour: an itching sensation of the eyes followed, and it seemed, to use their own words, "as if they were about to have an attack of the blight."

country on my return to Yas. Day had just dawned when I commenced my journey; the sky was clear and serene; the rising sun gilded the summits of the picturesque mountains; the sparkling dew was not yet dispelled, and all nature looked refreshed; the atmosphere was cool and agreeable, and the birds chanted, as if to salute the rising orb with their early melody; the dark foliage of the swamp oaks, and a brighter vegetation, would indicate the proximity of the river, whose murmuring stream was occasionally heard, although its waters were not seen. But as the day advanced, it became more sultry; vegetation drooped with excessive heat; the feathered songsters ceased their carolling, and only a few herons, magpies, ("Karo" of the aborigines,) and crows, were visible. I arrived at Darbylara late in the afternoon.

The banks of the Murrumbidgee were beautifully picturesque. How delightful it is in this country, so destitute of large streams, to sit under the overshadowing branches of the Eucalypti, near the river, watching the flights of wild fowl, engaged in catching the fish, with which this river abounds, or seeing the young amphibious blacks amusing themselves by throwing stones into the deep part of the stream, and diving in order to catch them before they reach the bottom. In this

amusement, they displayed much activity, and in nearly every instance succeeded in regaining the stone before it reached the bottom. The competition among them to catch it, was highly amusing.

There were a number of the aborigines about this farm, who made themselves occasionally useful by grinding wheat, and other occupations ; but no dependence can be placed upon their industry for they work when they please, and remain idle when they like; the latter being of most frequent occurrence ; but they are encouraged for their valuable assistance in finding strayed cattle, as they track the beasts with an accuracy seldom or never attained by a European.

The river's banks abounded in trees of enormous size, and were profusely embellished with elegant flowers. I saw a species of the Eucalyptus, called the " Water Gum," full a hundred feet in elevation, and six or seven feet in diameter.*

* Alluding to large trees, I heard a person, who had fully persuaded himself of the fact, endeavour to impress his auditors with the belief that a tree existed upon the estate of the Van Dieman's Land Company nine hundred feet high!!! This gigantic vegetable production would certainly beat " Raffle's flower," or " Crawford's root," and must be very valuable if only as a gigantic curiosity.

I also observed a swamp oak* growing from the trunk of one of these trees, having quite a parasitical character ; the former being about twelve feet high, and the latter full forty, both in a flourishing condition. An animal, called "Water-rat" by the colonists, and Biddunong by the aborigines, burrowed in the banks ; but I was not able to procure a specimen. There are also two species of the Kangaroo-rat found about this part of the colony ; one called "Cannamung," and the second, a larger species, called "Talbung" by the blacks.

About the river's banks an elegant species of fly-catcher, "Birinberu" of the natives, was numerous, burrowing for some distance in the sand, where it lays its eggs, and produces young. It is about the size of a lark, of beautiful and varied plumage, migrating from this part of the country in the winter, and returning in the summer to build about its old haunts. I examined several of the burrows, which were situated on a sandy flat, near the river ; the entrance was two inches and a half at its broadest diameter, continuing of a breadth seldom exceeding three inches, to the

* An excellent ley for soap, is made from the "swamp oak," when burnt ; and a ley is also procured at the island of Tahiti, in the South Seas, from the *Casuarina equisetifolia* for a similar purpose.

length of three feet generally,—although some were even longer,—terminating in a space from six to eight inches broad, where the eggs are laid . no nest was constructed, and, on examining the first burrow, I found four young ones reposing upon the bare sand. I covered the burrow as well as possible, leaving the young ones to a mother's care, who soon returned to her progeny. Other burrows contained from four to five white nearly round eggs. The length of these birds was ten inches from the beak to the two projecting tail feathers, which last were usually an inch and a half beyond the others : the irides were of a beautiful bright-red colour.

There are several species of birds seen here during the summer season, migrating in the winter, and others returning in the winter, and taking their departure in the summer. Observations upon the migration of birds in this colony would be interesting, as the accounts are often contradictory. The elegant “satin-bird,” (*Ptilinorynchus of Temminck*,) it is said, leaves the Murrumbidgee country during summer, returning in autumn : it is also mentioned, that the aborigines never kill this bird.*

Cattle and sheep stations now extend for some

* The aborigines call our domestic fowls, as well as all birds, by the general name of “Bújan.

distance down the Murrumbidgee probably as much as fifty miles. The following is a list of them, commencing from below Mr. Warby's farm at Darbylara. At a distance of two miles from Darbylara, proceeding down the stream, is the

Miles.		Belonging to
	1st Station, "Minghee,"	Mr. Warby, sen.
2 beyond,	2d Station, "Gundagiar,"	Mr. Hutchinson.
5 —	3d Station, "Willeplumer,"	Mr. Stuckey.
4 —	4th Station, "Kimo,"	Mr. Guise.
3 —	5th Station, "Wadjego,"	Mrs. Jenkins.
4 —	6th Station, "Nanghas,"	Mr. J. M'Arthur.
8 --	7th Station, "Jabtre,"	Mr. Ellis.
2 —	8th Station, "Wandubadjere,"	Mr. Thorn.
10 —	9th Station, "Kubandere,"	Mr. Tompson.
10 —	10th Station, "Billing billing,"	Mr. H. M'Arthur.

The natives' names of that part of the country where the stations are situated have been retained; the distance in miles is nominal.

The family at Darbylara are generally industriously employed in making butter and cheese, which is taken to Sydney for sale: they possess numerous herds of cattle, and the luxuriant pasturage about the farm fattens and enables the milch cows to furnish abundance of milk. From the industry displayed by this family, they deserve to realize an independence from their exer-

tions. Formerly flocks of sheep were kept about the farm ; but from great losses being sustained among them, from a morbid propensity of destroying their progeny, they were given up, and more attention paid to this as a dairy farm, for which purpose no land could be better selected.

CHAPTER XVI.

Flocks of pelicans and grey parrots—Arrive at Jugiong—
 A busy scene—The harvest—Quails and Hawks—Mr.
 Hume's farm—Domestic life among the settlers—Miss
 my way in the forest—Mr. Reddal's farm—Disease called
 the Black Leg—Mr. Bradley's residence at Lansdowne
 Park—Drooping manna trees—Christmas festival—Mr. F.
 M'Arthur's farm—Aboriginal tribes—Native costume—
 Noisy revelry—Wild ducks and pigeons—Spiders.

ON leaving Darbylara, I proceeded to Jugiong
 by a different road from that by which I came,
 keeping near the Murrumbidgee river during
 the journey. Occasionally a flock of pelicans
 ("Guligalle" of the natives) were seen: this
 species has black and white plumage; the back
 and upper part of the wings being black, the
 remainder of the body white, with the bill and
 legs of a yellowish colour. Black swans ("Gu-
 niock" of the aborigines) were also seen; and
 among others of the "plumy tribe" that enli-

vened the scenery, were flocks of grey parrots, and several other species of the same tribe; the bell-bird, razor-grinder, and coach-whip birds, were also occasionally seen or heard; the latter well named from its peculiar note, which accurately resembles the cracking of a whip. In the vicinity of this noble stream the scenery was beautiful; rich and luxuriant pasturage abounded, and the country had a cheerful and animated appearance. The river, during its course, occasionally forms pretty cascades, by falling over huge rocks that oppose its current.

After riding four miles, a station belonging to Mr. Kennedy, called Kurongullen, gullen, was seen on the opposite side of the river; about a mile further distant, Mr. Lupton's station of Guberolong was passed; and a further ride of eight miles, through a fertile picturesque country, brought me to Bulbábuck, a station the property of Mr. Henry O'Brien, where the men were busily occupied in cutting some fine fields of wheat. In the evening I reached Jugiong, and on the following day (10th December) arrived at Yas Plains.

This was the busy season with the settlers, being both the wool and grain harvest. Shearing had commenced some time before; but many who had numerous flocks were still engaged in that pro-

fitable occupation ; the packing, sorting, screwing, and sewing in bales, occupying much time ; wool being the staple article of the colony, and forming the principal riches of the settler. It is interesting for a stranger visiting the country at this period to view the processes of washing and shearing the animals—sorting, pressing, and packing the wool ;—to often hear the terms of short and long staple wool, and to see the specimens of it arranged in small locks, showing the different degrees of fineness. If the shearing season is deferred, various grass seeds get into the wool, particularly those of the *Anthisteria Australis*, or kangaroo grass, one of the most abundant perhaps of the native grasses, frequently not only injuring the fleece, but, aided by its awns, penetrating even to the skin of the sheep. The Australian climate is admirably calculated for wool growing ; the improvement of the fleeces during the late years, and the assorting of the wool by competent persons educated for the purpose in Germany, have produced for it so high a character in the London market, that the quantity exported from the colony is now great, and annually increasing : many of the settlers sell their wool to buyers in the colony, who speculate upon it, while others send it direct to agents in England.

The golden harvest also increases the business of the settler, usually occurring at the same time with the wool season, and the fields of grain around the scattered habitations render the scenery extremely rich. The prospect of the harvest this season was favourable both for its abundance and quality, although in some crops smut prevailed, the most were entirely free from it. It is a curious circumstance that self-sown wheat never smuts; that early sown is said to have little or none, and the wheat never smuts but when in blossom. I saw at one farm an ear of wheat from one of the fields, one side of which bore fine, healthy, and full grains, whilst the opposite side was entirely destroyed by smut. Wheat appears to suffer most. At one of the stations in the Tumat country the wheat suffered from smut, whilst barley and rye were perfectly free from it; and finer crops of the latter grain had never been seen. There are, I understand, many kinds of wheat that never suffer from smut in the colony; why are they not then sown in preference? The plan of trying different kinds of wheat and other grain, from various parts of the world, is worthy of attention, and would no doubt eventually confer much benefit, and add to the resources of the colony. There is a grain which the settlers have lately commenced to cultivate, called the "skin-

less oat," said to be brought from China, that yields greater returns than the usually cultivated kind.

On riding through plains, &c. a number of quails are usually started by the dogs, and numerous eagle hawks, (Mollien of the natives,) and others of the same rapacious tribe, hover about for the purpose of darting upon the unfortunate quails when started; these hawks will also destroy and feed upon snakes, lizards, &c.

On the 23d of December I left Yas Plains for Sydney; in the evening I arrived at "Lomebraes," or "Willowdalong," the farm of Mr. John Hume, after a journey of twenty-two miles. This farm is situated close to a river, which I was surprised to find was the "Lachlan." At this season it was merely a chain of shallow ponds, abounding with weeds, and even in the winter season, from the extent of the banks, it cannot attain any magnitude; probably by aid of tributary streams, it may in its course become a river of more importance. About this country the heat of the summer had not been so great as to parch up the land, which still maintained its verdure; but the utter want of variety in several parts of the colony, produces a tedious vacuity in the mind of the traveller when journeying over it.

A pleasing object in domestic life among the

settlers was the number of healthy, blooming children seen on the farms in the interior ; their little plump forms, with the prevailing flaxen hair, cheerful and lively disposition, and rosy countenances, sufficiently indicated that bush fare did not disagree with them : living in the midst of excellent milk, and other wholesome food, with exercise, they are never cloyed by the trash usually given to children in large towns. Sickness is also rarer among the servants, from an inability to become inebriated ; but tobacco is quite a necessary of life among them ; few can undergo any labour without it, and many have told me that they would rather give up their rations than be deprived of tobacco ; consequently no gift is more acceptable in the bush to a servant, for any assistance he may render to the traveller, than a present of tobacco, for money in the distant parts of the colony, is comparatively useless, and they care little or nothing about it.

On leaving " Lomebraes," the morning following, I proceeded some distance on my journey, when thinking I could reach " Mut, mut, billy," sooner by taking a nearer cut across the bush, I followed cattle-paths, until I missed my way ; no trifle in the bush of New South Wales, where many, having lost themselves in the mazes of a forest, have

perished. However, after *chancing* the direction, I came to a settler's hut, about three or four miles distant from Mr. Reddal's farm, at Mut, mut, billy ; I made inquiry of a man and woman, who were at that time busily engaged in opening a cow in the stock-yard, whether I was in the right road ; after answering my inquiry in the affirmative, the man asked me if I had ever seen the disease called the " black leg," which prevailed so much, and was still prevailing to some extent among the cattle in the colony, informing me that the cow had died of the disease, the first instance of it in this part of the country.

I felt gratified at having an opportunity of examining a case of this disease, of which I had only previously heard an account ; so alighting, I entered the stock-yard, and examined the dead animal. Every part of the internal viscera was in a perfectly healthy condition, the stomach was distended with food, and there was nothing in the internal appearances exhibited to account for the death of the animal ; but upon the thigh of the left hind leg, I perceived a swelling, and on the skin being laid back from it, an extent of dark extravasated blood was seen, and there was a similar state of extravasation upon one side of the neck : cutting through the fascia, the whole of the muscles, which had the appearances just

mentioned, were found saturated with black blood, even to the bone. I can make no better comparison of its appearance than by saying it seemed as if those parts of the body had been severely beaten or mashed.

The animal I examined was a young cow; (the disease is said to attack principally the yearlings among cattle;) she had been perfectly well the preceding evening, but was found dead early in the morning; from the stomach being found distended with food, it could not have been long ill previous to its death. On arriving at the farm of Mut, mut, billy, I mentioned the circumstance to the overseer; he was alarmed at the disease having occurred so near, and expressed a fear of his cattle becoming attacked, as the disease was considered contagious; he asserted that none of his cattle had ever yet been affected, although he had heard of numbers dying in other districts from the disease.

It was a few days after this, when staying at Goulburn Plains, that a gentleman arrived, who mentioned his having seen a case of the disease denominated the "black leg," in the stock-yard of the farm at Mut, mut, billy, that morning, so from this circumstance the fears of the overseer, respecting the extension of the disease, were unfortunately realized. The Irish assigned

servants upon the estates where the disease has occurred, mention that it is not uncommon in Ireland, and is there considered contagious.* The mode of treatment adopted for its cure in that country is to bleed and rowel the cattle, and change the pasturage : it has been asserted that it was unknown in the colony until within the last twelvemonth ; but some declare that it has existed, although not extensively, for a much longer period. Dr. Gibson informed me that the disease prevails principally among calves and yearlings, the first marked symptoms being a paralytic affection, the animal drawing the leg after it ; a swelling and tenderness are then experienced about the affected parts, and usually a fatal termination ensues in twelve hours ; bleeding relieves, and even has been known to cure cattle thus affected, if resorted to in time ; but from the rapid progress of the disease, and among a large number of cattle, it is seldom observed until too late.

On the 24th of December I arrived at Lansdowne Park, (or, in the language of the coun-

* The "black leg" is evidently the disease among the cattle, known in Ireland as the "*crippawn*," a kind of paralytic affection of the limbs, which generally ends fatally ; the customary course is by bleeding, and changing them to a drier pasture.

try, "Bungee.") Goulburn Plains, the residence of Mr. Bradley; and although the days previous had been sultry and oppressive, this was so cold as to make it agreeable to see a large wood-fire blazing on the parlour hearth, giving the close of day the appearance of a Christmas-eve at home, although in this country it was the height of the summer season; but such atmospherical changes occasionally take place in the colony.

The elegant drooping manna-trees (*Eucalyptus mannifera*) were numerous, and at this season secreted the peculiar saccharine mucilaginous substance called *manna*, which, in greater or less quantities, was lying upon the ground beneath them, or upon their leaves, trunks, and branches, in small white flakes, resembling bits of starch. The taste of this secretion is sweet and mucilaginous, having a greater or less aperient effect on different individuals; it is quite a sweetmeat, and seems to consist of mucilage, sugar, and probably some magnesia: although it readily acts as an aperient on some persons, upon others it produces no effect; it does not dissolve in the sun, but, on the contrary, becomes dryer and of harder consistence, by exposure; rain dissolves it, but more secretion of it takes place after wet than during a continuance of dry weather. Many of the colonists supposed the

manna was secreted from the leaves of the tree, but from the foliage having a strong camphorated taste and odour, which the manna has not in the slightest degree, it was not probable; others again supposed it to proceed from the nectaries of the flowers, which are white, growing in clusters, and give to the tree a beautiful appearance when in bloom, attracting multitudes of parroquets. This tree, similar to the other *Eucalypti*, secretes a red gum, both spontaneously and in larger quantities, on incisions being made on the trunk. Birds and several insects feed upon the manna; among others the "Galang, galang," as they are named in the language of the country, the "locust" of the colonists, of which insects, as I have before said, the aborigines declare it to be the excrement.

The tree is called in the aboriginal language "Bartoman," and the manna is named "Cú ningaban;" it is collected and eaten by the natives. The growth of the tree, when young, is graceful and elegant; the bark is covered with a whitish powder, which readily rubs off upon the fingers, and the bark underneath is of a greyish colour; the bark of the "white gum" (*Eucalyptus species*) resembles this tree, but may be distinguished by not having a black butt like the manna-tree. On

examining the tree to ascertain positively from what part of it the manna was secreted, I found in several that the manna exuded in a liquid form in minute drops from the bark, and then concreted ; on some it had oozed out and had concreted upon the trunk in large thin flakes ; it exuded about the consistence of syrup, and in taste was sweet ; when secreted from the branches it falls from those above, upon the leaves, &c. of others beneath, and upon the ground, where, during a plentiful season, a large quantity may be collected.

The rain that had fallen the day previous to my examination of these trees, and the heat of the sun causing a quantity of manna to exude from them, its mode of secretion could be more readily distinguished. It is usually secreted about the commencement of December ; but it depends on the weather whether the secretion is in greater or less quantity : this season it was abundant.

The manna trees had commenced during the latter part of December, to throw off their outer bark ; their trunks, therefore, had a ragged appearance, and the ground underneath was strewed with dried crisped pieces which had fallen off, leaving a smooth and handsome new bark in their place. The black cockatoos (“Womborong,” and “Bulowla”) were occasionally seen

in numbers, feeding upon the ripe cones of the *Banksia*, or honeysuckles;”* and the smaller chattering parroquets were flying about, in hundreds, and revelling among the *Eucalypti* trees, which were now in flower; and, like to the humming-birds, they were extracting honey from the nectaries of the blossoms. On examining one that had been shot, the beak was covered, and the mouth filled, with honey, possessing the peculiar camphorated smell of the leaves and flowers of the tree, mingled with stamina; the stomach was filled with a dark, thick honey, among which some quantity of the stamina of the Eucalyptic flowers were mingled. The Blue Mountain parrot also sips the nectar from the flowers, as well as from peaches, &c. The natives, when they kill any of these birds, suck their beaks to extract the honey with which the mouth is usually filled, and also recover that collected in the stomach.

The aborigines were now collecting about the farms in expectation of a feast at the ensuing Christmas festival. I went up to one who was busily engaged in making an opossum-skin cloak: he sewed the skins together with the fibres of the

* Called honeysuckle by the colonists, because the flowers secrete a quantity of honey, which is attractive to the natives, and the numerous parroquets, when the trees are in bloom.

bark of the "Stringy Bark" tree for thread, by first perforating holes in it with a sharp piece of bone, and then passing the thread through the holes as he proceeded. I asked him some questions, and then gave him a piece of tobacco: he asked for two piece tobacco, because "I merry busy, and you ask me much," said blackee.

I visited "Northwood," (distant about six miles from the Plains,) the neat farm of Mr. Francis M'Arthur, and afterwards rode across the plains to Dr. Gibson's farm, at Taranna, which is situated near the "Soldier's Flat;" this latter place consists of several small farms, of about a hundred acres each, which were granted by government to the discharged veterans. There were small bark huts erected upon the grants, and several ripe fields of grain and vegetable gardens about them.

The numerals among the aboriginal tribes of Goulburn Plains are as follows. One, Me tong;—Two, Bulla;—Three, Bulla, metong;—Plenty, Nerang and Gorong.

Christmas Day is regarded as a festival by the blacks who live near the habitations of the white men, it being customary at this period for the settlers to distribute among them provisions and spirits, with which they contrive to render

themselves *perfectly happy*. Several tribes had formed their encampment on and about the Plains, for the occasion, their huts had been speedily erected, by collecting the branches of trees, and lying over them sheets of bark, so placed as to form a shelter to windward; the fire being made in front. Some appeared in "native costume," with an extra daub of red ochre, and the "bottle" round the head; others wore tufts of the yellow crest of the white cockatoo, pending from their beards; but there were some who approximated to civilized society in dress, being arrayed in shirt, trousers, and handkerchief;—and when thus cleanly "rigged out" in European finery, their personal appearance was not unprepossessing,—not that I mean to say they will bear away the palm for personal beauty.

Some of the "black fellers" had merely a jacket, others only a shirt: the garments, however, were merely put on for the occasion, to be soon after laid aside, as they find clothing materially obstruct them when engaged in hunting or other expeditions. The putting on the European garments serves merely to gratify their vanity, making them look "like white feller," as they express it. Having observed, to one who petitioned me for a pair of "inexpressibles," to look

“like white feller,” that his father did not wear breeches ; he replied, “My fadder no see white feller trowsers—*if make a light* (see) make get ; but no white feller sit down this place when my fadder here.”

The “ladies” are conspicuous principally for their head gear ; glowing in grease and red ochre, the ringlets of these “dark angels” were decorated with opossum tails, the extremities of other animals, and the incisor teeth of the kangaroo ; some had the “Cambun” (“Bolombine” of the Tumat country,) or fillet daubed with pipe-clay bound round the forehead : this ornament is sometimes made from the stringy bark tree, as well as from the tendons of the kangaroo’s tail : lateral lines of pipe-clay ornamented the upper part of their faces, breast, and arms. Both men and women have raised cicatrices over the breast, arms, and back ; but the forms of these personal decorations are various. They regarded with a degree of awe, a keyed bugle, with which a gentleman amused himself at this place : they called it the *Cobbong (large) whistle* ; and were more pleased with the slow airs played upon it, than those of a lively and quick movement.

On the evening of Christmas Day we adjourned to the verandah : the scene was beautiful ; the heavy clouds, which had previously ob-

scured the heavens, had passed away : the sun, about to set, cast a red glow over the beautiful scenery of fields of golden grain ; numerous herds of cattle and flocks of sheep scattered over different parts of the extensive plains ; the elegant, drooping, young manna trees, and the sombre foliage of the *Banksia*, or honeysuckle ; the picturesque wooded hills, with declivities covered with verdure to the plains beneath, and the farthest view terminated by distant mountains, formed a splendid prospect.

My attention was recalled from the enjoyment of this tranquil scene, by the noisy revelry of the blacks, whose approaches towards civilization were manifested by their getting intoxicated. The camp was now one scene of tumult and confusion : the huts, of a weak and temporary construction, were thrown down ; the men, inebriated with "*bull*," were chasing the women and children with sticks, who scampered away to escape the punishment awarded to their mockery : numerous curses, in English, proceeded from the lips of the inebriated blacks, being terms more expressive than any their limited language could afford. As the men swore, the women screamed and talked incessantly.

One of them came to me the following morning, and said, "You ought give black feller

milliken, (milk,) bullock, and sheep, for white feller come up here, drive away opossum and kangaroo, and poor black feller get noting to patta (eat,) merry, merry, get hungry,"—a very true tale, thought I.

Kangaroo rats, called in the native language "Kánaman," were numerous about this place; they are lively playful little animals, and when in confinement will drink milk and eat manna with avidity; their fur is as fine as that of the larger species of kangaroo. It is said to be found abundantly about the "Stringy Bark" ranges, forming rude nests of the fibrous bark. At a beautiful spot on the Wollondilly, not far distant from the plains, and at a part of the river forming even at this, the summer season, a fine sheet of water, called "Karoa" by the natives,* the "Burriol," or musk ducks, with their young, the "Gunarung," or wood-ducks, as well as other kinds of water-fowl, were seen in great numbers; and occasionally, about the marshes, the native companion, or Curaduck of the aborigines.

* The name of the native that accompanied me was "Buru, birrima," which he said he received from the name of the place where he was born. This appears a common method among the aborigines of bestowing names upon persons, as well as from any personal defect. The native name of Mr. Bradley's farm is "Bungee," and his little child born there will usually be known by that name among the aborigines.

During this short excursion, a young black was stung by a wasp, and although he no doubt suffered severe pain, he yet disdained to utter a cry or a groan; he threw himself upon the ground, and rolled about, but no sound escaped his lips.

The bronzed-winged pigeon, the "Obun-galong" in the aboriginal language, was abundant at this season. It constructs, like the pigeon tribe generally, a rude nest of sticks upon the forked branches of a tree, and lays two or more white eggs.

There is a spider which I frequently observed about Yas Plains, and also at other parts of the colony, which forms a den in the ground; the opening is about an inch in diameter; over this a lid is formed of web, incorporated with earth, and a web hinge, accurately filling the external aperture, which the animal can shut at pleasure. I have heard of a person who was accustomed to feed one of these insects; after feeding, it would enter the habitation, and shut down the lid, by drawing it close with one of its claws. It is nearly impossible to discover their habitations when the lid is closed, from its being so accurately fitted to the aperture.

CHAPTER XVII.

Arrive at Wombat Brush—Animals called Wombat—Parched country—Road-side houses—Colonial English—Column to the memory of La Perouse—Death of Le Receveur—Sydney police-office—The Bustard—Botanic garden—The aborigines—King Bungaree—The castor-oil shrub—Diseases of Australia—New Zealanders—Australian ladies—Prejudice against travellers from Botany Bay—Anecdote—A fishing excursion—Cephalopodous animals—Conclusion of the author's researches in this colony.

ON the 30th of December I left Goulburn Plains, and arrived the same evening at Arthursleigh. On the day following I crossed the "Uringalle," (more commonly known by the name of "Paddy's river,") and arrived at "Wombat Brush." This tract of forest land was so named from being formerly frequented by a number of the animals called "Wombat," but which are now rarely or never seen in the vicinity of the settlement, the whole having been nearly destroyed. About the Tumat and Murrumbidgee country I witnessed numerous burrows; and certain marks of the

animals indicative of their presence ; but they can but seldom be seen, as they remain in the burrows during the day, coming out to feed at night.

One of these animals kept at " Been," in the Tumat country, alive and in a tame state, would remain in its habitation until dark ; it would then come out, and seek for the keelers or milk vessels ; and should none be uncovered, would contrive to get off the covers, bathe itself in the milk, drinking at the same time. It would also enter the little vegetable garden attached to the station, in search of lettuces, to which it evinced much partiality ; if none could be found, it would gnaw the cabbage-stalks, without touching the foliage. Although numerous in the more distant parts of the colony, they are difficult to procure, from the great depth to which they burrow.

Having passed the " ploughed ground," Bong Bong, Mittagong range, &c. I continued, through a country parched by the summer heats, or having a burnt aspect, from the custom among the settlers or natives, of setting fire to the dried grass. The scorched and arid appearance of the land, as my journey led towards Sydney, was wretched, compared with the beautiful verdant plains and ranges I had left in the Tumat, Murrumbidgee, and Yas countries. The harvest was for the most

part reaped; a few scattered patches animated by the verdure of the young maize springing up, and the yellow flowers of the native "Jibbong," (*Persoonia sp.*), with a few other flowering shrubs, scattered about, was all that cheered the eye of the traveller on the journey. I arrived at Sydney on the 2nd of Jan. 1833.

The houses by the road side, on the approach to Sydney from Liverpool, or Paramatta, are very neat in their construction. A bark-hut near the "metropolis" is daily becoming rarer; they are speedily giving place to neat and even elegant verandah cottages. There are certainly an abundance of public-houses in the colony, and the neat, clean appearance of the attendants, as well as the interior of the inns, may vie with those in the mother-country. The signs of the taverns assume every variety, all but that of *Temperance*.

It has often been mentioned by writers upon the United States of America, that a purer and more correct English is spoken in that country than in the "old country," where it is corrupted by so many different provincial dialects. The remark respecting the United States of America will equally apply to Australia; for among the native-born Australians, (descended from European parents,) the English spoken is very pure; and it is easy to recognize a person

from *home* or one born in the colony, no matter of what class of society, from this circumstance.

On a spot near the entrance to Botany Bay, (so named by Sir Joseph Banks, and "Sting Ray Bay," from the number of that fish captured there by Captain Cook,) a neat column has been erected by Mr. Joshua Thorp, (at that time the government architect,) from a design by Mr. Cookney, to the memory of La Perouse; the expense of its erection being paid by a subscription from the officers of the French discovery ships, which visited the colony in 1824; the colonial government supplying convict labourers. It is situated on a little elevation not far from the place at which Captain Cook landed. The column is circular, standing on a pedestal, and surmounted by a sphere. Its elevation may be about fifteen feet. This was the last place whence intelligence was received from the indefatigable but unfortunate navigator. The inscriptions on the pedestal are in English and French, and as follow:—"This place, visited by Mons. de la Perouse in 1788, is the last whence any accounts of him were received. Erected in the name of France by M.M. de Bougainville and Ducampier, commanding the frigate *La Thetis* and the corvette *L'Esperance*, lying in Port Jackson. An. 1825." About one hundred yards distant, inland from this column, near a red gum tree, are interred

the remains of Pere le Receveur, one of the naturalists attached to Perouse's expedition, who died at Botany Bay, in 1788. On the red-gum tree was the following inscription, carved by one of the officers attached to Bougainville's expedition:—"Prés de cet arbre. Reposit les restes, Du P. Le Receveur. Visité en Mars, 1824."

During the time that the French discovery ships, La Thetis and L'Esperance, lay at Port Jackson, this place was also visited by their commanders and officers; and search having been made for the exact spot where the remains of the naturalist were deposited, some of his bones were found, and over that spot a plain monument has been erected to his memory: on it was placed the following inscription:—"Hic jacet, Le Receveur, Ex. F. F. Minoribus, Galliæ Sacerdos, Physicus in Circumnavigatione Mundi Duce de la Perouse. Obiit die 17 Feb. Anno 1788."

The following account of the death of Le Receveur is given in Philipp's Voyage to Botany Bay, &c. "During the stay of M. de la Perouse in Botany Bay, Father Le Receveur, who came out in the Astrolabe as a naturalist, died. His death was occasioned by wounds, which he received in the unfortunate *rencontre* at the Navigator's Island. A slight monument was erected to his memory." An inscription was placed on it similar to the preceding.

The Sydney police office daily produces a strange compound of characters ; ludicrous scenes and incidents furnish abundance of *aliment* for the newspapers, who decorate many of the cases brought before the magistrate in so facetious a manner as to amuse their readers and sell the papers. The number of newspapers published in Sydney is very great, considering the small town, and many of them are well and ably conducted. "The " Sydney Herald" is published twice a week ; the " Sydney Gazette" three times ; the " Sydney Monitor" twice ; and there are other smaller papers *published weekly*.

At Paramatta I saw two tame specimens of the lesser *Otis*, or Bustard, the " Curlew" of the colony, which is abundant in this country ; they were familiar with the man who was in the habit of feeding them, but averse to approach strangers. It is principally during the stillness of night that the peculiar melancholy cry and whistle of these birds are heard, seeming like the harbinger of death. While sitting one night by the bed-side of a young man, expiring from a decline, I heard the note of the bird, unbroken by any other sound ; it came over my senses like a knell summoning the departing spirit to its last long home.*

* There is also at Batavia a bird which emits a melancholy

Among the attractions which Sydney presents to the visitor is the Botanic Garden, with its neat and tastefully arranged walks ; it is, however, to be regretted, that this establishment, as a "botanic garden," is not encouraged, it being, in fact, merely a government vegetable and fruit garden. Such an establishment would be most valuable as a nursery for the introduction of trees, shrubs, or plants, estimable either for timber, fruits, flowers, or dyes, and thus add to the resources of the colony ; by its means how many valuable productions might be introduced : at present exotics are almost entirely confined to the gardens of a few intelligent settlers. Still there are several trees and plants introduced from New Zealand, the north-west, and other parts of Australia, Cape, &c. A fine healthy specimen of the "*Adenanthos sericca*" has been successfully introduced, (which is correctly figured in Labillardiere's Plant. Nov.

scream and whistle during the night ; it is called by the Javanese "*Borong Matee*," or "Death bird," and is regarded by them, as well as by some of the European residents, as a bird of ill-omen ; and its note is supposed to indicate the approaching death of some individual. I was informed, that the decease of a gentleman at Batavia was indicated some time before by one of these birds uttering its melancholy screams, and hovering near the dwelling, and this was mentioned by a European, who credited the superstitious idea that these birds were ominous.

Holl. Tab. 38,) which shows that shrubs, &c. from King George's Sound (to which place this one is indigenous,) can be grown in perfection at Port Jackson.

In a pond the pretty white flowers and dark leaves of *Damasonium ovatifolium* were floating, and may be often seen swimming on the surface of the more tardy streams in the colony. The New Zealand flax plant does not appear to thrive well, nor has it yet flowered; the best plants I have seen were at the "Vineyard," the residence of H. M'Arthur, Esq., who has planted it in a moister soil. The Karaka tree, (*Corynocarpus laevigata*,) of New Zealand, was in thriving condition, having reached the elevation of from six to nearly fourteen feet, and borne fruit.

The New Zealand species of *Dracæna*, (or Tee of the natives of that country,) grows and flowers well not only in these gardens, but is frequently seen planted in front of the dwelling houses in and about Sydney; as also that lofty species of *Araucaria*, (*A. excelsa*,) commonly known by the name of Norfolk Island pine.* The Indian bamboo also grows very luxuriantly in the gardens, and in that part of the domain

* Governor King, when at Norfolk Island, cut down one which measured, after it was felled, two hundred and twenty-eight feet long, and eleven feet in diameter.

near the government house. The *Callistachys ovata*, from King George's Sound, was also in flower; it is an elegant shrub, having a silvery pubescence over the leaves, and bears handsome clusters of yellow flowers. The *Hibiscus splendens*, from Moreton Bay, was also in full bloom; its large and elegant pink flowers being full five inches in diameter. Numerous species of *Eucalypti*; *Banksia*, &c. from the interior of the colony, as also from Moreton Bay, and other portions of the Australian coast, were in a thriving state; and a species of *Dracæna*, bearing purple flowers, and brought from Moreton Bay, was in blossom.

About Sydney, however, in January, the beauty of the floral kingdom had in some degree passed away: *Melaleuca myrtifolia*, *Leptospermum*, *Xanthorrea hastile*, and other species; *Callicoma serratifolia*; *Gompholobium*; *Lambertia formosa*; *Isopogon anethifolius*; *Enokelia major and minor*; *Billardiera scandens*; and a few others still remaining, covered with blossoms, to animate the scene with their varied tints and brilliancy of appearance. The shrubs of the *Staphelia viridiflora* were now in fruit; which, when ripe, is of a purplish black colour, having a sweetish taste, and is gathered and sold in the shops under the popular name of "five corners:" this name, no doubt, was applied

to it on account of the *calyx* projecting in five points above the fruit. The gardens are laid out in very neat order, and Mr. Richard Cunningham having arrived from England with an appointment as colonial botanist, it may be hoped from his known talent and assiduity that the colony will soon have a "*Botanic Garden*," in lieu of a repository for turnips and carrots.

The aborigines are often seen about Sydney ; but to me they appear, probably from their vicious habits, a far worse-looking race than those I had seen in the interior. The *celebrated* King Bungaree had recently ended his mortal career, as well as most of his tribe, none of them ever having been induced to settle and cultivate the soil for subsistence. It is related, that in the time of the government of General Macquaire there was an attempt made, by distributing seeds among them, to induce the natives to cultivate the ground : among the packets of seed sent for distribution were some which contained fish-hooks ; these, together with the seeds, were given by the governor to the sable monarch, King Bungaree. Some time after the governor inquired of him whether the seeds had yet come up — "Oh berry well, berry well," exclaimed Bungaree, "all make come up berry well, except dem fish-hooks, them no come up yet."

The castor oilshrub (*Ricinus communis*) abounds in the colony both in a wild and cultivated state, thriving even in the most arid soils; yet the oil is still imported and sold in the colony at a high price, when by very little attention any quantity could be expressed from the seeds, not only for medicinal, but likewise for domestic purposes; such as burning in lamps; for which latter purpose it is used in some parts of South America, as well as by the Javanese and others. There are two methods employed to extract the oil—coction and expression; the first is performed by tying the seeds, previously decorticated and bruised, in a bag, and then suspending in boiling water until all the oil is extracted, and, rising to the surface of the water, is skimmed off.

This mode of preparation is still preferred by many of the West Indian practitioners; but as the oil is apt to get rancid when thus prepared, it is now obtained, both at home and abroad, by subjecting the seeds to the press in the same manner as the almond. The oil obtained is equal to one-fourth of the weight of the seeds employed. The acrid principle is contained in the cotyledons, and not in the embryo, nor in the testa. It is of a volatile nature. Good expressed castor oil is nearly inodorous and

insipid ; but the best leaves a slight sensation of acrimony in the throat after it is swallowed. It is thick, viscid, transparent, and colourless, or of a pale straw colour : that which is obtained by coction has a brownish hue ; and both kinds, when they become rancid, thicken, deepen in colour to reddish brown, and acquire a hot, nauseous taste. It has all the chemical characters of the other expressed oils, except that it is heavier, and is very soluble in alcohol, and also in sulphuric ether.*

Few diseases can be said to be produced by the climate of Australia : dissipation and numerous vices introduced from home have caused some to prevail extensively in the populous town of Sydney, but in the interior they are comparatively few. A number of persons perish from that fatal disease consumption ; but I do not regard it as produced by the climate, as it invariably attacks persons from England, of dissipated habits, or of employments uncongenial to health. The vice of intemperance prevails extensively, and renders the bills of mortality much greater than could be supposed from the population and acknowledged salubrity of the climate.

New Zealanders are now employed at Sydney as labourers, and are much esteemed for their

* Thompson's *London Dispensatory*. 8vo. p. 532.

steady and sober habits : they are also careful of the money they earn :—as an instance, one of them, who had just returned to Sydney from a whaling voyage, on receiving his wages, placed the amount in the hands of a gentleman, from whom he drew occasionally, about ten shillings at a time, to purchase clothes, or any other necessary article.

The Australian ladies may compete for personal beauty and elegance with any European, although satirized as “corn-stalks” from the slenderness of their forms. It is true their reserve is great, but it proceeds from diffidence, for in family intercourse they are both animated and communicative. Their education, from a deficiency of good schools, was formerly much neglected, except they were sent to Europe for that purpose ; but now that cause of complaint is removed by the establishment of several respectable seminaries and teachers ; so the high degree of natural talent the Australian females really possess may now be improved by proper cultivation. Even among the male Australians there is a taciturnity proceeding from natural diffidence and reserve, not from any want of mental resources : this led one of their more lively countrymen to observe, “ that they could do every thing but speak.”

It has been said that formerly it was dangerous in England to inform a fellow-traveller of having just arrived from Botany Bay, as he will soon shun your acquaintance ; but visitors from that country must, after the following anecdote, stand a worse chance in the celestial empire. A ship arriving at China from Australia, the commander, when asked by the Chinese where the ship came from, jocosely answered, " From New South Wales, where all the English thieves are sent." The inhabitants of the empire, taking the joke seriously, reported this and every other ship which arrived from that country to the mandarin as " ship from thiefo country : one thiefo captain, three thiefo officers, twenty-five thiefo crew." And when the Hooghly arrived with the late governor of New South Wales, it was—" One thiefo viceroy of thiefo country, with several thiefo attendants." The thiefo viceroy's lady landing at Macao, was not reported to the mandarin.

One afternoon, a party was formed for a fishing excursion in Port Jackson : we took a seine with us, and pulled out to a fine bay or cove, called " Chowder Bay," a picturesque little spot, and not far distant in the harbour from the north head at the entrance of Port Jackson. On the seine being hauled, immense numbers of the

Balistes, more commonly known by the name of “*Leather Jackets*,” from the great toughness of their skins, of various sizes were obtained. This fish is troublesome to hook-and-line fishermen, from biting their hook into two parts. It was probably this circumstance that caused the name of *File-fish* to be conferred upon them. Their flesh is not used by Europeans ; but the blacks eat them. Several sting-rays (*Trygon pastinaca* ? of Cuvier) were also caught, together with numerous specimens of *Diodon* ; *Sygnathus*, and two species of *Mullus* ; one was the *Mullus barbatus*, Linn., of a bright-red colour, “*Le Rouget*” of the French : this is the species said to be so celebrated for the excellence of its flavour, as well as the pleasure the Romans took in contemplating the changes of colour it experienced while dying.

The “*Cat-fish*,” (*Silurus*,) said to have the power of stinging with the tentaculæ or feelers, which pend from about the external part of the mouth, large quantities of the *Chætodon fasciata*, or Banded Chætodon, and several species of bream, were caught in this and other coves so numerous in the splendid harbour of Port Jackson.

Several large cephalopodous animals, *Loligo* of Lamarck, *Les Calmars* of Cuvier, were fre-

quently taken in the seine. If taken in the hand alive, they would, with the succulent tentaculæ, draw the fingers of the person holding them towards their parrot-beaked mouths, and inflict a severe bite : they also discharge, when captured, a large quantity of thick black fluid, a very minute proportion of which suffices to render turbid a large quantity of water. Should this black liquid fall upon linen clothes, it produces a stain difficult, if at all possible, to be removed. It is from this fluid that the material known by the name of China or Indian ink, is manufactured. The ancients were also accustomed to use it as a writing ink, and esteemed the flesh as a delicacy. Most of the eastern natives, and those among the Polynesian islands, partake of it, and esteem it as food : they may be seen exposed for sale in the bazaars throughout India.

Having brought my researches in this colony to a conclusion for the present, I have to regret the limited portion of time I was able to devote to the investigation of its various natural productions, &c., so numerous and interesting in all portions of the great continent of Australia. The discoveries already made have been numerous ; and, when it is considered that an immense tract of country still remains unexplored, many treasures

in every department of natural history may yet be looked for from this comparatively new and extraordinary portion of the globe.

To the botanist and zoologist, objects of peculiar interest are continually presenting themselves, not previously described, or indeed known in Europe. While a field of investigation might be opened by the geologist, the cultivation of which may be expected to repay his labours a thousand fold.

CHAPTER XVIII.

Leave Sydney — Rottenes Island — Colonial prospects — Voyage to Batavia — Prince's Island — The Java coast — Anchor in Batavia roads — The river — Alligators — Streets of Batavia — M. Choulan's tavern — Forests — Java ponies — A veterinary monkey — Public buildings — The traveller's tree — Celebrated Javanese chief — Sketch of his life and actions — Exactions of the Dutch government — The orangutan — Society in Batavia — Animals of Java — Doves — Dried specimen of the hippocampus.

ON the 14th of March I left Sydney, in the ship "Sir Thomas Munro," for Batavia, taking the southern passage, the winds obliged us to pass round Van Dieman's Land. On the 22nd, "Schouten's Island" was seen bearing west by south, and "St. Patrick's Head," north-west by compass, about twenty-five miles distant; and on the 23rd, Cape Pillar bore west by south-half-south; and "Maria Island" north by west-half-west by compass; distant about thirty miles. We had to beat against strong westerly winds; and at noon, of the 22nd of April, D'Entrecasteaux Point bore east by north, distant about

twenty miles, and extreme of the land to the northward, north-east by compass. The appearance of the coast was sterile. On the 23rd, we passed "Cape Leeuwin." When first seen, it had the appearance of a moderately high island, the land connecting it with the main being low, and not at that time visible from the deck.

On the 26th, we were off "Rottenest Island," which was of a moderate height, and most sterile appearance. The main land was sandy and scrubby: numerous fires were seen where land was clearing. A boat came off as we were endeavouring to beat into Gage's roads, and came alongside, with two gentlemen in her. They could furnish us, however, with no news respecting the Dutch war, to attain information respecting which was the object of our wishing to touch at this place. In reply to our inquiries respecting the state of the new colony, they said it was rapidly progressing. Of the settlements at King George's Sound and Port Augusta, the latter was reported as succeeding better than the former. There had been lately several arrivals with live stock from Hobart Town, and a brig, the "Dart," from Sydney, was then standing in for Gage's roads with a cargo of provision and live stock. Sheep at this period were selling from thirty to forty shillings each; flour from

twenty to thirty pounds per ton ; and potatoes at the enormous price of twenty-five pounds per ton. It was expected, however, that in the course of another year the colony would be able to raise produce sufficient for its consumption. No vessels had been lost at Swan River since the first year, and with common precautions it was considered there was no risk.

At two P. M. we proceeded on our voyage to Batavia. On the 13th of May we had the south-east trade, in lat. $21^{\circ} 15'$ south, lon. $138^{\circ} 13'$, east. On the 4th of May we crossed from $108^{\circ} 13'$ to $106^{\circ} 58'$ east longitude, (in a run of eight days from Swan River,) being the track recommended by Horsburg, to look for the "Trial Rocks," but did not see them.* On the 5th, several

* The Trial Rocks are thus mentioned in the "Lives and Voyages of Drake, Cavendish, and Dampier," published in the Edinburgh Cabinet Library, page 448.

"Dampier intended once more to attempt New Holland in about 20° . Here he found soundings at forty fathoms, but did not see the land ; and steered westward, to search for the Trial Rocks, (so named from an English ship called the Trial having been wrecked upon them many years before,) which were supposed to lie in this parallel, and about eighty leagues westward of the coast. But Captain Dampier was sick, and unable to maintain perpetual watch himself, and the officers inefficient and careless, so that this important point was not ascertained."

tropic birds, of the roseate and white species, were about the ship, although we were then distant three hundred and seventy miles from "Christmas Island," which was the nearest land.* On the 7th, boobies, fregate birds, and white and rose-coloured tropic birds, indicated the vicinity of "Christmas Island," which was seen about midnight, by the light of the moon, bearing north-east by north, by compass, distant twelve or fourteen miles. On the 10th we were becalmed three or four miles off the south-west side of "Clapp's Island," which was low, densely wooded with cocoa-palms, and other trees, even to the water's edge: a heavy surf rolled upon the sandy beach, and on reefs extending from each extremity.

Early in the morning, on the 11th, we were off the north-west side of "Prince's Island," and the land wind brought with it a delicious balmy fragrance; the extensive reef, running out a long distance from the south-west point,

* These are certainly the most delicate and beautiful of the oceanic birds; their peculiar shrill, raucous note indicates their presence about the ship; hovering over the vessel, or darting into the water in pursuit of prey, and as the sun shines upon the chaste and elegant plumage of the white species, or the rosy-tinted feathers of the red species, or *phanicurus*, their beauty is increased.

on which a heavy surf broke, was distinctly seen. This island, low at one part, is high and mountainous at another. It was late in the afternoon before we had a clear view of its lofty peaked mountain. The island was densely wooded, having a picturesque and verdant appearance. During the morning, which was showery, we slowly coasted along the island, at about four or five miles distant. As the weather cleared up about noon, the scenery gratified the eye with its varied tints, refreshed by the genial showers, and recalled to my memory those gems of the ocean distributed over the Polynesian Archipelago.

As we proceeded along the Java coast, having the lofty Crokatoa Peak, and others of the adjacent islands in view, light and variable winds and calms, with adverse currents, rendered our passage slow and tedious, and often obliged us to anchor. We were, on these occasions, visited by canoes, with fowls, eggs, turtle, &c. The outline of this island is at some parts low, wooded, and uninteresting; whilst at others, lofty mountains rise one above the other, until the towering "Mount Karang" terminates the view. The varied tints of the vegetation, covering the mountains from the margin of the sea to the loftiest summits the eye could attain, had a

rich and beautiful appearance, as the setting sun cast its rays over the landscape. Occasionally the thatched Javanese habitations became visible, peeping from beneath a canopy of wood. Most Malay villages are buried amidst the foliage of tropical fruit and other trees, which form a cool and agreeable shelter; but such situations cannot be regarded as conducive to health.

After a tedious passage since making the Island of Java, we passed "Onrust Island," which is the marine depôt, where ships are hove down and repaired; there are some neat buildings erected upon it, with rows of trees before them, in the usual Dutch style: but silence reigned; there was no bustle; and the black countenances of two sepoys were all the human beings visible. We anchored in Batavia Roads on the 21st; and the scene before us was a low wooded coast, lofty mountains in the distance; a few tiled houses, or native huts, scattered among the trees; and an extensive jetty, which is erecting on each side of the river: the town being built on a swamp, and planted with trees, was entirely concealed from the shipping in the roadstead.*

* Some ships, seeking freights, anchor outside the roads, by which it seems the port charges are saved; and then anchor in the roadstead, if they consider there is a sufficient inducement for them to remain at this port.

The following day we passed up the river, by the boat being tracked : (the current running down at a rapid rate, preventing boats being pulled against it ;) on each side an extensive wooden jetty was erecting, a great portion of which was now completed ; it extended to the bar at the river's entrance, with a break-water in front, having a passage on each side for boats. The expense of the construction of this jetty is paid by a duty of five per cent. being levied upon the amount of duties on all imported goods. A number of native convicts were employed in driving piles, &c. to complete this very useful undertaking.

On arriving at the Custom House, our boat was searched. Miserable houses lined the river on either side ; cocoa-nut palms, and other trees, including the *Thespesia populnea*, were planted about the dwellings ; masses of filth, dead and putrid bodies of dogs, hogs, and other animals, float down the river, impeding the boats in their passage : these carcasses serve to feed the numerous alligators (Buáya of the Javanese) which infest the river in great numbers, but are useful in removing the putrefying substances, which would otherwise be destructive to health in this sultry climate.

The alligators are held sacred by the Javanese,

who consequently never destroy them : indeed, the good understanding seems mutual ; for I observed native convicts working up to the waist in the water, not far from these voracious creatures, (reposing like logs on the surface of the water,) without fear or apprehension, injury from them never being experienced. Some say the alligators are too well fed with the offal and carcases coming down the river ; others, that the reptiles have a respect for black skins ; for should a European enter the river like the natives, he would be attacked by these formidable creatures. I saw a number of these reptiles, one morning, assembled about a dead buffalo, which had floated down the river near the bar ; from the size of some of them, they must have survived several generations.

We landed near a row of neat houses, having trees planted in front, which conduced, in this sultry climate, to afford an agreeable shelter from the fervour of the sun : these buildings were principally occupied as stores and offices by the merchants. The streets of Batavia run for the most part in a north and south direction ; are kept in neat order, regularly watered, and planted with rows of trees in the Dutch style ; these formerly adorned the banks of canals, which intersected the streets, rendering the city as

pestilential a place as could be met with between the tropics. During the brief period the island was under the British government, the canals were filled up; the main stream of the "Grand River," and its tributaries, alone remaining.

The houses in the city are spacious, but only used as offices and stores by merchants and others, on account of the insalubrity of the city during the night; having concluded business by four or five o'clock, P. M. they drive to their residences in the vicinity. On the afternoon of my arrival I drove out with Mr. Vidal, (a mercantile gentleman, resident in Batavia,) to Moolenfleet, about two miles from the city, passing on the road some mansions in the usual style of Dutch architecture, having gardens before them filled with various flowering shrubs and plants, among which the *Hibiscus rosa chinensis*, *Poinciana pulcherrima*, and *Ixora*, in full blossom, were conspicuous from the brilliancy of their colours.

We arrived at a tavern kept by a Monsieur Choulan, pleasantly situated at this place, but it is ill-conducted, (although the best and most respectable,) the proprietor having realized a fortune, does not consider it requisite to devote any further attention on those by whom he acquired it. Our after dinner display disap-

pointed me, from having heard and read so much of the delicious fruits of Batavia, both for flavour and variety ; the dessert was miserable ; the Rambutan (fruit of the *Nephelium echinatum*) or hairy fruit, (Rambut signifying hairy,) and some Mangoosteens,* were good ; the oranges were insipid ; and the “ Sour-sop ” (introduced from the West Indies) was the best fruit upon the table ; indeed, I may observe with truth, that I hardly tasted a good fruit during my stay at Batavia, except the Pine-apple and Mangoosten ; but it seems that fruits arrive at perfection in particular districts of the Island of Java ; there being one in which Mangoosteens abound ; at another, where the land is cool and elevated, pears, apples, and strawberries are produced : every kind is cultivated about Batavia, but

* The “ far-famed Mangoosten ” is certainly an agreeable fruit, but still I cannot join the various writers who have lavished such praises upon it—it may be want of *taste* in me ; and probably the fruit will still retain “ its luscious qualities, surpassing all other fruits in the world, combining the excellence of the whole ; ” but I must candidly confess that I am not so great an admirer of this or other tropical fruits, although I at the same time allow many to have excellent flavour, yet none can bear comparison with the delightful acidulated European fruits ; and the Mangoosten is even, in my opinion, beneath the orange or pine-apple, although still a very agreeable fruit.

nonc (excepting the pinc-apple) attain excellence.

The little Java ponies excited my attention, but these beautiful animals cannot endure much fatigue; they are purchased from thirty to one hundred and fifty Java rupees each; and if exported there is an export duty of nearly two pounds each: the residents are obliged to keep several of these animals, as there are always some incapable of duty from sickness. The Javanese consider that by keeping a species of monkey in the stable, the horses will not get sick, and should they become indisposed, Jacko possesses powers to cure them; the more valuable the monkey employed for the purpose, the more readily will the horses be cured, or the better will they be preserved in health. The Lampong monkey (brought from the Lampong Islands) is highly esteemed for this purpose by the superstitious Javanese for its qualities as a veterinary doctor.

A lad at one residence, who had charge of the horses, threatened to leave his master's service, on some of the horses getting sick, unless a monkey was procured for the stable; one of the Lampong kind was consequently purchased to attend upon the sick quadrupeds. Soon after the monkey had been in attendance, the sick horses began to recover, and in a short time were declared fit for duty; thus proving (what-

ever our grooms may think on the subject) that a monkey of the veterinary doctor species is an invaluable appendage to a stud of horses, and ought to be imported and bred by the Zoological Society for this express purpose.

An accident, however, occurred shortly after the monkey had taken up his residence in the stable, which placed him on the sick list, and made him a subject of surgical care. Being tired of driving away the flies which tormented his patients, he sought for variety, and observing, in the horses' tails, some grey hairs mingled with the black, to prevent the animals looking older than they really were, he began in the kindest manner to pluck them out. A kick, which laid poor Jacko prostrate at a distance, with a swollen physiognomy and fractured fore-arm, was the ungracious return made for this piece of service, thus reversing the old saying of "one good turn deserves another."*

After dinner we drove round the vicinity, passed Weltevreden,† where are the barracks

* At Singapore, observing one of these monkeys in a stable, I inquired if Java horses were kept there; the answer was in the affirmative; so Jacko was probably imported with the horses to keep them in health.

† The Malay name for Weltevreden is "Pasārsānan," which signifies Monday market, (Pasār. market; sānan. Monday.)

for the troops ; the situation is considered salubrious. There is also a fine building at this place, used as the state-rooms for the governor, and some part of it for government offices ; opposite to this building, in the centre of the square, is a small column surmounted by a lion, erected in commemoration of the battle of Waterloo. I was much gratified during the drive with the neat appearance of the houses, most of which were surrounded by gardens, rendered both brilliant and fragrant, by tropical trees and shrubs, gay with the vivid colouring imparted by their blossoms ; and as evening closed, the powerful and delicious odour of the tube-rose (which bears the appellation of " Intriguer of the night " among the Malays) communicated to us the information that those simple white liliaceous flowers were growing not far distant.*

In a few of the gardens I remarked that curious, large herbaceous plant, called the " Traveller's-tree ; (from a refreshing stream of limpid water gushing out from the stem when cut ;)

* This plant emits its fragrant smell powerfully after sunset, and has been " observed in a sultry evening, after thunder, when the atmosphere was highly charged with electric fluid, to dart small sparks, or scintillations of lucid flame, in great abundance from such of its flowers as were fading."—*Edin. Philos. Journal*, vol. iii. p. 415.

it is rare, and not indigenous, I understand, to Java. I recollect first seeing this tree at the Mauritius, and think it was mentioned as having been brought from Madagascar. The native houses in the vicinity of Batavia are almost concealed by the luxuriant foliage of Cocoa-nut, Banana, Jack, and other tropical trees. A neat building we passed, I was informed, was the "English church," and is under the direction of the Rev. Mr. Medhurst. After extending our drive round the "Kœnig," or King's Plain," we returned to our hotel.

In the billiard-room, I remarked a Javanese of diminutive stature, but stoutly formed, with a noble intellectual head; his manner was free and independent, but at the same time pleasing; he was accompanied by a young lad, (his brother-in-law.) This individual turned out to be no other than the celebrated chief Santot, or (as at present known by his assumed name) Ali Bassa; he was a leader of the rebellious party during the late insurrections, under Diepo Nagoro, and by going over to the Dutch, was the means of bringing the late Javanese war to a favourable issue; since that time he has held the rank of colonel in the Dutch service, with the command of eight hundred native troops, and had recently been sent on the expedition to

Padang, in Sumatra, where the Dutch are making strenuous efforts to conquer and oppress the natives.

Santot (or Panjerang Ali Bassa Pranredo Dudjo) was attired in white trowsers, waistcoat, and a coat of blue cloth with gilt buttons; he wore also a turban, in the usual Javanese style; his brother-in-law was dressed in a blue cloth jacket and trowsers. The intellectual head, and intelligent countenance of Santot would induce one to regard him as a second Napoleon.

As I have just stated, he was one of the leaders in the late rebellion, and made strenuous exertions to expel the oppressors of his country: this was nearly effected, when he attacked a Monsieur de l'Eau,* then a lieutenant commanding a small fortress in the interior of Java, with a small garrison of only twenty European soldiers, but who were well supplied with arms and ammunition. Ali Bassa made the attack with a strong force, but, after losing fifty men, he forwarded a message to Lieutenant

* This officer, now a captain in the army, and by all accounts an excellent and brave soldier, I saw at the same time at this hotel, where he at present resided; he appeared attached to Santot, and they conversed much together; he had lately returned from the Sumatran coast, having been recently employed in the war in the interior of that island.

de l'Eau, to the effect, that if he would come alone to him, he would make conditions to surrender himself to the Dutch government ; Lieutenant de l'Eau, with some confidence, ventured. On being introduced, Ali Bassa, who was seated on a mat, desired the lieutenant to sit down by him ; and the interview terminated by Santot surrendering to him, on condition that he should not be beheaded. Having entered the Dutch service, he was sent, with the regiment of native troops under his command, to the seat of war in the island of Sumatra. The cause of his return to Batavia was a suspicion entertained by the resident at Padang, of his being in secret correspondence with the enemy, and the following stratagem was practised to convey him as a prisoner to Batavia.

Santot was stationed at some distance from Padang, with about eight hundred Javanese troops ; and because he was not attacked by the natives at the time of the massacre, the Dutch at Padang suspected he must have had some knowledge of the preconcerted plan to destroy the European force. The resident, afraid to make any open charge against him, requested he would proceed to Java, at the urgent solicitations of the governor-general, to collect a large force, and return to conquer Sumatra. Upon

this representation he was induced to embark on board the government cruiser "*Circe*:" on landing at Batavia he was received by the resident and a guard of cavalry, and proceeded in the governor's carriage, as he naturally supposed, to have an interview with his excellency ; but instead of it, he was conveyed to the common gaol, and there confined in a dungeon, ignorant even of the charges against him ; and none of his friends were permitted to visit him :—there he remained for several days on *suspicion*. He was liberated on its being represented to the governor-general that the resident of Padang was misinformed. It is said he is to return to Sumatra.

He seemed to enjoy the game of billiards, and was an expert player. His brother-in-law, who was second in command of the regiment, was at one time near falling a victim to the strict discipline Santot maintained in his army during the rebellion. Having issued orders against cock-fighting and every other species of gambling, on going unexpectedly round the camp, he found his brother-in-law with some other officers thus engaged : he ordered them out to be shot ; three were instantly killed, and the brother-in-law was saved by the ball carrying away his turban, and producing a slight scalp wound, after which Santot pardoned him. Santot is a graceful horseman.

The troops under his command consist of cavalry and infantry ; the former are described as being a fine body of troops ; they are dressed in the Moorish costume, and armed with lances, sabres, carbines, and pistols. His army consisted of five thousand men.

Santot is not of noble family, although by his talents he has elevated himself to the rank of a prince of Java. He now holds the station and receives the pay of a colonel in the Dutch service. I saw some of his infantry, who were fine looking soldiers, attired in green turbans, blue uniform jacket and trowsers, and handkerchiefs round their waists.

The exactions of the Dutch government upon the natives have increased rather than diminished, in spite of all the lessons they have received ; and the present system, if left unaltered, will eventually cause the loss of Java, if not the whole of their settlements in the eastern islands. At the present time much discontent prevails at Macassar and other places, which, together with the attempts at aggrandizement in Sumatra, where a severer opposition is experienced than could ever have been expected, throws enough upon their hands in this part of the world ; and when the news arrived of the late rupture in Holland, it was fully expected by the Javanese that the Eng-

lish would take the island ; and the arrival in the roads of a British man-of-war (the Curaçoa) was almost hailed by them as a confirmation of the fact.

The government trembled for Java when the news of war in Europe arrived ; and the appearance of our men-of-war, the *Magicienne*, *Wolf*, &c. did not tend to allay their apprehensions. The Dutch vessels were sent off to Sourabaya, and remained there under the protection of the sloops of war, *Helden* and *Amphitrite* ; so there was hardly a single Dutch vessel remaining in Batavia roads, the English and American flags almost alone waving. The government were engaged in erecting two turf batteries on the banks a short distance down the river, and planted cannon upon them, and mercantile affairs were almost suspended. It was expected that an embargo would have been laid by the Dutch on our ships in Batavia roads ; but an order issued on this subject had reference only to their own vessels. The *Calcutta* and other papers were at this time filled with false and absurd statements relating to the Dutch force at Batavia, and seemed most eager to point out, even in the event of hostilities, in what manner they could most easily invade British property.*

In consequence of the present unsettled state

* The following paragraph appeared in one of the *Calcutta*

of Holland, freights were difficult to be procured, although a large quantity of produce remained for shipment ; but the owners were afraid to ship until news of a more settled state of European affairs arrived. Flour was scarce, and maintained a high price at Batavia. Malay boatmen are employed for ships' boats in preference to the crew of the vessels, as the boat has to be tracked up the river, by which the Europeans would suffer much exposure to the sun. The natives, thus employed, are also spies of the custom-house, and are ever on the watch, when un-

journals, and was copied into most of the India papers :—" A passenger who came round from Batavia has favoured us with the following intelligence relative to the Dutch squadron, &c. In Batavia roads there were—one line-of-battle ship, mounting sixty guns ; three large frigates ; four brigs and smaller vessels of war, all well armed and manned. In the canal there were—twenty gun-boats, mounting two long brass guns each. All the troops were marching in from the interior, and the *fortifications* were placed in a complete state of defence. A large frigate was lying at Sourabaya, well manned and armed. *If the Dutch should determine on making reprisals, a few days' sail would take them to Lintin, where they might seize British property to an immense amount.*"

A very kind hint I deserving the thanks of the *Dutch Government* ; for the capture would have been easy, the loss of British property great, being without a vessel of war to protect them. This is the way British affairs are conducted in the east.

suspected, and ready to convey information of any attempt to evade the duties.

At the residence of Mr. Davies I had an opportunity of seeing a living specimen of the orang-utan, which had been brought from *Banjarmassing*, on the south coast of Borneo. The animal was a male, and measured two feet four inches in height, being the first specimen I had seen alive. I was much pleased with its intellectual appearance as compared with others of the monkey tribe. He was seen to some disadvantage, as he was suffering from a severe cold; and not being found in the usual haunt, was at last discovered in one of the beds, enveloped in a sheet. When we uncovered him, he regarded us with a piteous countenance, as if to inform us he was indisposed,—his eyes were suffused with tears, cough, and skin very hot and dry, with a pulse at one hundred and twenty. (What is the natural standard of the healthy pulse in this animal?) He was evidently most desirous of being wrapped up, and did not care to be caressed by strangers, but turned his back upon them, hiding his head and face. His usual place of repose was on a mat in the verandah, but feeling ill, he thought he might claim greater indulgence, so took possession of one of the beds. The large anterior mass of brain gave a high

degree of intelligence to the animal's countenance, although the face had not so much of the human character as is seen in the *Simia syndactyla*, or Ungka ape ; but, concealing the lower portion of the countenance, the upper part and eyes beam with an intelligent expression. I observe it can thrust forward the lips in imitation of the action of kissing, but cannot give the impulse to them : neither does it lap liquid when in the act of drinking. When running about it often exercises its destructive propensity by destroying trees in the gardens of the houses in the vicinity ; and some of the owners not evincing much partiality to the monkey tribe, threatened to shoot the aggressor ; so, to save the life of the animal, a large bamboo cage was constructed, in which he was confined, but, born to freedom, he screamed with rage on being placed in it, and, exerting his muscular power, soon demolished the cage, and was then as quiet as before, being perfectly docile when at liberty, but savage under restraint.

He sometimes made himself a nest in a large tree near the house, and, watching when any one approached with fruit or eggs, would come down and endeavour to steal them. He is fond of coffee, and runs eagerly after the servants to

procure it. The natives are very fond of the animal, and it appears more attached to them than to Europeans. Not being found in Java, it is regarded as a great curiosity; the natives assigning to it a superior degree of intelligence. The animal, having been presented to the commander of a ship to take to Europe, the servants declared, that it had overheard the conversation of its being about to migrate, and always appeared melancholy whenever this gentleman visited the house; adding also, that it was the cause of its present illness.

The engraving of this animal, in Dr. Abel's work on China, was immediately recognized by the natives; and his interesting account accords with the generally observed habits. Excepting in intellectual development, I do not consider the orang-utan so closely resembles the human species as the *Hylobates syndactyla*, or Ungka ape, which walks more erect; and, in its internal anatomy, is more closely allied to the human race.

Being desirous of gaining some information respecting the usual height these animals attain, I consulted several persons who had visited Borneo, one of whom had been for some time a prisoner in the interior: the greatest elevation

the animal had been seen was four feet three or four inches ; at first it was stated to be eight feet, but, on further explanation, it was found the animal had been measured with the arms elevated above the head, which of course made a material difference. Its most usual height is from two and a half to three feet, when erect. These animals can be procured with facility, at Borneo, for one or two dollars ; but, if not procured young, little dependence can be placed on their surviving, as they become so strongly attached to their masters, that a separation will cause them to pine and die. The animal at Mr. Davis's improved in health in a few days, but never evinced any inclination to cultivate the acquaintance of strangers ; he was much attached to a Malay female, and a little Malay boy, who resided in the same house with him, and the latter was his principal playmate.

Society in Batavia is a dead letter ; bachelors smoking and drinking parties are, in many instances, common ; ruining the health, and occasioning the death of many, particularly strangers. The cause of frequent mortality is, in many instances, attributed to climate, that should be laid to the charge of imprudence. From the little I saw of the Batavian ladies, when returning from church in their gay equipages, they

were not particularly attractive; the majority were tinged with a dark hue, probably *sun-burnt*; few can talk any language but Javanese and Dutch; so there would be some difficulty for a stranger to judge of their intellectual powers. Bonnets not being fashionable in this country, an excellent view was afforded of their attractions. Some had four horses to their chariots, and a number of black servants perched up behind, according to the wealth or rank of the personage.

The Chinese are the principal artificers of the place, the Javanese preferring a military life; the Chinese are also the cultivators of the plantations and manufacturers of sugar, &c. Many of them may now be seen driving about in their carriages, possessed of great wealth, and owners of large estates, who arrived not many years since, penniless; several large estates on the island are also owned by British subjects resident in England, having agents or superintendents here to look after them.

Flowers, of delicious fragrance, are sold about the streets, to adorn the dark forms of the Javanese females, or lavish their fragrance upon the fairer Batavians, who are extravagantly fond of this article of luxury.

The animals of Java are very numerous, the

island being rich in zoological and botanical productions; the small or Java rhinoceros is numerous about Ceram, in the district of Bantam; it is often shot, but all endeavours to procure living specimens have as yet failed. Tigers are also numerous, and consist of three species, the *Matchan Itum*, or black tiger; the *Matchan Toetoe*, or leopard; and the *Matchan Loreng*, or royal striped tiger.

There are two species of doves seen in great numbers about the habitations of the Javanese; one being small, the other of a delicate cream colour, with a narrow black semicircular mark about the neck. The small species (which is most esteemed) is called "Perkutut" by the Javanese, and the larger one "Puter." Conversing with a Javanese about them, he appeared delighted to give me some account of his pets; seeing them attended with so much care I inquired the reason of their being such favourites, in preference to birds of far more beautiful plumage, so abundant on this magnificent and fertile island? In answer to my inquiry he informed me, that, "when these birds are kept about the house, it will not be destroyed by fire, or be liable to the depredations of thieves: as an instance of their having this power, should I be sceptical on the subject, he gravely assured me that during the heavy

rains in Feb. 1832, when most of the houses were inundated, one was preserved from the flood by this bird being within, the water flowed round the habitation, but did not enter !

When the birds are kept in a state of confinement, it is said by the Javanese, that they pass small green stones, sometimes one every week, and continuing for one or two years ; these stones are much esteemed, valued as high as thirty and forty rupees each, and are set in rings, &c. The stones, according to native information, are always *passed* upon a *Friday* ; (which is the Javanese Sunday ;) some set as high a value upon their birds as fifty and one hundred rupees each. The natives never eat them ; a European, at one time, shot some, and gave them to his Javanese servant to eat, not being aware of their veneration for them, but he would not touch them. Every *Friday* they take the birds out of the cages, wash them in rice-water, at the same time administering some small pills, (composed of such a multiplicity of medicinal ingredients, that my Javanese informant said, it would take too long a time to give me the names of the whole,) otherwise the birds would not live ; for if they were not washed, and did not take the physic, they would have small white worms in the corner of the eyes and in the nostrils, which would soon destroy them.

“ Yesterday,” (Friday,) said my amusing Malay informant, “ I washed this bird, (the one then before us,) and gave him his physic.” He was so highly pleased at my taking an interest in his birds, that he presented me with a pair of the cream-coloured doves, which, he observed, “ Would speak like a clock, every hour.”* The smaller species was the one, however, possessed of the preserving qualities against fire and flood. He apologized for not making me a present of it, and gave, in my opinion, the best of reasons that a married man could, which was—“ *his wife would not let him part with it.*”

I, however, so pleased my Malay friend, that he regretted I was about to leave Batavia so soon, as he would otherwise have shown me some more curiosities, and given me plenty of information on Javanese things, (probably, I thought, of a similar stamp to the foregoing, that is, more amusing than instructive). He brought me a dried specimen of the *Hippocampus*, carefully wrapped in paper; it was named Ecan Kudu, or horse-fish, (Ecan, signifying a fish, and Kudu, horse,) by the Malays, from its

* These doves when on board *cooed*, or, as the Malay said, *talked* when the bells were struck, but as frequently *cooed* or *spoke* out of the regular time, so they did not answer the purpose of a clock!

being regarded by them as an excellent medicine for horses; they place it (without being pounded, or otherwise prepared) in the water, the horses drink, and consider it an excellent tonic for them.

I saw at Batavia a species of Gibbon, which is indigenous to Java, and had just been purchased, it was the *Pithecus leuciscus*, Desm., or *Simia leucisca*, Schreb. The natives call it the white ape, or Woa, woa, puteh; the fur being of a light greyish colour; face and ears, black; no tail; long arms; and a prehensile power of the feet.

The *Sumpitan*, or blow-pipe, is an instrument upwards of six feet long; with which the Javanese propel small clay pellets from the mouth with such force as to kill birds and other animals; they are likewise used by the Javanese in warfare, to shoot the small poisoned arrows, (*damháak*,) which are about a foot in length, armed at one extremity with pith, and are propelled with surprising accuracy of aim.

CHAPTER XIX.

Leave Batavia and anchor off Hoorn Island—Islands about the Bengal Passage—Gingiong roads—Lofty aspect of the land—The coast—The golden mountain—Island of Sumatra—Aspect of the country—The lover's leap—Village of Pedir—Ships of the Acheenese Rajah—Visit to the Rajah—Dense vegetation—Buffalos—Ba Assan trees—Hall of reception—Interview with his Highness—Commercial negotiations — Curiosity of the natives — The Areka or Betel-nut—Flowering shrubs and plants—Rice-planting—Return to the ship—A prohibition.

At daylight, on the 2nd of June, I left Batavia for the Pedir Coast, on the north-east part of the large island of Sumatra; and, about noon, it being calm, anchored off Hoorn Island, in the Great Channel. This island is a mere reef, or sand-bank, with trees of some elevation upon it, which impart a higher aspect to it than on landing it is in reality found to possess. The passage, by the western coast of Sumatra, was

tedious ; light and variable winds and calms being very often experienced, although we kept some hundred of miles from the coast ;* it was, therefore, not until the morning of the 28th of June, that elevated land was seen, being the islands about the “ Bengal Passage,” which we entered about half past ten o’clock, A. M., having on one side the lofty wooded island of “ Pulo Brasse,” † and “ Pulo Nancie,” and opposite to them, the elevated island, rich in vegetation, of “ Pulo Way.” “ Pulo Rondo” was also visible in the distance.

Our progress through the passage was but slow, with a moderate south wind ; and a strong westerly current considerably impeded the vessel. On entering further in the passage, we became more under the influence of

* It is recommended (I was informed by some intelligent persons at Singapore) for ships proceeding to the north-east coast of Sumatra, at this season of the year, to take the passage by the Straits of Banca and Malacca, by which the voyage would rarely be protracted beyond ten or twelve days. From the length of time we took to Pedir, by the outside passage, there was evidently an error in taking it in preference to the one recommended, by persons accustomed to trade about those places.

† “ *Pulo*,” in the Malay language, signifies island, but Europeans frequently use the word *Island* before it.

the high land, and the breeze diminished. The weather was showery and unsettled, and the ship anchored in the evening in "Gingiong roads," in eleven fathoms, about five or six miles distant from the wooded coast.

The land had a lofty aspect, abounding in profuse vegetation, and was possessed of much romantic and picturesque beauty. Since we entered the passage, and proceeded along the coast, the mountains rose in peaked and various fantastic groups, forming the back view of the landscape; the low land, near the beach, was covered with timber; hills rose gradually one beyond another, terminated by lofty mountains, towering in the distance; the whole covered by a dense vegetation. At this time, the view was occasionally impeded by fleecy clouds passing over, giving afterwards an increased, animated appearance to the scene, by the refreshing showers they produced. At some distance from the main land, straggling rocks were sometimes seen, either rising solitary, or in clusters from the ocean's depths; some covered with a scanty vegetation, whilst the bare summits and declivities of others had a volcanic character: around their bases, the breakers dashed furiously, and the white foam raged against those rugged sides, which had stood the violence of a thousand

tempests, serving as a place of refuge for boobies, tropic, and other oceanic birds, which here congregate and rear their progeny, free from molestation.

The coast, as we proceeded, maintained its picturesque character, the high land being clothed with timber, and the low coast trending between the more elevated parts, of a somewhat similar character to some portions of the island of Java and other islands of the Indian Archipelago, was profusely covered with vegetation. On "Pulo Way," several clear, and apparently cultivated patches of land were visible, and smoke of fires; but no habitations could be perceived. Most of the island was a dense jungle, seeming only calculated as a refuge for wild animals in the midst of its wilderness of luxuriant vegetation. The coast off which we had anchored this evening, was, for the most part, low; except the land being elevated as it rose from the "Point Pedro," but it was not of such a verdant character as the mountainous coast we had previously passed during the day. The low land, however, abounded in trees; among which, the cocoa-nut palm was both numerous and conspicuous.

The following morning, at sunrise, the atmosphere was delightfully cool and refreshing; and the land-breeze brought off with it a delicious

fragrance. At daylight, we weighed, passed "Point Pedro," and then the vessel sailed at a distance only of three miles from the shore, in from twelve to fourteen fathoms water, which afforded an excellent view of the varying features of the Acheenese coast, as we proceeded. During the early part of the morning, the towering, peaked summit of the "Golden Mountain" was visible and perfectly clear; but as the day advanced, it became capped with clouds: it was elevated far above the mountains in the vicinity, and seems situated some distance inland. The west side of the mountain was clothed with wood to the summit, and exhibits nothing in its aspect from which the name of "Golden" could be supposed to be derived; but, as the Malays term it the "Gonnong Mas," or Golden Mountain, it has probably obtained the appellation from them on account of gold having been found upon it; and the English name is merely a translation of the Malay. The eastern side of the mountain has a similar densely wooded appearance from the base to the summit, as just mentioned of the western.

The morning was fine and clear; and as we sailed along the high picturesque coast of this portion (north-east) of the beautiful island of Sumatra, with light and variable winds

from west-south-west to north-west, it was extremely agreeable ; but, at the same time often caused me to feel regret that I could not revel amidst the botanical and other natural productions the coast and adjacent hills seemed to produce in profusion. Besides the elevated "Golden Mountain," there were many of great height, some of a saddle form, and the crateric summits of others imparted additional importance to the beautiful romantic scenery around them.

The hills became less wooded as we advanced to the eastward, and lost much of their tropical character. This peculiar feature of the country was, however, occasionally resumed—a sandy beach, upon which large trees were scattered, with a few thatched habitations of the natives, peeping from the dense foliage of the trees which grew about, with the cocoa-nut palms waving their feathered branches above them—this again gave the tropical character to our view ; but the receding hills terminating in mountainous country, now but thinly covered with vegetation, varied the landscape, and it possessed little to remind the stranger of inter-tropical scenery.

It was soon after noonday, when we passed the bluff point, named in the charts, the "Lover's Leap," and the coast beyond maintained, for

some distance, similar features to that we had passed, excepting some portions which had an increase of picturesque beauty: the receding hills were not so elevated; white cliffs, bare of shrubs or any kind of vegetation, rose almost perpendicularly from the beach about the "Lover's Leap;" but still further eastward, the coast again abounded in trees. Hills rose above hills, having, in part, a cleared appearance; but, in general, vegetation was most abundant. Lofty mountains formed the distant prospect; above the whole of which, the "Golden Mountain" reared its peaked summit, terminating the rich and varied landscape in an extremely beautiful manner.

From the few houses and canoes seen about this part of the coast, there seems to be a paucity of inhabitants, and no cultivation of the land was visible. The natives, however, may live in the fertile valleys, a short distance from the sea-coast, and concealed from our view. The wind and current being adverse, it was impossible for the ship to make any progress, and we therefore anchored about seven P. M. in twelve fathoms, a few miles to the eastward of the "Lover's Leap."

The next day we proceeded along the coast, the features of which were similar to that before described; but beyond "Pedir Point," the country

assumed a more populous and cultivated appearance : cocoa-palms abounded on the beach ; thatched houses of the natives were numerous, and canoes and larger boats were busily fishing ; the whole aspect of the coast was animated and picturesque. From light winds and calms, and strong adverse currents, we were often obliged to anchor, and did not reach the anchorage off the village of Pedir until the afternoon of the subsequent day (the 1st of July).

The situation of " Pedir " is an extensive, fertile flat, interspersed with low verdant hills, and the distance terminating in lofty mountains, covered most profusely with vegetation. The village of " Pedir " (from which some extent of coast, to the eastward, has been named by Europeans the " Pedir Coast ") is situated a short distance up a small and narrow river : the residence of the rajah, and a portion of the village, could be distinguished from the shipping in the roadstead. The plain through which the river flows, and upon the banks of which the village of Pedir is situated, is an extensive flat, or, for the most part, a series of marshes abounding in rice plantations, and extending to some distance inland, apparently terminated by a dense jungle and ranges of mountains towering one above the other ; to the westward it becomes hilly, trend-

ing out towards "Pedir Point;" and to the eastward terminates in lofty mountains, at some distance. This description is given from the appearance of the country as seen from the anchorage. The whole line of coast has a beautiful and luxuriant character, abounding in cocoa-nut, areka, and other palms; and beneath the trees the thatched roofs of native houses are occasionally seen.

Some vessels, belonging to the rajah of Acheen, were at anchor off "Pedir;" and others, having English colours flying, off the villages further to the eastward. The ships belonging to the Acheenese rajah were designated "men of war;" but a "grab," among the number, was the only one originally the property of his highness, for it had just conquered the barque, at whose peak the Acheenese colours waved, but which had been the property of the rajah of Trumong, who resided on the west coast of Sumatra, and with whom the Acheenese monarch was at war: the remaining one under the Acheenese flag, was an English brig, of Penang, last from the Maldivé Islands, with a cargo of dried fish: she was seized for trading in arms and ammunition with a rajah on the coast, who was at the time hostile to the king of Acheen. I shall have occasion to return to the latter affair at another part of this work.

The vessels were rigged in the European style, appeared of English build, and carried guns like merchant ships. They hoisted a huge, broad, red pennant, and the Acheenese ensign, the field of which was red, the central ornaments of a white colour.

Soon after we anchored, an old moorman came off to the ship, from the rajah, and arrangements were made to accompany him on shore the next morning to pay our respects to his highness.

On the morning of the following day, I accompanied Mr. Henry Fearon, (the supercargo), and the commander, on a visit to the shore, to have an interview with the rajah ; one of his attendants having previously been on board, bearing a multitude of salaams from his highness, and intimating that he would be happy to receive the gentlemen arrived in the ship. At the entrance of the river, we crossed the bar, upon which a surf is continually breaking, more violently at low water, or when the sea breeze blows fresh, than at high water.* At this time there was comparatively but little surf, so we passed without getting wet. We then entered the small winding river, which, although deep at some parts, suddenly

* It is passable for light ships' boats at half ebb, and even at low water, at the latter time the boats occasionally grounding; those heavily laden can only pass at high water.

shoaled at others, except the channel was kept, which usually had a sufficient draught of water for light boats ; but an inexperienced person had better have a native to pilot him, which prevents the annoyance of continually getting the boat perched upon spits and sand-banks. The course of the river is very serpentine ; and after entering it, the banks are covered with shrubs and plants, forming a dense vegetation, among which *Acanthus ilicifolia*, covered by a profusion of cærulean blossoms and other flowering shrubs, were numerous, as also the *Achrosticum aureum*, and other ferns. Native houses appeared mingled with the graceful, waving bamboo, cocoa palms, plantains, and other trees.

After proceeding a short distance up the river, we arrived at the small village of Pedir, which is a collection of thatched Malay habitations. Herds of buffaloes were refreshing themselves in the stream, and had a strange appearance when seen with only the head above water. The natives informed us that alligators were numerous in the river. We did not observe any during the time we remained at Pedir ; and from the buffaloes not being attacked, it is probable they are not numerous about the lower part of the river. After bathing, the buffaloes not being troubled with many of the projections called

hairs, had their hides covered with a thick coating of blue mud, which preserved them from the attacks of insects. Those on the banks, both old and young, stood, with their ludicrous physiognomies, staring at us as we passed them. A number of the small humpbacked Bengal breed of cattle were also observed feeding about the plain.

On leaving the ship, arms had been placed in the boat as a precautionary measure on this coast, where the natives are reported to be oftentimes unable to distinguish between *meum* and *tuum*; but on landing they were left in the boat, and our Jacks, not having the fear of the natives, or of a reprimand from their commander, before their eyes, took a morning's walk about the village, leaving the boat, together with our weapons, under charge of a boy, which proved the precaution was needless, as the arms, reposing at the bottom of the boat, were in this instance equally as effective as if they had been in the hands of the men.

After landing, we were conducted through an extensive bazaar, planted with several shady trees, called Ba, assan, by the natives; the closeness of their foliage and extending branches affording an agreeable shelter from the fervour of the sun's rays: the market seemed well supplied.

We were conducted from this to the “Hall of Reception” for strangers, which was a small room, elevated a short distance above the ground, opened on all sides, with an ornamental projecting roof: the ascent to it was by a rude bamboo ladder, like an approach to a hay-loft; but as the rajah ascended by the same *staircase*, of course we could not complain. On entering the room, we found some chairs of European manufacture, standing on four legs, but most of them minus arms, backs, &c. In these we were requested to seat ourselves until the rajah arrived. Some coarse mats were also laid upon the floor in the centre of the room—or perhaps cage would be a better nomenclature than room, for it was more like the latter than the former.

We waited patiently the arrival of the rajah for some time, surrounded and gazed at by several old, grave-looking, bearded Moormen, who remained silent, as their organs of mastication were almost incessantly engaged in chewing the “betel,” their teeth being blackened, and lips become of a brick-red colour, from the use of this masticatory: it is said that it is a good stomachic, causing the breath to be always sweet; and the assertion may be correct, for the breath of natives who are in the habit of chewing the aromatic compound is agreeable; but the

discoloration of the teeth and mouth caused by its use, gives a disagreeable appearance to those who habituate themselves to it. Whilst delayed by the rajah, we were regaled by the pure and refreshing juice from some green cocoa-nuts : at length his highness arrived.

He was a young man of very dark, but handsomely-formed features, (darker by two shades than the Malays,) about five feet five or six inches in height, of slender form, and attired in the usual native *Sarong* ; a yellow silk *Sandalong*, or sash, around the waist, in which a *Kris*, of handsome manufacture, was placed ; a close *Baju*, or jacket, with plated buttons in front ; upon his head a turban of white cloth, without any decorations ; and gold bangles around his wrists and ankles : his attendants were almost all Moormen, or natives of Bengal and Madras ; many from the latter countries, and others, of that extraction, born at this place. The rajah, although born here, had the appearance of being of Bengal parentage. The grave old gentlemen around were the principal spokesmen on affairs of business.

It was the object of Mr. Fearon to purchase a cargo of Areka-nut* for the China market, for

* The fruit of the Areka palm is incorrectly called in commerce "Betel-nut," which has occasioned mistakes ;

which object he had brought dollars, opium, iron, lead, and steel. Most of the bearded gentlemen were traders in the Areka-nut; but a tall, thin, elderly, and shrewd old man, was the principal agent in the transactions between Mr. Fearon and the rajah, for the latter, like most rajahs, had but little to say on the affair, and from being young, had merely to approve of whatever was done. This agent, whom we designated "*Minister of the Board of Trade,*" proved to be uncle to the present rajah; this circumstance accounted for his having so much to do with the government affairs. After some common-place conversation, the commercial business was introduced; samples, or musters, of the quality of the nuts were shown; and an arrangement was entered into between the parties for the delivery of three thousand peculs in ten days, at the rate of one and a-half dollars the pecul, iron, steel, lead, and dollars, being given many writers considering it the fruit of the "Piper Betel," or Betel vine, the leaves of which are used with the Areka-nut as a masticatory; but as the whole mixed together, and eaten by the natives, constitutes what is called "chewing the betel" by Europeans, the nut probably derived its commercial appellation from that source. The confusion existing between the Areka palm, producing the nuts, and the Betel vine, by most writers, has caused me to insert this explanatory note.

in exchange, at prices then agreed upon. This contract was ratified by the old trading minister, placing the right-hand of the supercargo into that of the rajah, repeating, as they remained with joined hands, the terms assented to; all agreements are made in the name of the rajah, and are written and signed by both parties. They had abundance of opium, as much, they informed us, as seven hundred chests unsold; it had been purchased at seven hundred dollars the chest, (the cost price at Batavia at this time,) but the Areka-nut had been delivered in exchange, at the rate of one dollar the pecul.*

After the commercial affairs had been settled, the rajah, ministers, and merchants, accompanied us about, and in the vicinity of the village, followed by a nondescript rabble. My collecting plants and insects amused some and puzzled others, and all were desirous of ascertaining for what purpose I required them; whether we had

* A small investment of various articles of cutlery would have no doubt met with a ready sale;—a set of excellent razors, the cost price of which in London was thirty shillings, was sold for twenty-five dollars, and other articles, of a good quality, would have sold at equally good prices. A rifle gun, case complete, was also sold for one hundred and fifty dollars; and a pair of duelling pistols, of French manufacture, seventy-five dollars.

any flowers in our country? whether they were to feed animals? and the insects for birds on board the ship? but when at last they were informed I was a "curer of diseases," they remained perfectly satisfied that I collected them for medicinal purposes, and without making another inquiry on the subject, resumed their almost perpetual conversation on the Areka or betel-nut. On the way the rajah gathered a plant, (*Chenopodium* family?) and giving it to me, said it was medicinal, and called by the Malays "Gunche, maju," (signifying shirt-buttons,) and the name was probably applied to it from the elevated buds having some resemblance to them. The plant is used by the natives in the form of decoction, as an internal remedy for various diseases; and, as far as I could understand them, was possessed of emetic properties. It is a small plant, and grows abundantly on the banks of the Paddy fields, and on most of the waste land about the village.

Among a profusion of other flowering shrubs and plants was the *Cassia occidentalis*, (Bandram of the natives,) several species of *Solanum*; the pretty *Vinca rosea*, or rose periwinkle, *Datura fastuosa*, the fruit of which the natives told me would cause madness if eaten; it was named by them Tropungo; several species of *Convolvuli*;

a species of *Senecio*, with a number of others, wild and cultivated, some of which exhaled fragrant odours ; and a multitude of butterflies and other insects, vieing with one another in brilliancy and harmony of colours, flew about in apparent enjoyment of the fervent tropical sun, among the profusion of flowers which strewed the ground. The *Jatropha curcas*, or Banawa of the natives, was planted, as well as the bamboo, for fences ; rice-fields were numerous, but this being the dry season, the fields were dry, and the harvest collected, the variety of succulent and other plants that sprung up about them, afforded excellent feeding for the numerous herds of cattle rambling about.

During the rainy season, which occurs from about November to nearly the termination of the month of February, the planting of rice takes place ; the fields, for the most part dry at the present time, are then overflowed ; the season of the rice harvest usually occurs in April. The country, although flat, had a pleasing fertile aspect, and when the vivid green or golden yellow of the rice plantation was added, its beauty must be still further increased.

The rajah, his followers, and the merchants, appear to be all Moormen, either natives of, or descendants from, those born in Hindostan. The

bazaar trade appears for the most part also to be monopolized by them ; the Malays seem the tillers of the soil, or subordinates, in other respects. The Hindostanee natives, or their descendants, are evidently the conquerors of the coast, and of course the heads of government are of that race. The rajah made Mr. Fearon a present of a small bullock, cocoa-nuts, plantains, sugar-canes, &c., and accepted an invitation to visit the ship the day following, when it would be requisite, from their professing the Mahometan creed, that "all pigs should be kept from grunting," or getting an afternoon's liberty.* About noon, taking leave of the rajah and his party, we returned on board.

At this place no canoes came off to the ship with fish, fowls, fruit, &c., for sale ; none but those on business came to the ship, and Mr. Fearon was advised by the rajah not to allow any to do so. This appeared strange, as off the other villages to the eastward of Pedir, goats, fruit, fowls, yams, &c., were brought off for sale ; but we afterwards had good reason for suspecting that some of the rajah's followers were

* A "flock of the swinish breed" would prove efficacious in clearing the decks of a ship of the Mahometan Malays, who have a religious abhorrence of the pollution occasioned by such company.

desirous of supplying the ship, placing their own prices on the articles, allowing a percentage to his highness, and thus contrived to have a prohibition placed on canoes coming alongside.

CHAPTER XX.

Visit from the young Rajah—Native weapons—Costume—
 The “trading minister” and his boy—Inspection of the
 ship by the natives—Population of the Pedir district—
 Rambles on the coast—King Crabs—Land crabs—
 Ova of fish—Soldier crabs—Their food—The Rajah’s
 house—Cocoa-nut water—Habitations in the Rajah’s
 inclosure—The fort—The bazaar—Banks of the river
 —Plants—Native fishing—Fruits—The country far-
 ther inland—Vegetation—The Eju Palm—A fine
 plain.

ON the afternoon of the following day we had
 the honour of a visit from the young rajah; he
 came off in one of the large native boats, seated
 upon a platform on the stern, in the oriental
 fashion. Having no state-boat he came in this,
 which was merely one of the usual cargo, or
 fishing boats, which are large and spacious,
 with a small deck or platform at the after-part.
 Many of the rowers were attired in scarlet

jackets, some having, and others being deficient in sleeves, and all seemed to have dressed themselves in their best apparel; all wore elegant krisses, for the whole of the natives, whether of the Malay or Hindostanee races, wear the Kris or the Klawang, (a kind of short sword,) and are seldom or never seen without: the manufacture of these weapons varies both in the blades and handles, and all the varieties are designated by distinct native names; from the form of the blades severe wounds must be caused by them, and many of the natives wore scars obtained by them in their private quarrels. The handles were formed of whale's teeth, or buffalo horn; and the sheaths of various beautiful woods, of which a kind of satin-wood seemed to have the preference; the wood is said not to be luted together (nor has it the appearance of being so) in the construction of the sheath, but is hollowed in an ingenious manner from a solid piece, and is very liable to split with the least blow; they are tastefully ornamented with a kind of *tatawing*, or carving, performed with a small knife, into which, after the carving is completed, some black pigment is rubbed, which gives an increased effect to the decoration. They place a high value on the krisses and klawangs, and they are usually ornamented with gold or silver, accord-

ing to the rank and wealth of the owner. The cutting portion of the blade is formed of steel, the remainder of iron; the temper of the weapons is not good, being extremely brittle.

The rajah was attired in the same apparel as on our interview yesterday, but his followers formed, in dress, a motley group. There was a fine looking lad, about fourteen years of age, who came with the party; he was step-brother to the rajah, or, as we were informed by a Moor-man who spoke some English, "*one father, two mothers, rajah, and this boy;*" he was dressed in a scarlet jacket, decorated with gold lace, a handsome kris, and wore gold bangles around his ancles. The young rajah ran about the ship, seeming to enjoy all he beheld; mistook the sow (who behaved remarkably well on this occasion, neither grunting nor giving any indications of the suspicious family to which she belonged, but set upon her haunches gazing unmeaningly at the visitors, who held her race in abhorrence) for a kind of dog; and was delighted with the turkies, which he had never seen before. A pair of the birds were presented to him, and also a sheep, at which he was much gratified.

Our thin spare friend, the "trading minister," and also a train of attendants and merchants,

accompanied the rajah ; the former antiquated personage brought with him his son, a little boy about four or five years old ; he was a keen, black-eyed little fellow, wore a Moorman's cap elegantly worked with gold lace, on his little shaved cranium ; a scarlet jacket and trowsers, a number of gold and silver bangles about his wrists and ancles, and an amulet or charm (which consists of a sentence from the Koran, written and placed in a case, to protect the wearer from injury—the priests make a good harvest in this kind of traffic, which appears to me strictly analogous to the African *fetishes*) pended from his neck ; the dark diminutive creature chattered incessantly, and was inquisitive about every thing it saw ; appeared devoid of fear, and was quite tame, suffering itself to be handled with impunity.

After all our sable visitors had concluded their rambles over, and inspection of, the ship, they were invited into the cuddy, seated round the table, and cabin biscuit and cheese were placed before them. They evinced some partiality to the former, by devouring large quantities themselves, and passing supplies to the numerous attendants who could not *feed* at the table ; they could not be induced thus publicly to taste wine or beer, being against

the Mahometan creed, but preferred cocoa-nut water, which they said "is our wine and beer;" but few would refuse either wine or spirits in private.

I amused them with some drawings; among others they recognized that of the Pearly Nautilus, but said it was rarely procured at this place, but was occasionally seen off the coast. They named it "sea shrimp," Udang laut; (Udang, shrimp; and laut, sea;) they were not acquainted with the Orang Utan, of which I showed them an engraving, but immediately knew that of the *Hylobates syndactyla*, or "Ungka" ape, which, they observed, was found in the woods of the interior of this island, but was very difficult to capture alive.

The rajah having remained for some time on board, retired with his attendants to the boat, and returned on shore, under a salute of three guns from the ship, which compliment he also received on coming on board. The rajah of Pedir is related to the king of Acheen, and the territory is tributary to the Acheenese ruler. The population of the Pedir district, (which does not extend far along the coast, but to some distance inland,) is stated to be 100,000, and has several petty rajahs tributary to it; but they appear all petty rajahs along this coast, paying homage and tribute to the Acheenese king.

Often during the cool evenings, I amused myself by wandering about the extensive beach on this coast, to observe and collect such marine productions as might be interesting; a great number of dead shells strewed the beach, but living shells, or those containing the soft parts, were rare. Observing an antenna of some crustaceous animal projecting from the moist sand, left by the receding of the tide, I pulled it, and drew out two fine king crabs, jointed together by their under surfaces, and thus united burrow in the sand; they are called "Ecan, mimi" by the Javanese, and, on this coast, they are named "Moi, moi." The male is larger than the female; they are eaten by the Javanese, but on this coast they are not eaten, although the natives observe the Chinese are fond of them.* The females lay their eggs in the sand, after carrying them for some time, and, in about the second month, the young are produced; these animals are perfectly harmless; they crawl rapidly, and when touched draw the upper part of the shell a little inwards; and, as they move, the long antenna bears a resemblance to a tail. When placed on the back, they find much difficulty in regaining their natural position.

* The Chinese have several species indigenous to the *Celestial Empire*.

Land crabs* were numerous, as were also the shells of the genera *Cytherea*, *Tellina*, *Mactra*, *Conus*, *Oliva*, *Cypræa*, *Harpa*, *Dolium*, *Murex*, *Turbo*, *Nerita*, and *Dentalium*; but although this was an indication of the number about the coast, yet but very few were procured in which the living animals were found. Among these was a number of the *Venus*, and small species of *Voluta*: the latter buried themselves with rapidity in the sand; the natives call them "Dunkin." Almost buried in a deep black mud, among which the roots of mangrove trees abounded, the trees having been cut down, I found a number of white bodies growing from a piece of rotten wood, and being each about an inch in length, † and three-eighths of an inch in breadth, containing a watery fluid, called "Sepur" by the natives; they were not, however, eaten or used for any purpose by them. I preserved several specimens in spirits.

A great number of the *Pagurii*, hermit or soldier crabs, of different sizes, were running about

* The general name for crab among the natives on this coast is "*Biong*," but all the various species have distinct names given them.

† They are evidently the ova of some fish, but of what genus it is as yet difficult to form an opinion.

the beach ; two large specimens, that I found, had each taken possession of the *Dolium perdix*, or partridge shell, to which they were as firmly attached as if in their natural habitation. The crustaceous portion of these animals is of a beautiful lilac colour, the softer parts yellow, and the antennæ of a dark red colour ; the natives call them by the general name of “ Sepo ;” the smaller kind inhabit *Murices*, *Trochi*, *Neritæ*, *Helices*, *Lymnææ*, *Cerethii*, and other univalve shells. In some instances I saw large shells of *Harpa*, &c., inhabited by very small animals of this kind, moving their heavy and cumbrous dwelling slowly and with difficulty ; there were some of a red, and others of a sea-green colour, but the larger were invariably of a beautiful lilac. May not this change of colour depend upon their age ?

The *Pagurii* feed upon dead animals, fish, and all kinds of offal, as well as vegetable matter, such as skins of plantains, remains of cocoa nuts, fruits, &c. I have often observed a number of these creatures of various sizes congregated about a dead and putrid fish, and it is ludicrous, on disturbing them in the midst of their feast, to see them marching away, jumbling and overturning one another in the hurry, causing a

clattering noise to proceed from the collision of their burrowed coverings; and should they not be able to escape capture they draw themselves closely into the shell, closing the aperture so firmly, by crossing the claws over the entrance, as to render it impossible to extract them without breaking the shell to pieces. Thus secured, they remain immoveable and apparently dead, and may be kicked or thrown about, without giving any indications of life; but danger passed, they emerge partly from the shell as before, and move briskly away. The natives use them occasionally, but rarely, as food.

It is not an improbable supposition, that the *ova* of these curious crustaceous animals are deposited in the empty shells lying upon the beach; and the changes these *crustacea* undergo is one of the most interesting subjects of investigation which could engage the attention of a practical naturalist. It is a curious fact that, no matter whatever form the univalve shell may have, the posterior or soft parts of the animal inhabiting it are accommodated to it; thus causing persons not accustomed to observe the changes of natural objects to regard this as the original inhabitant; and it is oftentimes difficult to persuade them of the reverse: the posterior portion of the animal being naked, and the anterior crusta-

ceous, the former evidently requires some protection.

One morning (having previously received a general invitation) I visited the rajah at his habitation : the situation was an extensive plot of ground, containing numerous houses in the usual Malay style of building, being the residences of the rajah, his wives, and attendants ; the whole enclosed by lofty waving bamboos, forming a close and impenetrable fence ; and the interior planted with a number of fruit trees and flowering shrubs. The entrance was by a gateway, over which was a small room, in which his highness receives visitors, or wiles away a leisure hour in smoking, talking, or sleeping. I ascended to it by a bamboo ladder, and found myself in a cool but dirty room, containing a small bed, over which a mat was laid ; the curtains about it seemed to have remained in ignorance, since they came from the loom, of the application of water. Some carved boxes, (one of which served me for a seat,) a native shield, and a few other trumpery articles, constituted the furniture of the apartment. And here I was received in a cordial manner by the rajah.

His highness was attired in a common Madras cloth *sarong* and *sandalong*, which, like the curtains, seemed never to have undergone ablution ;

he wore, in lieu of a turban, the usual parti-coloured Moorman's cap or cupia, which merely covered the top of his head. The personal appearance of the rajah reminded me of the tribe of animals they abhor for uncleanness—I allude to the hog, of which he informed us there were *plenty wild*, if we were desirous of hunting them.

Cocoa-nut water was introduced, being the usual beverage in the country, and proving both wholesome and refreshing. The cocoa palm abounds, and they have numerous varieties. The Malay name for the nut is Kalapas; in the Acheenese language the tree is called Ba, hu, (*ba* signifying tree, and *hu* cocoa-nut,)—a ripe nut, Hu, massa,—and a green one, Hu, mudar.* This palm forms a beautiful and picturesque object in the tropical landscape. In the Appendix I purpose giving an account of this valuable, ornamental, and useful palm, and the various uses for which it is employed in the different countries where it abounds. †

* The language spoken by the aboriginal natives of this country is the Acheenese, which is a dialect of the Malay. A Javanese, however, could not understand the Acheenese language. The people on the coast, nevertheless, mix the Acheenese with other dialects of the Malay, and also with some Hindoostanee words.

† See Appendix, No. 2. in the second volume.

The habitations in the rajah's inclosure were raised from the ground, (which is the usual Malay style of constructing houses,) and were ascended by means of rude bamboo ladders. They are formed, for the most part, of bamboo, and thatched with palm leaves; but one of larger size and neater style was the immediate residence of the rajah and his wives; the young rajah having, as we were informed, two concubines, eighteen years of age each,—and a child, now four years old, betrothed to him as his intended wife. Near the habitations the cocoa, plantain, orange, mango, and custard apple trees grew, shading them by the grandeur and profusion of their foliage. There was also a house (which from the commencement, being now in frame, appeared intended to be of some extent,) which had been commenced by the old rajah not long before his death; but the building was obliged to be discontinued by the young rajah, on his succession, from a want of the necessary funds for its construction.

At one part of the inclosure a bamboo ladder ascended to a little elevation, which brought us to a plank, over which we passed into the fort adjoining the residence of the rajah, and was mounted with several large brass guns, most of which had the arms of the East India Company

upon them. The fort was built of stone, elevated about sixteen or eighteen feet from the ground, covered over with a thatch of palm leaves, and having a look-out house upon the summit. There were lamps, which are lighted after dark, and remain so during the night, a sentinel being also stationed there. From some large rents in the walls of the fort, it was evident that the concussion of the guns, if fired off, (which they had not yet been,) would bring the whole fabric down about their ears : the minister and "authorities" thought the same, and said a stronger fort was to be built, when a sufficient number of stones calculated for the purpose could be collected.* Although abundance of cocoa-nut water was given us to drink, yet nothing was offered us to eat ; by which I should infer, they conceived white people lived, like humming birds, upon suction.

On leaving the rajah's place, my guides took me again to the bazaar, where it appears to be a custom to take strangers : this I attribute to their Mahometan prejudices, of not being desirous of receiving christians under their roofs. Here mats were placed, so that I might be

* The fort is also partly surrounded by a palisade of bamboos, and a moat exterior to it, abounding on its banks with a dense vegetation.

seated, and gazed at, like a curious animal, by a large crowd of natives of all classes and orders, who, from the eagerness they evinced, and the crowds which assembled around us upon these occasions, seemed to regard Europeans as curiosities. However, instead of waiting to be gazed at, I amused myself by wandering over the bazaar, which was plentifully supplied with sugar-canes, plantains, rice, cucumbers, dried fish, sere, (the leaf of the *piper betel*,) the Areka nut, or Pinong, cut up ready for mastication, and a quantity of live stock, as small bullocks, ducks, fowls, &c. &c.

From the bazaar I walked down by the banks of the river, upon the raised paths which intersected the numerous marshes, which now, during the dry season, abounded in luxuriant grass and other herbaceous plants, affording fine feeding for the numerous bullocks (of the small hunch-backed Bengal breed) and buffaloes, which roamed about. During the rainy season the whole of this flat is planted with rice, which, together with the scattered picturesque habitations, and groups of palms and other trees, form, by their combination, a very pleasing landscape. Upon the banks of the river was the *Acrostic humaureum*, or "Ongpi" of the natives, as well as the "Ba, jurugu," or *Acanthus ilicifolius*, covered with

a profusion of blue flowers ; and brilliant butterflies and other insects flew about the rich vegetation, which was so profusely strewed about. Surrounding a hut near the river was the "Sekar," a species of *Pandanus*, the younger leaves of which several women were engaged in collecting : they are bleached by soaking in water, and afterwards exposing them to the heat of the sun. Being thus prepared, they manufacture them into various kinds of coarse mats.

The *Thespesia populnea*, profusely covered with its large yellow flowers, and called "Onseran" by the natives, was very common about their habitations, forming usually a portion of the fence around their gardens. A leafless species of the *Euphorbiaceæ* family, which they named "Bugar," was also growing plentifully in the hedges : they did not use it medicinally, but said, if the juice was taken internally, it would produce violent pain and excessive vomiting. Having arrived at a fisherman's station, we crossed over a creek in one of the large fishing boats, in which the seine was very large, and manufactured from the fibres of the trunk of a palm, (which I shall hereafter have occasion to mention,) this fibrous material is known by the common name of "black coir ;" it is strong, elastic, and very durable.

A number of natives were fishing upon the

banks of the river with their peculiar hand-nets, called "Gniap:" this net is of a similar appearance, but of course smaller, to that used in the "Sarambeau fishing rafts," at Manilla, of which there is a very correct figure in the Voyage of La Perouse, 8vo. Engl. ed. vol. ii. p. 322. On examining the contents of the baskets, which were rudely formed from the spathe of the Areka palm, they were found to contain only a few small fish, prawns, and biongs, or crabs. On their success, my native attendants informed me, the fishermen depend for their daily meal. During the rice and betel nut harvest, they earn their subsistence by cutting and threshing the former, and gathering and shelling the latter; but when the season for those productions has passed, they depend upon the fish caught with the hand-net, as a subsistence for themselves and families.

I stood by one of them to see "a haul:" after a short time had elapsed, the heavy net was raised, and contained only a solitary fish and a few crabs. The nets were baited with crabs' claws, tied about different parts. On a marsh near this spot a flock of two kinds of crane was feeding; one species small and white, and named "Ecuar," the other much larger, of a greyish colour, and named "Ngnar, ngnar," by the natives.

Fruit was at this season scarce, a few guavas,

plantains, and "jack," was all that could be procured ; but during the season, mangoosteens, a variety of plantains and bananas, oranges, pine-apples, mangoes, and other tropical fruits, could be procured in abundance. Having ranged about the Pædir Rajah's district, near the sea coast, I returned on board in the evening with the collection I had made.

Among the natives that occasionally came on board with the cargo boats, as well as those seen on shore, consisting of different races of Hindoostan, Malays, &c. there were several with the African features and hair ; none of whom, however, were well-formed or handsome men, but still seemed to possess great muscular power. They were of that African race designated the "Black Arabs," who are shipped as seamen on board vessels at Bushire and other places in the Persian Gulf. When I was looking at this variety of the human race, one of the rajah's followers said he was the property of the rajah, and he would sell him to me, if I wanted him. As I did not require a specimen of that kind, I declined this very obliging offer. The land and sea breezes were for some days very regular, and at others extremely irregular, varying also in their degree of strength. The range of the

thermometer, during the short period I remained on this coast, was from 79° to 88°.*

Early one morning, a party was formed, to endeavour to obtain a view of the country further inland. On landing at the village of Pedir, we were met by the old trading minister, who accompanied us. The houses of the natives were constructed of bamboo, raised, like all the Malay residences, upon strong posts, a short distance from the ground, and the ascent to the rooms above, was by bamboo ladders. The habitations are covered with a thatch, formed from the leaves of different kinds of palms; and the dwellings are cool. This quality, so desirable in sultry climates, is given to them by gardens surrounding the habitations, filled with trees, imparting a refreshing verdure; and from the blossoms delightful odours were exhaled. Among the more elevated kinds, were the graceful and majestic cocoa-nut, and the straight Areka palm, (Areka catechu,) surmounted by its tuft of dark-green foliage, and its long pendent clusters of orange-coloured fruit, of an oval form.

The *Artocarpus incisa*, or Jack-tree, the broad-

* During this month the weather was generally fine and clear; a few days only being squally and unsettled weather, with showers of rain.

leaved plantain, the mango, orange, lime, and occasionally, but rarely, the bread-fruit trees, (*A. integrifolia*,) ornamented the garden. That most elegant as well as largest of the gramineous plants, the bamboo, (“Triang” of the natives,) was abundant, as fences about many of the dwellings, (as well as the *Erythrina corollodendron*, or Mangkudu of the natives; the *Jatropha curcas*, or “Banawa” of the natives,*) and in distinct clumps; the Piper betel trailed up some of the trees, and the *Abrus precatorius*, (Anasagar of the natives,) with its pods, containing small, but beautiful crimson seeds, hung in festoons from the bushes in the jungle, and a *Diosma*, called Un grupuum by the natives, was abundant and fragrant; the Manihot (*Jatropha manihot*) was also seen; and although I was informed the root was prepared and eaten, the shrub did not seem to be extensively planted. The Carambola-trees (*Averrhoa carambola*) were numerous, and called Boslemang. A quantity of the fruit was observed laid upon a raised bamboo platform, spread out to dry in the sun, and the natives appeared fond of eating them in a raw

* The Archeenese name for this tree, was *Bánawa*, or *Búnawa*; and I afterwards ascertained that the castor-oil tree had the same appellation given to it.

state, as well as using them in many of their curries, and other dishes.

About some of the native habitations, that large and elegant palm, the *Borossus gomutus* of Loureiro, the *Saguerus pinnatus* of the Batavian Transactions, and the *Cleophora* of Goertner, was planted: it is the "Anau" of the Sumatrans; was called at this place "Eju" and "Doh" by the Javanese: it is valued on account of excellent toddy being extracted from it; but more especially for the black fibres collected from the trunk, about the bases of the petioles of the fronds; which fibrous substance resembles somewhat in its appearance, as well as elasticity, horsehair; and it is highly esteemed for the manufacture of rope used for their seines, vessels, &c.; the very thick fibres, the natives say, the Moormen resident here use as pens, and call them "Puré Eju:" it is probably the same tree from which the fibres, called *Cabo-negro* by the Spaniards, are procured at Manilla, and from which they also manufacture rope.

We continued our ramble over a fine plain, terminated in the distance by palms: bamboos, the broad-leaved plantain, and other elegant trees were seen, ornamenting some lonely habitation, the roof just appearing above the dense foliage. This plain at one season of the year is covered

with rice-fields; but was now dried up: the stubble of the former harvest remained, and the whole was covered by an abundance of herbage, affording feeding for herds of cattle. A number of various species of Grylli were hopping about the fields, and were caught by the native boys for my entomological collection: they called them, in the language of the country, "Daruar," and these insects are eaten by the natives.

CHAPTER XXI.

Country about Pedir—"White Lions"—The rajah's habits—
 A decision—Ornaments for the ear—Female curiosity—
 The rajah's horses—War between the rajah of Acheen
 and the rajah of Trumony—A native's account of the
 quarrel—Purchase of betel-nut—The Areka-nut—Trade
 in that article—Anecdote—A Chittagong brig—Dried fish
 —Beautiful appearance of the Golden Mountain—Assem-
 blage of the mountains—Tornados—The fire king and his
 demons—Yamora—Burial-ground—Large tree—Small
 crabs—Game called Mein Achu—Leprosy—Party of na-
 tives—The *Viverra musanga*—Applications for medicine—
 Rajah of Putu—His retinue—Object of his visit.

THE country about Pedir, as far as I had an opportunity of seeing it, was very picturesque, abounding in a luxuriant, natural vegetation, as well as in a state of cultivation. The native habitations are almost hidden by cocoa-nut, plantain, areka, eju, jack, and other trees; fragrant odours were exhaled from the multitude of flowers which strewed the surface of the ground;

and a variety of profuse vegetation was spread over the face of nature. The soil is rich, and the numerous vegetables (among which the purple and white yams are abundant) planted in the gardens of the natives, are most prolific.* The habitations, as I have before noticed, are raised upon posts, which I should suppose, in these marshy situations, are intended to guard against the miasmata which must rise from the surface of the ground after the rains, and to the influence of which the inhabitants would be much exposed, if their dwellings were not placed on an elevated site. The plain is beautiful, and the back-ground of the landscape is terminated by mountains, varying in elevation, and extending in a direction principally from east to west; † sometimes covered by fleecy clouds, and at others, glowing in the varying and beautiful tints of a setting sun, which cast its expiring rays, undimmed by a cloud, over the towering masses.

After walking in the vicinity of the village,— for our guides evinced no desire of taking us

* Among which the *Caladium costatum*, or Berar of the natives, was also seen planted; the root of which is eaten by them, after it has been previously washed in water for some time.

† The mountains behind Pedir range in various directions.

further inland,—we were desired to enter a house to rest ourselves : by an invitation to enter, is only meant being seated in the verandah ; for we did not, or rather were not permitted to, intrude ourselves into any other parts of the dwelling. At this place cocoa-nut water was again offered as a refreshment. We requested to be taken further in the interior of the country ; but, although a refusal was never given, yet we found we were invariably taken, by other paths, back to the place from whence we came. We became at last, from this and other circumstances, convinced that our Moor friends were fearful of exposing themselves to the krisses of the “ Hill people,” from whom they appear to have conquered some portion of the country, establishing themselves as traders.

We returned after a short ramble, and were conducted into the bazaar, and seated with a semicircle of the natives before us, all staring quietly and decorously at the “ *white lions*.” From this place we adjourned to the fort, near the rajah's residence, where we waited for the appearance of his highness, who had not yet risen from his couch. The old minister gave us some account of the rajah's habits ; one of which was, that he lies in bed until three P. M., except when there is any particular business,

such as the arrival of a ship, to induce him to rise earlier; and he does not retire to rest until three A. M., after smoking a pipe of opium. The old gentleman must have been guilty of an exaggeration, when he stated that the rajah would smoke a ball of opium in four days. His highness is only eighteen years of age, and has not at present the appearance of an opium smoker: it must have been the quantity consumed by the rajah and his numerous followers that was meant, the whole of which was placed to the rajah's account. Pipes of opium were offered to us to regale ourselves, but of course were refused.*

After some delay, the rajah came to visit us, having just risen from his couch, unwashed, and attired in unclean garments. He shook hands, in the European manner, with the party; and then, having but little to say, from want of some other employment, he amused himself with my insect boxes, and the insects placed in them transfixed by pins: this led to an explanation of my professional pursuits, and its collateral branches; but as the subject was rather beyond his comprehension, he became attracted from it to a

* We were informed, that a law had been made by the late rajah, which still remained in force, that any native robbing, or otherwise ill-using, a European in his territory, should lose his right hand.

cloth cap worn by one of the party, about which there was much discussion, the result of which was, that the rajah and his followers came to the important decision, that it would make a very good pocket or case for containing betel-nut, and the accompanying articles required to be used with it. Being heartily tired, we were happy to escape from the royal presence ; and the boat being ready, we returned on board.

All the women had the lobes of the ears enormously distended, from wearing, when very young, round pieces of wood, polished and ornamented, or rolls of leaves in them : the richer classes wear large ornaments of gold and silver : the old women have the lobes hanging down to a great length, but without ornament ; that they formerly had placed them in the lobes was evident by the distended orifices, which, having lost their elasticity, prevented their retention as before. The poorer classes are content with neatly polished and ornamented round pieces of wood, or a roll of the plantain or some other kind of leaf, as a substitute for those of gold and silver worn by the higher and richer classes. The lower class of females were usually attired in cotton cloth *sarongs*, and the *cabaya*, passing over the head, of a black colour, or other dark patterns. As we passed their dwellings, they

came forth, with the usual feminine curiosity, to view the strangers : indeed, we appeared to be as much objects of curiosity among them, as I had before been when landing upon many of the unfrequented islands of the Polynesian Archipelago ; and the natives, that arrived in the boats with Areka-nut, from the villages on the coast, seemed to regard us as wonders, and surrounded the entrance of the poop-cuddy at meal-times, as if to satisfy themselves how such animals fed.

We had an offer of some of the rajah's horses to ride about the village : at first it was thought that some dun cows, with horns cut off close to the head, and a preternatural erection of the ears, were the animals offered ; but it appears they were real ponies : if we had ridden them, however, it must have been without any saddle or bridle, for there were no articles of that description to be procured at Pedir.

The barque at present at anchor in Pedir roads, under the Acheenese flag, was captured from the rajah of Trumong, on the west coast of Sumatra, by the man-of-war grab belonging to the rajah of Acheen : the cause of it was this :— the Trumong rajah is tributary to the king, or rajah, of Acheen : he had not paid tribute for three years ; and on its being demanded, the Trumong rajah returned for answer, that he in-

tended paying it with *iron balls*; war was therefore declared against this rebellious rajah, and the barque was captured by the following stratagem: the commander of his Acheenese majesty's grab fell in with the barque at sea, assured her commander that all differences had been adjusted between the two rajahs, and requested him to come on board. The captain of the barque unsuspectingly accepted the invitation, taking presents with him. On stepping upon the deck of the grab, himself, crew, and presents were detained, and a boat, with a number of men well armed, sent on board the barque; and having secured the guns, hauled down the Trumong rajah's colours, and hoisted those of his Acheenese majesty, the vessels will sail, in company, for Acheen in a few days.

A Madras native, who spoke a little English, amused us with his version of the affair. "I belong, and barque belong, to the rajah of Trumong. Acheen rajah and my rajah make war; Trumong rajah plenty dollars, and go buy ships at Pulo Penang, to fight rajah Acheen. Acheen rajah very poor, one day buy ship, in a month want sell, because very poor—Acheen rajah no good, no pay Lascars—Trumong rajah, my king, pay well, plenty dollars. My barque got seven guns and twelve Lascar men. The grab send a

boat and ask 'whose barque this?' My captain say, 'rajah Trumong's;' then grab's men take prisoners, and say, 'barque belong now to Acheen rajah;' so he pull down colours—our colours before white and black—now Acheen colours red and white."

The quantity of betel-nut agreed for (three thousand peculs) was sent on board; and a further agreement entered into for three thousand peculs more, to be delivered in a few days after. Opium, at nine hundred dollars the chest, was taken in part payment: this was a high price, but netted to the sellers a profit of only ninety-five Java rupees, or forty-seven dollars; from the large quantity in the market at this place, it was with the greatest difficulty it could be disposed of even at that price: the dollars to be given in addition must have been the principal inducement, for opium had been purchased from the Penang brig, "Calder Bux," at seven hundred and seventy dollars the chest; but we afterwards found only one dollar the pecul, or rather laxar, had been paid by that vessel, which will account for their giving in barter a higher price for the opium.

On the second agreement being made, the rajah and suite came on board to ratify it, which, after some disputes and discussions with all

parties, was effected by the supercargo of the ship.

The principal article of exportation from this coast is Areka-nut, and a small quantity of rice ; the latter, however, appeared of an inferior quality, and one-and-a-half dollar a pecul was demanded as the lowest price ; the vessel would be required to furnish bags for the rice, as there are none manufactured on the coast, and a delay of the vessel would be also required to procure it. Areka-nut must, therefore, be regarded as the principal article of trade, as it is to be purchased cheap, and of a quality as excellent as in any part of the Eastern islands, or Cochin China.

The Areka palm is the *Areka catechu* of botanists ; it is a palm of elegant growth, rising with a very erect and small stem to the height of forty or even sixty feet, the summit terminating in a tuft of dark-green foliage ; the circumference of the trunk is seldom more than one-and-a-half to two feet, when of early growth of dark-green, and when old of a dark-grey colour ; the circles formed by the clasping petioles of the fronds being very visible upon it : the tree bears fruit only once during the year, at which period the tree, with its long bunches of orange oval-shaped fruit, pendent from the

upper part of the trunk, contrasted by the dark-green foliage, has a beautiful appearance. The Areka-nut, when planted, takes three years to arrive at a sufficient size to produce fruit; the wood of this palm is used at this place for a variety of purposes.

The fruit grows in long pendulous clusters, each about the size of a small hen's egg; the external covering is thick, fibrous, covered by an orange-coloured epidermis; and on the thick fibrous husk being cleared away, the nut is discovered surrounded by its own immediate epidermis, which often proves difficult of removal. The nut is conical, but varies in some, having an elevated apex and small base, and others a large base and very slightly elevated apex. One nut is the natural produce of each fruit, although sometimes double or triple nuts are found, anomalies often met with in the vegetable kingdom.*

Many of the common drinking and baling utensils in the boats are made from the spathe of the Areka palm; and I have frequently seen a vessel for holding water made from it, which was not dissimilar to those made by the Australian natives from the bark of the Eucalypti trees; they use the flower spathe also for nail-

* New Betel nut will lose, during a voyage to China, from eight to ten per cent.

ing upon the bottoms of their boats. May, June, and July, are the months for collecting the nuts. They had loaded nine ships this season ; but forty vessels, of all sizes, have been freighted in one season, for Pinang, &c., from whence it is exported to China, Madras, and other parts of continental India.

The nuts vary in size ; their quality, however, does not at all depend upon this property, but upon their internal appearance when cut, intimating the quantity of astringent matter contained in them. If the white, or medullary portion, which intersects the red or astringent part be small, has assumed a bluish tinge, and the astringent part is very red, the nut is considered of good quality ; but when the medullary portion is in large quantity, the nut is considered more mature, and not possessing so much astringency, is not esteemed so valuable.

The quantity of nut produced on this coast is stated to be eighty thousand peculs. When there is no immediate demand for this article, it is not shelled, but preserved in the husk, as it is considered not to be so liable to be destroyed by the worm in that state ; but although this is the opinion of the natives on the coast, yet I have seen nuts destroyed totally by the worm while in the husk, in the space of two months. The

produce of the first month, or month-and-a-half, amounting usually to forty thousand peculs, the natives informed us is exported; and the second gathering, amounting to about the same quantity, is consumed in the country. The nuts were brought on board the ship in large boats, (originally built and employed as fishing vessels, except when required for this employment, they are from three to four tons burthen each, and are to be purchased for twenty or twenty-five dollars,) in bulk, and Manilla mat-bags, and are taken on board the ships in bulk. The quantity of Areka-nut imported by the Chinese, amounts to forty-five or forty-eight thousand peculs annually, exclusive of that brought from Cochin China, the amount of which is not known; in 1832, from a failure of the usual supply of nuts from Cochin China, forty-eight thousand peculs, imported from other places, sold so high as four dollars and three-quarters the pecul; the price it usually fetches in the China market is from two to three and three-quarter dollars the pecul. The principal consumption of the nut as a masticatory (in conjunction with the leaf called betel, produced from a vine, the *Piper betel*) is in the provinces of Quang, ton, (Canton, of Europeans,) Quang, si, and Che, keang, and may be seen, exposed for sale, on

little stalls about the suburbs of Canton, with the other additional articles used in the preparation ; it is also used as a mordant for coarse dyes. The Areka-nuts brought from Cochin China are considered by the Chinese the best imported. This may, however, arise from prejudice in favour of the production of a country so nearly allied to them, to that introduced by foreigners. In the central provinces of Hoo, kwang, and Kang, si, the nut is, after being bruised and pounded, mixed with the green food of horses as a preventive against a diarrhœa, to which that kind of food sometimes subjects them. It was likewise mentioned to me by a Chinese, that it is used as a domestic medicine in the north of China, small pieces being boiled ; the decoction is administered in various visceral affections.

A cargo of this article generates so much heat as to raise the thermometer in the hold forty degrees above that on the deck ; and from this circumstance, and the quantity of steam generated, the crew are prevented from sleeping between decks.

The Areka-nut is commonly known by the very prevailing Malay name of *Pinang*, or *Pinong*, but in the Acheenese language it is called *Pénu*, and the tree *Ba, penu* ; *Ba*, signifying tree, is usually prefixed to the specific

name, as *Un*, signifying plant, is prefixed to the name of a plant.

The ripe Areka-nut is called also *Pénu, massa*, and the green *Pénu, mudr* ;* the Gambir, used with the Betel, *Gambé* ; the Betel-leaf, *Ránu* ; the Chunam, *Gapu* ; the tobacco, *Bákun*.

The rajah of Pedir claims ten per cent. as a duty levied in kind upon all the Areka-nut disposed of to ships arriving in his territory ; and, besides this, his subjects are obliged to dispose of the nuts to the ship, at the price he or his mimisters have agreed upon with the supercargo.*

The red colour, produced by chewing the Betel-leaf, in combination with the Areka-nut, lime, &c., is not produced by them when used separately. The mastication of the “*Betel*” is considered very wholesome by those who are in the habit of using it : it may be so, but the black appearance it gives to the teeth, although it is said to be an excellent preserver of them, together with the brick-red lips and mouth, give

* I understand that a large quantity of the Areka-nut is grown upon the Pelew islands, and could be procured in barter for tobacco, rum, and other articles ; this was ascertained by a vessel which visited those islands in 1830. The natives of this group of islands also use it as a masticatory.

any thing but an agreeable appearance.* Its use certainly does not impart additional beauty to the native females, who habituate themselves to an equal extent to those of the opposite sex.†

There was an old native of Madras, a Moor-man, forming one of the rajah's attendants on board, whose duty it was to visit ships, and report their arrival to his highness, and also to attend the ship daily to see the cargo taken on board; this individual had one of his hands rendered useless by a blow from a Klawang, or Malay sword. Besides the scar resulting from this wound, there was an unreduced dislocation of the carpal extremity of the ulna, and a fracture of the radius, which, being disunited, an artificial joint had been formed: the cause of this personal injury, he said, proceeded from an attack made upon a vessel he was in, by one belonging to the rajah of Acheen, in which

* It is also by a combination of substances that the Otaheitans produce a red dye from the fruit of a species of *Ficus*, called Matti, and the leaves of a species of *Cordia*, called "Tou."

† I have often seen on this coast, as well as in Java, small bunches of the abortive fruit, taken from the spathe of the Areka palm, placed as an ornament at the stern and bows of the native boats.

several people were killed. This individual, being on board one morning, although professing in external appearances the Mahometan creed, expressed a desire of having a tumbler of the stimulating beverage denominated "grog," if it could be *administered* without its being seen; proving that his religious scruples were not so strong in private as his veneration for public opinion, or a fear of losing *caste*. A stiff glass of grog was, therefore, prepared for him, which the old withered disciple of Mahometanism regarded with glittering eyes. There was also on board another Mussulman, whose duty it was to take account of the cargo as it came to the ship, and report the quantity to the rajah; the sinner was about to raise the glass to his mouth, exclaiming, "What would the other man say if he was to see me now?" when the old saying was verified, of "there is many a slip between the cup and the lip;" for the scribe was, at the same instant, seen descending, and there was only time to conceal the glass before he was close to him. The old fellow stroked his whiskers, and began seriously to talk about opium; and as the white turbaned man saw him clear out from below, the long-sought enjoyment was obliged to be postponed.

A Chittagong brig, commanded by a black

Portuguese, anchored in the roads, on the 10th of July, from the Maldivé islands, bound to Penang, with a cargo of dried fish and some tortoise-shell, which had been procured in exchange for rice ; his object was to dispose of his cargo in exchange for dollars and Betel-nut at this place. The dried fish was the *Bonito* cut into small pieces. The Maldivé natives prepare it in the following manner :—A long slice is cut from each side of the fish, and these again are divided into two parts, so that each fish is divided into four pieces ; it is then boiled for a short time in salt water, after which it is smoked and placed in the sun to dry ; it then becomes extremely hard, and resembles, when broken, a piece of wood, having a reddish appearance at the fractured parts : after it has been soaked, it is used for curries and other native dishes.

The “ Golden Mountain ” is a very conspicuous and beautiful object from the anchorage ; but it ought to be mentioned, that, from this position, two mountains are seen to the westward, one towering to a peak, and densely wooded, the other, anterior to it, is a lofty rounded hill : the first is the one known to Europeans as the “ Golden Mountain ; ” the second, or rounded mountain, is not named in the charts, but it may be called the “ Pedir

Mountain." The "Golden Mountain" is called by the natives *Yamori*, and the other *Yamora*; the first the natives designate as the father, the second the mother (probably of all the little mountains about them).

The natives state, that once every year the mountains come together, occasioning rain, thunder, lightning, earthquakes, and violent storms; the *Urong Salle*, or Fire King, then sits upon the mountain, surrounded by hideous demons, enjoying the noise and uproar occasioned by the conflict of the elements; the winds blow in violent tornados; the thunder is so loud as to occasion the earth to tremble under the feet of the terrified inhabitants: the rain causes tremendous mountain torrents, inundating habitations and plantations, carrying all before them in their impetuous course, and spreading devastation around. In the midst of this dreadful conflict of the elements, the mountains meet with a horrible crash. As the forked lightning plays around them, the *Urong Salle*, or Fire King, surrounded by his satellites, laughs and sports in the scene; the mountains remain united for a minute, when they again separate, regaining their former position. No person dare ascend the hill at any time, for there sits the Fire King and his demons, and should any mortal cast his

eyes upon him, that instant he would be struck with blindness.

Yamora is stated to be distant, inland from Pedir, two days' journey travelling on foot, and *Yamori* is the same distance from the other mountain; not, however, as the crow flies, but it would take that period of time to reach it, from the winding and difficulties of the road. From this account there is every reason to suppose that earthquakes and volcanic eruptions are occasionally felt upon this coast. As far as we could ascertain, there was no appearance of a burning volcano existing in either of the mountains just mentioned; they were both densely clothed with vegetation, more especially the "Golden Mountain."

Near the banks of the river, a short distance up, is an uninclosed native burial-ground; the graves had a stone or piece of wood placed both at the head and foot: there were several trees of *Hibiscus tiliaceus*, *Tamarindus Indica*, and a very large one, called *Ba*, *Glumpong* by the natives, (*Sterculia fatida*, Linn.) which was described by them as being poisonous, producing violent vomiting and pains in the head, if the fruit be eaten. I subsequently saw it, planted about the fences in the village. There were two of these fine, lofty, and spreading trees in the burial-ground, and I procured speci-

mens both of the flowers and fruit : the former grew in clusters upon erect spikes, with the corolla of a dark red, mixed with yellowish green. They have a handsome appearance, but diffuse so fœtid a smell around, as soon to fill a room with the exceedingly disagreeable effluvia. The fruit is kidney-shaped ; the trees were sixty or seventy feet in height, and from eight to ten feet in circumference.

A piece of sandal wood, of good quality, was brought off to the ship by one of the natives ; he stated that large quantities of it could be procured, as the tree grew abundantly in the mountains. He gave it the usual Indian appellation of *Chandana*.*

In some brackish pools I collected several small living species of the *Cerethium* ; and about the banks a great number of a small crab, remarkable from one of the claws being greatly disproportioned to the size of the other parts of the animal, and entirely different in colour. When I first beheld them, I mistook them for small crabs running away with the claws of larger ones. They are difficult to catch, from

* It was stated to me that sandal wood can be procured at Acheen as well as other parts of the north-east coast, and is sold by the large pecul or bar (which is equal to three peculs) at twenty-four dollars the bar.

the exceeding rapidity of their motions, and escape, on the slightest movement or noise being made, into their subterraneous dwellings in the sand. The body and feet of the animal are bluish black, with a few white marks across, and the large claw is of a light or occasional darker red colour. The natives call them *Biong, po*. They are seen in great numbers about the pools, but are not eaten by the natives. I procured several specimens, which I preserved in spirits. On being placed in strong rum, they survived for the space of full three minutes ; and if more than one was placed in the same bottle, they would fight and pull the claws off each other in their death agonies.

Near the village, several boys were playing a game with Areka-nuts, called *Mein-achu*, in some degree resembling our game at marbles. Four nuts were piled up in form of a pyramid, twelve such forming a row ; a nut was then flippid off with some degree of force against the heaps, from a distance of about three yards. If the thrower succeeds in destroying one of the pyramids, he renews his throw at the others, always at the distance where his nut remained, until he misses, when the next player takes his turn : the game thus continuing until all the pyramids are thrown down.

I was much surprised a few days since, while passing a house in the vicinity of the village, to see apparently a European lad, of about six years of age; and on examining him closer, found his skin of a white colour, thinly scattered over with small light-brown patches. On passing the same house again, I made inquiry on the subject, and then had an opportunity of seeing two others, who were females,—one about sixteen or eighteen years of age, the other an infant just able to run about. They were described to us as children of native Malay parents, of the usual colour of their race; but we did not see them, as they had gone a short distance into the country. The children were named *Ceté*, *Theté*, and *Cebreté*. They had a plump appearance; flaxen hair, light-blue eyes; and the boy and young woman were slightly covered with scattered small brown patches; but the infant had not a blemish on its integument. The natives could give no reason for this variety; they looked upon it as curious, but did not seem, as far as I could ascertain, to regard it as a disease. They have the flat nose of the Malay, but otherwise would be considered the offspring of European parents, the skin being in some degree freckled. It ought certainly to be regarded as

a variety of, if not actually the disease called, leprosy.*

I met several natives going into the interior ; they were all well armed with krisses, klawangs or Malay swords, spears, and blunderbusses or musquets ; the country in the interior being described as in a very unsettled state. Some of the spears were about six feet long, resembling walking-staves, covered above by a wooden sheath, similar to the other part of the weapon, and ornamented with rims of silver ; the upper part, or sheath, being taken off, displays the head of the spear.

I purchased a specimen of the *Viverra musanga*, similar to one I had before procured at Java, for half a rupee ; although very wild with strangers, it was exceedingly domesticated with its master, following him like a cat, as he walked along the path : they called him, on this coast, as at Java, "Mussang."

This specimen was very little larger than one

* It is mentioned in *Labillardière's Voyage*, (Eng. Transl. 8vo. vol. i. p. 358,) that at Amboyna "I saw, on my return, a white negro, a Papuan man by birth ; he had light hair, his skin was white, and marked with reddish freckles, like those of the Europeans who have red hair ; but he was not weak-sighted, as is generally the case with other Albinos.

I had before procured ; but they attain, I was informed, the size of our domestic cat, living, in the wild state, upon the summits of the trees, eating fruit, and catching birds as their food. The animal is very fond of sugar-cane, plantain, rice, and the flesh of fowls, and will also kill and eat those troublesome insects, the cock-roaches. It, however, became so very savage on board, that I was obliged at last to destroy it.

I was frequently applied to by the natives, when sick, to administer medicines to them. There were several suffering from different kinds of tumours ; one, near the nose, I offered to remove ; but although the person promised to come on board for the purpose, I afterwards heard he was afraid, and altered his mind. Among many patients was a little girl, belonging to a Moorman, suffering from *Diarrhœa mucosa* : her body had been rubbed entirely over with a mixture of turmeric, sandal-wood, and oil, as a remedy for the disease. The yellow appearance—the usual indication of sickness—was not the result, as may have been expected, of some disease, but merely a daubing over the body of the above-mentioned composition,—this being the remedy for all diseases. The common Hindoo application of cow-dung and turmeric is frequent for external wounds or bruises, and

considered a very efficacious remedy. Cutaneous diseases were very numerous, and the native applications proved very inefficacious in removing them.

I had an opportunity of seeing another rajah—the rajah of Putu (a village and district not far distant, on the sea coast). He was ill-looking in person, and carried with him the appearance of being addicted to opium-smoking. He was attired in a *sarong* of a handsome pattern, the borders of which were woven with gold threads. These sarongs are the manufacture of the country, and are sold at high prices. The rajah was tall and young, and was attended by a numerous retinue, attired in red cloth jackets ornamented with gold lace, and handsome sarongs: others could only wear a cotton *baju*, or jacket. They were armed with spears, klawangs, krisses, and old rusty blunderbusses. The object of his visit to this place, was to pay his respects to the old queen (grandmother of the present rajah) of Acheen, who was residing at Pedir, and was about to embark in a few days in the Acheenese grab for Acheen, and was described as being an excellent old lady.

NOTE.

(See page 13, vol. i.)

A METHOD has since been mentioned to me, by which the colours of the flowers of plants are well preserved. The process was this:—The paper being first heated before the fire, or in an oven, the plant recently gathered is placed between the hot sheets, and pressed. It is requisite, however, that the paper, in the same heated state, be renewed at intervals, on account of the expressed juices from the stalks and leaves fermenting, which might otherwise injure the plants.

There is also a method of preserving plants in flower, by which their natural form, as well as colours, can be preserved. It consists in placing the plant in a jar, and pouring fine sand upon it, until the whole plant is covered: it is then to be placed, still kept in the jar, into an oven; after which, being taken out, and the sand removed, the plant is found preserved both in its form and colour.

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