

grow in bunches at the top of a stem, whose leaves resemble pieces of gray cloth. There is another everlasting, with purple flowers, which grows every where: a reed that does not exceed the size of a large hair, and bears a bunch of white and blue flowers, which, at some distance, appear to be floating in the air: it comes from the Cape; with a kind of tulip that has but two leaves, which stick to the earth as if they grasped it: there is a plant also from China, that sows itself: it has small flowers like a rose, each stem producing six or seven of them at the same time, all of which are variegated, from the deep red of bull's blood to the colour of brick.

The aloe flourishes here; from whose leaves may be drawn a medicinal gum, while their fibres are capable of being manufactured into linen: it grows on the rocks, and in places scorched by the sun. Some are covered with a strong and thick leaf of the size of a man's hand, and armed with a long spike: the stem rises from the centre to the height of a tree, that is covered with flowers which drop down aloes in their perfect state. There are others which are straight like large torches, with several sides, and covered with very sharp thorns; these are streaked, and have the appearance of serpents.

The rose tree is so easily propagated, that hedges are formed of it; but its flower is not close and fragrant as those of Europe: there are many varieties of them, and among others, a small kind from China, which bears flowers throughout the year. The jessamines of Spain and France are naturalized here. There are pomegranates with a double flower, but they are not very fruitful. The myrtle does not flourish here as in Provence.

The Asiatic, African, and American shrubs are, the Cassia, whose leaf is indented; but it does not resemble that of Europe. It is a large shrub, which is covered with yellow odoriferous flowers, in small tufts: they yield a bean which affords a black dye. As it is thorny, it is useful in forming hedges.

The Fousapatte, an Indian word, which signifies the shoemaker's flower, from its depositing a black dye when rubbed on leather. This shrub has a fine green foliage, larger than that of the horn-beam, in the midst of which appear flowers, like those of the pink, and of a deep red: they are used in forming close hedges, and there are many varieties of them.

The Poincillade, which is a native of America, is a kind of bramble that bears clusters of yellow and red flowers; it is very beautiful, but fades in a short time. It yields a bean, and its leaf is divided like the esculent vegetables.

The Jalap bears flowers in the shape of a funnel, and of a deep crimson, which only open at night: they smell like turpentine, and there are two kinds of them.

The vine of Madagascar is a creeper, of which bowers are formed, and bears a yellow flower; its leaves are downy, and appear to be covered with flour. There are several other kinds of flowering creepers in the gardens.

The Mongris, is a jessamine, whose leaf resembles that of the orange tree: there are both double and single ones, and they dispense an agreeable fragrance.

The Franchipanier, is a jessamine of another kind. This shrub grows in the shape of a stag's horn. From the extremities of the smaller horns there shoot out bunches of long leaves, in the centre of which are large white flowers, in the shape of a funnel, and have a pleasant odour.

The lilac of the Indies comes to perfection in a short time, and as quickly dies. It has an indented leaf of a very beautiful green; it bears sweet-smelling flowers, which change into berries: this shrub attains the height of a tree, and is of an agreeable appearance; but, though its foliage is of a brighter green, its flower is less beautiful, than the lilacs of Europe, which do not grow here. That of Persia does not succeed here. There is also the laurel, the rose laurel, the Galet lemon tree, which is formed into hedges; its fruit is round, small, and very acid. The Palma Christi grows every where, and its oil is a known vermifuge.

The pepper plant is a creeper, which twines like ivy; it flourishes, but bears no fruit. It is not known whether the tea tree, which has been brought from China, will naturalize itself in this island, as the Indian reed has done, which is of equal use in the Indies as the willow is in Europe.

The cotton tree grows, in the form of a shrub, in the driest situations; it bears a pretty yellow flower, to which a pod succeeds that contains the cotton. Its seed is given to promote milk in the breast.

The coffee tree is the most useful tree or shrub in the island. It is a kind of jessamine, with white flowers; its leaves are a fine green, placed in regular opposition to each other, and are like those of the laurel; its fruit is of a deep red, and separates into two beans. The trees are planted at the distance of seven feet from each other, and they are lopped at the height of six feet: they last only seven years: at three years they bear fruit; and the annual produce of each tree is estimated at a pound of berries. A Negro can annually cultivate a thousand pounds weight of

it, independent of the berries necessary to his own subsistence. The inhabitants pretend that the coffee of this island is inferior only to that of Moka.

Among the European trees, the pine, the fir, and the oak, grow to a moderate height, when they decline. There are also cherry, apricot, apple, and mulberry trees; with the pear, the medlar, and the olive. The fig tree cannot boast of its fruit; nor does the vine succeed in this climate: it produces grapes, but they do not ripen at the same time, and yield nothing for the vintage. In Europe, the fruit of the same tree attain their ripeness, in a great degree, at the same time; here they ripen successively; which occasions an uncommon variety in the taste of the fruit, gathered at the same moment from the same tree: it would probably be otherwise if it were left to its natural growth. The vine grows, in hot countries, in the midst of woods, where it twines itself round the trees which serve to shade it: this circumstance proves, that if it were introduced into more shady places, it might succeed in this island. The peach tree produces fruit, in a moderate abundance, and of an agreeable taste; but the stone does not separate.

The trees in this island are in a perpetual state of vegetation; and it might be a beneficial practice if they were planted deeper in the earth, in order to check their growth: they should be preserved from the heat here, as they are protected from the cold in the northern parts of Germany. The European trees shed their leaves in the cold season, which possesses here the warmth, and is accompanied with as much humidity as the spring in the moderate parts of Europe.

The foreign ornamental trees are, the Laurel, which flourishes here, as well as the Agathis, of which there are several kinds. Its leaf is indented, and intermixed with bunches of white airy flowers, which are succeeded by long, leguminous pods. The Chinese frequently represent them in their landscapes.

The Polché is a native of India; it has a tufted foliage, whose leaf is in the shape of an heart: it is useful only for the shade it affords. It produces an unprofitable fruit of a ligneous substance, and in the form of a medlar.

The Bambou, appears at a distance like our willows. It is a reed that shoots up to the height of the loftiest trees, and puts forth branches covered with leaves, like those of the olive tree: they are formed into avenues; and as the wind passes through them it produces a ceaseless murmur. Their uses are various and well known.

* The Attier, whose triangular flower is of a solid substance, has the taste of the pistachio. Its fruit resembles that of the pine tree; when ripe, it is filled with a white, sweet cream, has the fragrance of the orange-flower, and is full of black kernels. It is a grateful fruit, but very heating.

The Manguier is a very fine tree, which the inhabitants of India represent on their painted silks; it is covered with flowery branches, like the Indian chesnut tree: to them succeeds a quantity of fruit, in the shape of a very large flat plumb, covered with a rind that smells like turpentine. The fruit has an agreeable and vinous taste, and if it were not for its smell, might be said to equal the finest fruits of Europe: it is probable that a very pleasant drink might be extracted from it. It is generally loaded with fruit in the hurricane season, which occasions the loss of the greater part of it. It grows on the sands, and even in the sea.

The Bananier grows every where, but has no wood: it is nothing but a tuft of leaves, which rise in columns; and expand, at the top, in broad bands of green, which have the appearance of satin. At the end of a year, there sprouts forth from the top a long cluster bristled over with fruit, in the shape of a cucumber. The fruit, which is mucilaginous, has an agreeable taste, and the Negroes are very fond of it: it is given them on festivals, and they reckon their time by the course and number of Banana feasts. Its leaves resemble silk girdles; its cluster falls down for several feet, and its violet-coloured head resembles that of a serpent: this circumstance may have been the cause of its being called the fig tree of Adam. This fruit lasts all the year, and there are many kinds of it, some of the size of a plumb, and others as long as a man's arm. Linen may also be made of the fibres of this plant.

The Gouyanier bears a strong resemblance to the medlar tree; its flower is white, and its fruit smells like bugs. It possesses an astringent quality; and is the only fruit which breeds maggots.

The Jam-rose, is a tree which affords a fine shade, though not of a lofty growth; its fruit emits the fragrance of a rose bud, and is of a sweetish taste.

The Papayer is a kind of fig tree, without branches; it grows fast, and shoots up like a column, with a capital of large leaves: its fruit, which is like a small melon, grows out of its trunk, which is of the substance of a turnip. Its seed has the taste of cresses. The female Papayer only bears flowers; they are of a form and smell as agreeable as those of an honeysuckle.

The Badamier seems to have been formed for the purpose of giving shade. It

grows in the form of a pyramid ranged in several separate stories: its foliage is fine, and it yields a few almonds, that have an agreeable taste.

The Avocat is a handsome tree, and yields a pear which incloses a large kernel: the substance of this fruit is like butter, which when seasoned with sugar and lemon-juice, it is a pleasant eatable, though of an heating quality.

The Jacq is a tree of a beautiful foliage, and bears a monstrous fruit, which is the size of a large pumpkin, whose rind is of a fine verdant colour, and entirely shagreened. It is full of grains, whose coats, consisting of a white, glutinous, and sweet skin, are alone eaten. It smells like rotten cheese, and is a powerful stimulant.

The Tamarind has a very fine top: its leaves are placed in regular opposition to each other, and close in the night. Its pod affords a mucilage, which makes a pleasant and cooling beverage. It has perpetuated itself in the woods.

There are several kinds of orange trees, one of which bears an orange called by distinction the Mandarin. A large kind of Pamplemousse, an orange of a red colour and an indifferent taste: and a lemon tree that bears a large fruit, which yields but little juice.

The Cocoa tree has been transplanted hither. It is a kind of palm tree that flourishes in the sand, and one of the most useful trees in the commerce of India: it serves to give oil, and fibres for cables. It is said that at Pondicherry each cocoa tree annually produces a pistole. It delights so much in the vicinity of salt water, that salt is thrown into the hole in which the fruit is planted, to facilitate the opening of the bud. The cocoa appears to be designed to float in the sea, from its hairy coat, which keeps it above the water, and the hardness of the shell, which is impenetrable to it. This palm is the inhabitant of the southern shores, as the fir is the prevailing tree of the north, and as the date is the pride of the arid mountains of Palestine. Not long since it was discovered that a crab took up its abode at the foot of the cocoa tree: nature has provided it with a long claw, terminated by a nail, with which it draws out the substance of the fruit, through the holes at its extremity. This animal is found on the Island of Palms, to the north of Madagascar, which was discovered in 1769, by the shipwreck of a vessel named L'Heureux, that perished in its voyage to Bengal. This crab served the crew for food.

There has lately been discovered, in the island of Sechelle, a palm tree that bears double cocoa nuts, some of which weigh more than forty pounds. The Indians

attribute to it very extraordinary virtues: they suppose these trees to be a production of the sea, because the currents sometimes throw them on the coast of Malabar. They call them marine cocoa nuts. This fruit when stripped of its hair, *mulieris corporis bifurcationem, cum natura et pilis representat*. Its leaf, which is in the shape of a fan, is large enough to cover the half of a hut. But, in the usual proportionate dispensations of nature, this tree does not bear more than three or four of these enormous nuts; while the ordinary cocoa tree bears thirty or forty: their taste is much the same. Marine cocoas have been planted in the Isle of France, and begin to shoot.

There are also some curious trees, as the date, which seldom bears fruit; the palm which is called the Araque, as well as that which produces the sago; the Canificier and the Acajou, both of which yield flowers, but without fruit; the cinnamon tree, of which avenues have been made, resembles a large pear tree, both in size and foliage; its small clusters of flowers and its cinnamon have an aromatic odour. There was but one cocoa tree in the island in the year 1769.

It is long since the Ravinerara, a kind of nutmeg from Madagascar, has been planted here; as well as the Mangoustans and the Litchis, which produce the finest fruits in the world; the varnish tree, that yields an oil capable of preserving cabinet work; the tallow tree, whose seed is covered with a kind of wax; a tree from China, which yields small lemons in clusters like grapes; the silver tree of the Cape; and, lastly, the Teak, so well known for its service in the construction of vessels.

Marine Productions.

There is a great variety of fish in the seas that surround the Isle of France.

Whales are often seen to windward of the island, particularly in the month of September, which is the season of their copulation: they are then frequently observed to poise themselves perpendicularly in the water, and approach the shore: they are very inferior in size to those of the North. They are never caught, though the Negroes are not unacquainted with the art of harpooning them, because those people are engaged in more useful and less perilous occupations. The flesh of these whales is like that of the ox.

The *Piaille*, is a blackish fish, like a cod, both in shape and taste. It is sometimes poisonous, as well as several other kinds, which, however, are easily known: Those

who accidentally eat of them are seized with convulsions, which sometimes end in death. In such circumstances their skin falls off in scales. In the island of Rodriguez, which is not more than an hundred leagues distant from hence, the fleet under Admiral Boscawen lost, by the eating this fish, upwards of fifteen hundred men, which occasioned the expedition to fail against the Isle of France. It is supposed that these fish acquire their poisonous quality by eating the branches of the madrepore. The poisonous fish, however, may be known by the blackness of their teeth, or by throwing a piece of silver in the kettle in which they are boiling, which becomes black if they are impregnated with deleterious juices. It is, however, a very singular circumstance, that this fish is never unwholesome to the windward of the island. It is therefore an ill-founded opinion that the madrepores communicate this poison; because the island is surrounded with banks of coral. Others attribute it to the fruit of some poisonous tree which falls into the sea; but this opinion is no better founded than the former; since, among other reasons, the island does not produce any fruit that could produce such a pernicious effect. There is also one kind of wood-pigeon, whose flesh taken as food occasions convulsions: but, as it is a bird of passage, and as this fish is found in every part of these seas, this fatal quality may be acquired on the neighbouring coasts of Madagascar or Africa.

In the number of these suspected fish are several of a whitish appearance, with a wide mouth, and a large head; such as the Captain, and the Carranque. The flesh of these fish is not remarkably good; and those which have a rough bone on the palate, are supposed not to be dangerous.

There are sharks, but they are never eaten.

In general, the smaller the fish are, the less danger there is in eating them. The roach is much larger than, but very inferior to that of Europe: it is considered as wholesome, as well as the mullet, which is very common.

There are pilchards and mackerel, which differ little in appearance from those known to Europeans.

The Poule d'eau, a kind of turbot, is the best fish of these seas: its fat is green.

There are white rays, whose long tails are covered with sharp-pointed bones; and otters, whose skin and flesh are black; the sabre fish, so called from their shape; the moon fish, speckled with different colours; and the purse fish, whose skin is marked with the meshes of a net. There are other fish like our whiting, of red,

yellow, and violet colours. There are also the perroquet fish, which is green, with a yellow head, and white hooked beak; they swim in shoals, as the birds, from whom their name is derived, fly in flocks.

The armed fish is small and of a very whimsical shape: its head is like that of the pike, which bears on its back seven bony bristles as long as its body, the prick of which is poisonous: they are united by a pellicle that resembles the wing of a bat. It is marked from its mouth to its tail with brown and white stripes, like a zebra. There is a fish which is square, like a trunk, whose name has been given to it, and is armed with two horns like a bull: there are several kinds which never attain to any considerable size; as the porcupine fish, bristled over with long prickles, and the polypus, which crawls in the swamps, with its seven claws armed with air-holes: it changes its colour, spouts forth water, and endeavours to defend itself against any one who attempts to take it. These strange fish are found in the ledges and reefs of rocks, and are seldom if ever applied as food.

The fresh-water fish are better than ours; and appear to be of the same kind as those which are taken in the sea. Among these the best are the lubin, the mullet, and the carp; the cabot, that lives in the torrents formed by rocks, to which it adheres by means of a concave membrane, and very large and delicate shrimps. The eel is a kind of conger; there are some from seven to eight feet in length, and of the thickness of a man's leg; they retire into the holes of the rivers, and sometimes devour those who are so imprudent as to bathe there.

There are lobsters, or Langoustes, of a prodigious size, though their claws are comparatively small; they are of a blue colour marbled with white. There is a small kind of them, of a most beautiful form; they are of a sky-blue colour, with two small claws, divided into two joints, which are like a knife whose blade turns back into the handle. It seizes its prey as if it were maimed.

There is a great variety of crabs; the following are the most remarkable: a kind, rough with tubercles and prickles, like a madrepore; one which has on its back the impression of five red seals; another, whose claws terminate in the form of an horse-shoe. There is a kind also which is covered with hair, is entirely unprovided with claws, and sticks to the sides of ships: there is also a gray crab, with a smooth indented shell, on which appear several whimsical and irregular figures, that are exactly similar on each crab. There is another, whose eyes are placed at the termination of two long tubes, like telescopes. When it does not employ them, it lays them in

grooves along the side of its shell. The sea spider is a crab with red claws, of unequal length. There is also a crab, whose shell is three times larger than itself; thus it appears to be covered as with a large shield, and when in motion its feet are not visible.

In many places along the sea-shore, at a few feet beneath the water, are found great numbers of *Boudins*, red and black. When they are dragged on shore, they emit a thick, white, and flimsy matter, which is transformed in a moment into a parcel of loose glutinous threads. This animal is supposed to be the enemy of the crabs, among which it is found. Its slime is calculated to embarrass their claws, which are not able to lay hold of its elastic coat, or cylindrical shape. The sailors give it a very gross name, which may be rendered in Latin by *mentula monacbi*. The Chinese esteem it very much, and consider it as a very powerful stimulant.

There may be ranked also among the shell-fish, a shapeless, soft, and membranous mass, in the centre of which is a single flat bone, somewhat bent. In this species the common order of things seems reversed, as the animal is without, and the shell within.

There are several kinds of Oursin (*Echinus marinus*): the blue Oursin, with long prickles; in the water its two eyes shine like grains of lapis lazuli; and, among many others, there is one which resembles the bottom of an artichoke.

Of the various snails some remain fixed to the rocks, with an incrustated shell; and others wander about whose shell is smooth and shining. Among the former is the *Bouche d'Argent simple*, which, when cleared of its incrustation, exceeds burnished silver in beauty: the *Bouche d'Argent epineuse*; the *Bouche d'Or*, whose shell is yellow; the river snail, whose black skin conceals a fine rose colour, striped with *points d'ongrie*: the Persic or Panama Conch, which affords a liquor that gives a purple dye; a long snail, whose mouth is marked with black spots; and several others.

Among the wandering snails are, the fluted *Nerite*, the smooth *Nerite*, with red, gray, and black streaks, in all directions: there is a great variety of them. The harp snail, the most beautiful in shape and colour; the same with the addition of prickles; a snail similar to one which is seen in the Azores, that yields a purple juice; and many others.

There is in the Isle of France a smooth and flat *Lépas*,—the *Star Lépas*, and

the *Lépas fluviatilis*, which, like the other shells found in the rivers of this island, is covered with a black skin; the *Oreille de Mer*, whose inside is empearled, and a kind of white shell, whose *bourellet* is still more rounded.

The *vermicular*, (the *Serpula* of Linn.) which is nothing more than a white pipe, is supposed to be a fragment of the *Arrosoir*, (the *Serpula* penis), a large kind which winds across the *madrepores*. The *Cornet of St. Hubert*, a small white *vermicular*, in a spiral form, and divided into separate partitions, like the *nautilus*; the *Nautilus papyraceus*, and the common *Nautilus*, whose section forms such a fine *volute*.

Among the *Rouleaux*, (*Conus*, Linn.) is a common olive; (*Voluta*, Linn.) a beautiful olive, which resembles the shades of a velvet of three colours; the black is most esteemed; there are some of five inches in length; a small olive more open; and the common *Rouleau*, with red spots. These three kinds have an upper skin covered with hair; the *Drap d'or*; the *Tonnerre*, whose shell is very small, striped in zig-zag; the *Poire*; the *Rouleau* covered with skin like the *Poire*, whose mouth has an hollow slit, and is of a fine scarlet; the *Ear of Midas* is incrustated, but it is of a beautiful lustre; the *Grand Casque* of a pale yellow colour; the white *Casque* spotted with purple, and is very small; the *Scorpion*, covered with skin, and has seven fangs; and, lastly, the *Araignée*, a large and fine shell, whose lips are of a violet colour, and has a mouth decked with prickles.

Among the *Porcelaines*, (*Cypræa*, Linn.) there is a common kind of a reddish brown, *à dos d'âne*; another, which is spotted like a tyger, and the *Carle de Géographie*, which is rare. There is also the *Œuf*, or the egg of a milk white, whose mouth is red and yellow. The *Lievre*, (*Lepus*,) of a fine dark red colour, and the *Olive de Roche*, *Voluta*, whose shell is very brittle.

Among the *Vis*, the common speckled *Vis* is very long; there is another equally beautiful, whose spiral form is accompanied with a moulding; the *Enfant en Maillet*, more swelled; another equally large called the *Culotte de Suisse*, whose colours and lustre are very fine; a small *Vis* with a kind of beak, with an hole pierced in it: another *à dos d'âne*, that is also pierced; the *fuseau blanc*, which is rare; the *fuseau* with red spots; the maritime *Mitre*, marked with the same spots; the *Mitre fluviatilis*, which is covered with a black skin.

It is a singular circumstance, that all the univalves are turned from left to right, the shell being placed on its mouth, and the point towards the person who regards it. Exceptions from this general rule are very rare. If it were asked, by what law

their volute always turns to the same side? it may be answered, by the same law which makes the earth turn from the west to the east. In that case, the sun may be the efficient cause, as it is of their colours, which increase in beauty as we approach nearer to the line.

The Scorpion, which has very long claws, increases its shell every year. Its old claws become useless, and it forms new ones. It may be asked, what it has done with the old ones? In the same manner the Porcelaine has a thick mouth, which is formed in such a way, that it cannot augment its revolutions on itself, if it does not succeed in destroying the obstacles to its opening. It is not improbable, that these animals possess a liquor capable of dissolving the walls of the roof, which they wish to enlarge, and if this dissolvent exists, it might be employed for the stone in the bladder, and to destroy those glutinous humours, which resemble the *prima materia* of shells.

Among the *Bivalves*, are the common Oyster which adheres to the rocks, and is of so rude a shape, that it is necessary to employ an hammer to open it: it is good to eat; a kind which is called the leaf, on account of its form; a gray oyster which sticks to the sides of ships, and whose shell is beautiful and elastic: this is very rare. The pearl oyster is white, flat, thick, and very large; it is found at a great distance from land, and is the same as that in which pearls are found; another pearly oyster which is still flatter, and of a deep violet colour; it attaches itself by means of threads, like the muscle. It is very common at the south-east port, and is found at the mouths of the rivers. Its pearls are of a violet colour.

The oyster called *la Tuillée*, is by no means uncommon; it is of the same kind as those, which serve as holy-water pots in the church of Saint Sulpice. It is perhaps the largest shell fish of the sea. There are to be seen of them, at the Maldivian Islands, which require the strength of two oxen to drag them along. It is a very curious circumstance, that this oyster is found in a state of petrification on the coast of Normandy.

There is also a kind of oyster which is very small, and of a grey colour, that resembles, in shape, a Polish saddle; the thorny oyster, which is found in the beds of coral, and the *Pelure d'oignon*, or onion peel, of which we have seen only some detached shells.

There are three kinds of muscle, which are neither curious nor common: they resemble, in shape, the *dail* of the Mediterranean, and are found among the

madrepore: there is also a white muscle, with an elastic shell, which incorporates itself with the sponge; it is an intermediate gradation between two kinds.

The *Hache d'armes* is of the muscle kind, and is formed like a battle axe, with the hatchet on one side, and a point on the other; it is covered with asperities, and opens with a simple elastic plait.

Among the cockles, is the *Arche de Noé*, whose extremities rise like the poop of a vessel; the *Cœur de Bœuf*, one side of which is irregular; the *Corbeille*, whose flutings blend with each other; the *Rape*, whose *stries*, or gutters, are formed by arches which cross one another; a common cockle, with a slender shell, the inside of which is tinged with a deep blue; another sort, which is very beautiful and scarce, and marked on the outside like embroidery; the *Peigne*, and the *Manteau ducal*, of a fine Aurora colour.

There is every appearance, that the shell fish have their hostilities as well as other animals, as the shattered remains of them are continually found on the shores; and those which are taken in an entire state, are always pierced in different parts. There is a snail, armed with a sharp tooth, with which it wounds the shell of the muscle. It is found in the straits of Magellan, and is called the armed Burgau.

To obtain fine shell fish, they must be taken alive. Those, whose covering is clear, live on the sand, where they take refuge in stormy weather: others cling to the rocks: the muscles take abode among the branches of submarine plants, where they do not multiply in a great degree: if they were to spawn on the rocks, as in Europe, the hurricanes would destroy them.

There is much variety in the hinges of the shells of fish, which the artisan might imitate with advantage. The oyster has but little leather, which incorporates with the stony substance: the muscle has a strong elastic skin: the *hache d'arme* has but one fold: the *cœur*, if regular, has some small teeth at its hinge, which lock in one another; and if one of its sides extends, the hinge increases on the side where the weight preponderates, and the teeth which form it have a porportionable strength. An admirable principle of geometry is visible in their curb.

The Isle of France is entirely surrounded with the *madrepore*, which are stony vegetations, in the form of plants and shrubs. They are in such abundance, that the rocks are entirely formed of them.

They may be distinguished by those which do not spring from the earth, and those which are attached to it.

Among the first are the *Champignon*, which appears to be composed of leaves; the *Plumet*, which is of the same kind; the *Plumet*, with three and four branches, and the *Cerveau de Neptune*.

Among those which decorate the bottom of the sea, and which appear to hold to the earth by their roots, are the *Cbou-fleur*; the *Cbou*, whose leaves and appearance resemble very much that of the garden vegetable of the same name: it is of a large kind, as well as a madrepora, in a spiral form, and which is very brittle; another, which resembles a tree in its bark and branches, a very pretty kind, which is called the *Gerbe*, that seems to be formed of several clusters of ears of corn; the *Pinceau*, or the pink; in the centre of each segment, a small quantity of green is remarkable; a common kind, forming a tuft like the *Reseda*, with its conic flowers; a very pretty one, which grows in the form of an island, with its shore and its mountains; another, which resembles a congelation; a kind, whose foliage branches out like the fingers of the human hand; the *Bois de Cerf*, whose branches are detached and brittle; the *Ruche a Miel*, a shapeless mass, whose surface is regularly perforated with holes; a coral of a pale blue colour; withinside it is of a darker blue, and a coral, distinctly marked with black and white, which has something of the nature of the red coral, that has not yet been found here. Here are also several coralline vegetations of various colours, which are so brittle, that they cannot be conveyed to Europe.

Among the *Lithophites*, there is a plant resembling a long straw, which has neither foliage, knots, or blossoms; there is also a vegetation, like a small forest of trees, whose roots are very much interwoven, and each of them has a small bunch of leaves. The substance of this lithophite partakes of the nature of wood, and burns like it in the fire; it is, however, in the class of the madreporæ. There are also three kinds of marine stars, which do not suggest any particular remark.

It is no longer doubted, that the madreporæ are the work of an infinite number of small animals, although they bear an exact resemblance to trees, by their appearance, stem, branches, and mass, and even by their flowers, which display the same colour as the blossom of the peach tree.

Ambergris was formerly found on the coast, and there is even a small island to the windward which bears its name.

Native Animals.

According to the Abbé de la Caille, monkies were brought into the Isle of France by the Portugeze. The Monkey of this island is of a moderate size, with hair of a reddish-grey colour, and rather thick. It has a long tail, and is gregarious. These animals frequently venture to plunder the houses of the inhabitants; on which occasion they place sentinels on the rocks and in the trees; and when they perceive the dogs and hunters coming in pursuit of them, they set up a cry, and the whole of this curious party decamps. It climbs the highest mountains, and reposes above the precipices, on the smallest projections. It is the only quadruped of its size that exposes itself in such a situation.

It is supposed, that formerly the Flamingo (*Phœnicopterus*) was common in this island, but at present the number is reduced to a very few. It is a large handsome sea bird, whose plumage is an intermixture of black, white, and rose colour.

There is a considerable number of *Corbigeaux*, which are considered as the best game of the island: it is very difficult to shoot them.

There are two sorts of the *Paille en Cul* (the *Phœton æthereus* of Linn.); the one of a silver white; the other having the beak, claws, and rump, red. Although it be a sea bird, it builds its nest in the woods. The English call it the Tropic Bird.

There are several kinds of Parroquets, with a gray capuche: they are of the size of a sparrow, but can never be tamed. They are good to eat.

The woods produce Blackbirds, which at the call of the hunter come to the end of his gun. They are considered as game.

We shall now mention an animal of a very singular nature, which M. de Buffon calls the great Bat of Madagascar.

It is about a foot in length, from its posterior extremity to its beak, and its wings stretch to about four feet; it has large canine teeth, consisting of four in the upper, and as many in the lower jaw. Its muzzle is black and sharp; its ears large and bare; its talons are hooked, large, and compressed: it has no tail. These bats are of different colours; some of a bright red, others brown, and some are almost black. They resemble the common bat in their interior conformation, the shape of their wings, and the manner of spreading them when they fly. When these animals repose, they cling to the tops of the highest trees, and hang with their heads downwards. At other times, they fix themselves upon animals, and even upon man himself. They

feed indifferently on fruit, flesh, and insects. They are so fond of the juice of the palm tree, that they sometimes intoxicate themselves with it, so as to fall to the ground. Their horrid shrieks are heard, during the night, in the forests, at the distance of two miles, but they retire at the approach of day. Nothing is safe from the ravages of these destructive creatures; they equally destroy the wild and domestic birds, whenever they have an opportunity; and they will sometimes attack the human kind, by seizing and tearing the visage. It is very probable, as M. de Buffon has observed, that the ancients borrowed their idea of the harpies, from these terrible animals. The Indians consider them as a palatable article of food, particularly in certain seasons of the year, when they are full of fat: and even some of the French people, both in this island and the isle of Bourbon, have brought themselves, in this particular, to follow the Indian example. The Negroes, however, hold them in the greatest horror; and no consideration whatever could induce them to have any other concern with these noxious creatures, but to destroy them; for which purpose they employ uncommon dexterity. It has often happened, that persons have been attacked, while asleep, and bled to death by them, as they are powerful and subtle bloodsuckers; so that it is really dangerous to slumber in the open air, or to let them enter into an house during the night.

There is a kind of hawk, called the Chicken eater, which is said to feed on grasshoppers. It dwells on the sea shore, and discovers no appearance of alarm at the sight of man.

Formerly there was great plenty of turtles on this coast; but at present they are very much diminished.

The sea shore is full of holes, which are inhabited by great numbers of *Tourlou-roux*, which are a kind of amphibious crab, that dig under the earth like a mole. They run very fast, and when they are in danger of being taken, present the points of their claws, with which they make a kind of ringing noise. They are of no use whatever.

Another very singular amphibious animal, is the *Bernard l'hermite* (Cancer Bernhardus, *Linn.*), a kind of lobster, whose hinder part is without a shell; but nature has instinctively taught it to lodge that part in any empty shell it can find. They are seen running about in great numbers, each of them carrying its borrowed house, which when incommodious, from its being too small, it changes, as opportunity serves, for one that is more capacious.

The most noxious insects of the island are the Locusts, which are well known for the injury which agriculture receives from them.

There are several kinds of caterpillars, some of which, as that of the Citronnier, are very large and beautiful.

There is also a nocturnal butterfly, which bears on its corselet, a death's head (the Atropos, or *tête de mort*.) It frequents, and flies about, the interior apartments of houses.

The Centipede (*centpieds*, scolopendre), is frequently seen in obscure and humid situations. It is not improbable that this insect was designed to keep man from unwholesome places. Some of these insects attain the length of six inches, and ants have been seen to seize their legs, and to drag them along like a piece of timber.

The Scorpion inhabits the same moist places; its bite is not mortal, but it produces a fever, which is cured by rubbing the affected part with oil. This insect is the only one in the island, that is noxious to man; but it is become much less venomous than formerly.

There are bees which produce excellent honey.

There is a kind of insect that resembles the ant in appearance, nor is it less sagacious in forming its abode. These creatures make a sad havock among the trees, and timber, whose wood they pulverize, and with the dust form arches of about an inch in breadth, over which they pass and repass. These insects, which are called *Carias*, and are black, will sometimes over-run the whole timber-work of an house: They will make their way into trunks, and other pieces of furniture, in the course of a night. The most certain remedy against their depredations, is to rub the places which they frequent, with garlick.

There are three kinds of *Cancrelas* (*Blatta Indica*), a kind of beetle. One of them is of a flat shape and a gray colour, but the most common is of the size of a may-bug, and of a reddish-brown colour. This *Cancrelas*, or kakerlaque, is a *Coleopterous* insect, which soils and destroys every thing. It is called *Ravet* in the Antilles; though the *Cancrelas* of the Isle of France is larger than the *Ravet* of St. Domingo, but is equally troublesome by piercing the water-casks in ships, and making holes of two inches in circumference.

It has for its enemy a kind of beetle, or green fly, which is very active and light; and whose touch alone renders it motionless. The beetle then drags it along till it finds a chink to deposit its victim, it then lays an egg in the body of the *Cancrelas*,

and abandons it. This touch, which some have supposed to be a charm, is the puncture of a sting, whose effect must be very prompt, as that insect is of a very hardy nature.

In the trunks of trees is found a large worm with claws, which gnaws the wood: it is denominated a *Moutouc*. Not only the black, but the white inhabitants, consider it as palatable food. Pliny observes, that it was a favourite dish at the first tables in Rome, where it was the custom to fatten it with flour. Those were highly esteemed and preferred, which were found in the trunks of the oak. It was called *Cossus*.

The kinds of flies which are common with us, are to be found here. The gnat, called *Moustique*, or *Maringouin* is very troublesome, as in every place which it frequents: its hum is very loud. This gnat is black, spotted with white. Gauze curtains, which are called *mousticaïres*, are employed as preservatives against it during the night.

On the banks of rivulets are seen the insects called *Demoiselles* (*Libellula*), which are of a fine violet colour, and whose head is like a ruby. This is a carnivorous insect, and feeds on butterflies.

There is a small beautiful Lizard about four or five inches in length, with very lively eyes, which is to be found in the houses. It crawls up the walls, and even along the glass of the windows. It feeds on flies and insects, for which it will lay in wait with extreme patience. It lays small round eggs about the size of a pea, which are white spotted with yellow. Some of them are rendered so familiar as to take sugar from the hand. They are very innocent, and as they destroy the insects, are considered as beneficial domestic associates. There is a kind of them which inhabit the woods, and is extremely beautiful; being of an azure colour inclining to green, with crimson streaks on the back, which resemble Arabic characters.

But a more formidable enemy to the insects is the Spider.—Some of these are as large as a nut, with long legs covered with hair. Their webs are so strong, that small birds are taken in them. They destroy also wasps, scorpions and centipedes.

The mild temperature of this climate, so much desired by the inhabitants of Europe, is favourable to the propagation of insects which devour fruit. But the fruits of these Southern countries are clothed with such thick rinds, hard skins, and aromatic barks, as the orange, the lemon, &c. that there are very few kinds in which the fly can deposit its worm. Many of these insects also are in a continual state of hostility, as

the centipedes and the scorpion. The Formicaleo lays its snares for the ants; the green fly stings the cancrelas; the lizard pursues the butterfly; the spider prepares its nets for every insect that flies; and the hurricanes which formerly arrived every year, destroy both the pursuer and the pursued.

Animals brought into the Isle of France.

Foreign fish have been even brought to this place. The *Gourami* comes from Batavia. It is a fresh-water fish, and is esteemed to be the best in the Indies. It is like the salmon, but more delicate. Here are also the gold-fish from China, which lose their beauty as they increase in size. These two species multiply in the pools. Several ineffectual attempts have been made to transport frogs hither, which eat the eggs which the *Moustique* deposits on the stagnant waters.

A bird has been brought from the Cape which is extremely useful. The Dutch call it the Gardener's Friend.

It is of a brown colour, and the size of a large sparrow. It feeds on worms, caterpillars, and small snakes. But it not only eats them; it also provides a store for its future wants, by hanging them up on the hedges; and if deprived of its liberty, will contrive to suspend a portion of the meat which is given to it, on the wires of its cage.

The Martin has multiplied very much indeed, in this island. It is a kind of Indian starling, with a yellow beak and claws. It scarcely differs from that of Europe but in its plumage, which is less spotted. It has the same warble, the same aptitude to articulate words, and the same actions. It counterfeits other birds, and settles on animals to pluck their hair; but it is most remarkable for its greedy consumption of grasshoppers. They always go in pairs; and at sunset assemble in thousands, on certain trees which they prefer. After a general warbling, the whole flight goes to rest; and at break of day they disperse in pairs through different parts of the island. This bird is not eatable.

Several couple of Ravens had been let loose in the woods, to destroy the rats and mice, of which there remain but three males. The inhabitants accused them of devouring their chickens.

It is not possible to pass over the mischief occasioned by the Cape Bird, a kind of small singing bird which is very melodious. They were at first brought here from curiosity, but some of them escaped into the woods, where they have greatly

multiplied. They subsist on the fruits of the harvest, and the government has set a price on their destruction.

There is a very pretty Tom-tit, whose wings are dotted with white spots; and the Cardinal, whose head, neck, and belly, at a certain season of the year, are of a bright red; the rest of its plumage is a fine pearl colour. This bird comes from Bengal.

There are three kinds of Partridge much smaller than ours, and their cry resembles that of a hoarse cock. They roost, during the night, on the trees, as in other hot countries.

The fine Pheasant of China, and *Pintades*, have been let loose in the woods. Geese and wild ducks have also been introduced to the pools of water; there are also tame ones, and among others the Manilla duck, which is very beautiful. There are our European fowls; a kind of African fowl, whose skin, flesh, and bones are black; and another sort from China, the male of which is remarkable for its courage.

Many of the inhabitants derive considerable advantage from their poultry, on account of the scarcity of meat. Pigeons succeed very well here, and they are the best fowl of the island. Two kinds of turtle doves, as well as hares, have been brought hither.

In the woods, there are goats, wild hogs, and deer, the latter of which have multiplied in such a manner, that a squadron of ships has been victualled with them. Their flesh is excellent, particularly in the months of April, May, June, July, and August. The flocks which have been domesticated have never multiplied.

Among the domestic quadrupeds, there are sheep who lose their wool, goats which thrive, and cattle which come from Madagascar, and have a large wen on their necks. The cows give very little milk, and their calves degenerate.

There is sometimes a total want of butchers' meat; but the inhabitants have a resource in pork, which is better than that of Europe; it does not, however, make good salt meat, which proceeds from a defect in the salt. The female pig is very subject, in this island, to produce monsters.

Horses are very dear; a common one will cost an hundred pistoles. They fall away at the port, on account of the heat. They are never shod, though the island is full of rocks. Mules are very scarce here; and the asses are small and rare. The ass might become the most useful animal of the country, as it would ease the labour of the Negroes.

Some time ago two very fine wild asses, male and female, of the size of a mule, were brought from the Cape. They were streaked on the shoulder like the zebra of the Cape, though there is a considerable difference between them. These animals are of a nature that cannot be tamed.

Cats have degenerated here; the greater part of them are thin and emaciated, nor do the rats discover any very great apprehension of them. Dogs are much more effectual in destroying these noxious animals; but in the course of time they lose their hair and their scent. It is said, that they are never known to go mad in this island.

CHAPTER III.

Manners of the Inhabitants.—Account of the Blacks.—Theory of the Island, and its Caverns.—Some general Observations on the Isle of France, by M. le Gentil.—Luminous Globes, &c.

THE Isle of France was an absolute desert when Mascaregnas discovered it. The French who first established themselves there, were certain planters from the Isle of Bourbon, who brought with them simplicity of manners, good faith, an hospitable disposition, and an indifference for riches. M. de la Bourdonnais, who may, in some degree, be considered as the founder of this colony, brought some workmen along with him. When, however, he had rendered this island interesting by his labours, and it was thought convenient as a staple for their commerce of the Indies, persons of all conditions settled in it.

The agents of the Company, who possessed all the principal employments in the island, exercised too much of that financial disposition, which is discouraging to those who are employed in cultivating the earth. The whole of the public establishment was at their disposal; they, at the same time, controlled the police, the civil administration, and magazines of the island; some of them cleared the land and built houses, all of which they disposed of, at a very high price, to those who had ventured hither, in hope of advancing their fortune. There was consequently a great outcry against them; but the power was in their hands, and complaint was of no avail.

Several persons in the marine service of the Company settled here. They had long complained, that while they encountered dangers and suffered fatigues in support of the East Indian commerce, others acquired the honours and emoluments of it. As this settlement was so near to India, a sanguine hope of advantage from fixing in it animated their mind, and they became its inhabitants.

Several military officers of the Company arrived here; they were very respectable

persons, and some of them distinguished for their birth. They could not imagine that an officer would debase himself so far as to receive orders from a man who had formerly been a clerk in an accounting-house, though he might condescend to receive their pay. Nor did they like the sailors, who are rather too peremptory in their manners. On becoming inhabitants, they retained their original disposition, and consequently did not advance their fortunes.

Some of the King's regiments put in here and made some stay; while several of the officers, allured by the beauty of the climate and the love of repose, were induced to establish themselves in the island: but every thing was at the disposition, and submitted to the power of the Company.

The inhabitants were also increased by the arrival of some missionaries of the order of St. Lazarus.

To complete the settlement of this island, some merchants with small capitals arrived, and found it without commerce. These people augmented the abuses of money jobbing, which they found already established, and employed themselves in forming petty monopolies: they soon became obnoxious, and acquired the name of *Banians*, or *Jews*. On the other hand, they affected to despise any particular distinctions of the inhabitants, and were fond of propagating the opinion, that, after having passed the line, a general equality prevailed.

Such was the situation of this colony when it was ceded to the King in the year 1765.

One part of the inhabitants, who were attached to the Company from gratitude, beheld, with pain, a royal administration; while the other part, who had so long looked for the favour from a new government, seeing it principally occupied in plans of economy, were proportionably chagrined and disappointed.

The soldiers furnish a considerable number of workmen, as the moderate heat permits the white people to work in the open air; though they have not been rendered so beneficial to the colony as they might have been, in a more enlarged disposition of their capacities.

Though the seafaring people are always going and coming, they have, nevertheless, a considerable influence on the manners of the colony. Their policy is to complain alike of the places which they left, and of those at which they arrive: they have always bought too dear and sold too cheap, and think they are ruined if they do not gain an hundred and fifty per cent.

An hogshhead of claret costs five hundred livres, and every thing else in proportion. It is scarce credible, that the merchandize of Europe is dearer here than in India; and that Indian commodities fetch a higher price here than in Europe. The maritime people are so necessary to the inhabitants, that they are held in great consideration.

The greater part of the married people live on their plantations; and the women seldom visit the town, but when they are tempted by a ball, or are called to perform some essential duties of their religion. They are passionately fond of dancing; and no sooner is a ball announced, than they come in their palanquins from every quarter, as the roads will not admit of wheel carriages.

The women have but little colour, but they are well made, and, in general, handsome. Nature has given them a considerable portion of wit and vivacity; and if their education were not neglected, their society would be very agreeable: they are very fond mothers; and if they ever fail in fidelity to the marriage vow, it is too often owing to the indifference of their husbands, or to the Parisian manners which have been introduced among them. Their ordinary dress is fine muslin, lined with rose-coloured taffetas.

They possess, in a great degree, the more estimable domestic qualities; they seldom or never drink any thing but water, and their cleanliness is extreme. Their children are never confined in swaddling clothes, but run about almost as soon as they are born; they are often bathed, and allowed to eat fruit at their own discretion. As they are left entirely to themselves, and are uncontrouled by the superintendance of education, they soon become strong and robust, and their temperament advances in proportion. The females are sometimes married at eleven years of age.

There are about four hundred planters in this island, and about an hundred women of superior rank, not more than ten of whom live in the town. On firing the evening gun at eight o'clock, every one retires to his own habitation.

The Blacks.

Of the population of this island, we must consider the Indians and Negroes as forming a considerable proportion.

The first are from the coast of Malabar, and are a very mild and gentle people;

they come from Pondicherry, and let themselves out for a certain number of years. They are almost all of them workmen, and occupy a suburb which is called the Black Camp; they are of a deeper colour than the islanders of Madagascar, who are real Negroes, have the features of Europeans, and their hair is not woolly: they are sober and economical. Their head is dressed with a turban, and they wear long dresses of muslin, with large gold ear-rings, and silver bracelets at the wrists. There are some who enter into the service of the rich and titled inhabitants, as *pians*; a kind of domestic, which answers to the character of an European running footman: his peculiar distinction is a cane in his hand, and a dagger at his girdle. It were to be wished that there were a greater number of the inhabitants of Malabar established in this island, particularly of the cast of husbandmen.

At present, Madagascar furnishes the Negroes which are destined to cultivate the land in the Isle of Bourbon. The common price of one of them is a barrel of gunpowder, a few muskets, some pieces of cloth, and, above all, a certain proportion of piastres. The dearest of them costs about fifty crowns of France.*

These people have neither so flat a nose, or so dark a complexion, as those of Guinea; some of them are only brown; while others, as the Balamous, have long hair: nay, others of them have fair, and even red hair. They are dexterous, intelligent, and have a sense of honour and gratitude. The greatest insult which can be offered to one of these people, is to speak disrespectfully of his family; they are far less sensible to personal injuries. In their own country they work up various articles, with equal ingenuity and industry. Their zagaye, or half-pike, is very well forged, though a couple of stones form their hammer and their anvil. The linens which their women weave are very fine and well dyed; these they cast around them in a graceful form, and the manner in which they arrange their hair produces a pleasing head-dress; it consists of curls and tresses very tastefully blended with each other, and is the work of the women. They are passionately fond of dancing and music; their instrument is the tantam, which is a bow fixed to a gourd, from whence they draw a soft harmonious sound, with which they accompany the airs that they compose. Love is the general subject of them, and the girls dance to the songs of their lovers; the spectators beat time and applaud.

They are very hospitable. A black who is on a journey, enters without previous ceremony, or being known to the owner, into any hut which suits his convenience;

* In 1768.

and those whom he finds in it most willingly share their meal with him. Nor is it their custom to ask from whence he comes, or whither he is going.

Such are the qualifications and manners with which they arrive at the Isle of France. They are all disembarked with no clothing of any kind, but a strip of linen round their loins. The men are placed on one side of the beach, and the women with their children on the other. The planters then examine them, and make their purchases accordingly. Brothers, sisters, friends, and lovers, are now separated, and are led away to the respective plantations to which they are destined. Sometimes, in the paroxysms of their despair, they imagine that the white people are preparing to eat them, that they make red wine of their blood, and gunpowder of their bones.

Their manner of life is as follows: at day-break, the smacking of a whip is the signal that calls them to their work: and they then proceed to the plantation, where they labour in a state of almost entire nakedness, and in the heat of the sun. Their nourishment is ground maize boiled in water, or loaves of the manioc; and a small piece of cloth is their only covering. For the least act of negligence, they are tied hand and foot to a ladder, when the overseer gives them a certain number of strokes on their back, with a long whip; and with a three-pointed collar clasped round their necks, they are brought back to their work. It is not necessary to describe the severity with which these punishments are sometimes inflicted. On their return to their habitations in the evening, they are compelled to pray to God for the prosperity of their masters.

There is a subsisting law in favour of slaves, called the *Code Noir*; which ordains that they shall receive no more than thirty strokes at each chastisement; that they shall not work on Sundays; that meat shall be given them every week, and shirts every year: but this law is not observed.

The Negroes are naturally of a lively disposition, but their state of slavery soon renders them melancholy. Love alone seems to allay their pain: they exert themselves to the utmost in order to obtain a wife; and, if they can choose for themselves, they always prefer those who are advanced into a state of womanhood, who, they say, make the best soup. They immediately give them all they possess; and if their wives live in another plantation, they will undertake the most difficult and dangerous journeys to see them. On such occasions they fear neither fatigue nor punishment. Parties of them sometimes meet in the middle of the night, when they

dance beneath the shelter of a rock, to the mournful sound of a gourd filled with peas.

The discontented Negroes generally fly for refuge into the woods, where they are pursued by detachments of soldiers: when they are taken, they are punished with great severity; and the third offence of this kind is followed by death.

Religion is, indeed, sometimes employed to alleviate the evils of their situation. Some of them are occasionally baptised: they are then told that they are become the brethren of the white people, and that they will go into paradise; but it is not an easy matter to persuade them, that the Europeans will ever prove their guides to heaven.

It is not for us to discuss, in this place, the subject of slavery, on which very able writers have differed, and with which volumes have been filled. That discipline, and sometimes a severe one, may be necessary in the management of plantations, cannot be denied, and that the owners sometimes exercise their power with unnecessary rigour, must also be acknowledged; at the same time it would be ridiculous to assert that, because a white man is the master of a plantation, he must be cruel, and because a black man is a slave, he must be wretched. We shall conclude this subject with some remarks of the late Admiral Kempenfelt, made by him in the year 1758.

"The slaves of Madagascar are the most inclined to desert from their masters. Many of them, incited by the love of liberty, have retired into the most inaccessible woods and mountains, and, forming themselves into bodies, attack the plantations in which they have been slaves. The mischief they occasion is sometimes very destructive, both to the plantations, as well as to those who inhabit them. When they are impelled by hunger, neither domestic or wild animal, not even the monkeys escape them. They also make a kind of short spear or javelin, which they throw to a considerable distance, and with great dexterity. Many, on their desertion, have put out to sea in canoes which they have stolen, and have trusted to the mercy of the waves, in order to regain their native island of Madagascar; and it is known that some of them, by the force of the currents, and the favour of the winds, which generally blow that way, have arrived there, having been recognized by French people who had seen them at Mauritius.

"Many of the black Maroons have been taken and destroyed by the detachments of troops that are sent after them; they are still, however, numerous, and from the

ferocity of their character, the subject of continual alarm to the planters who live in the vicinity of the forests which they inhabit. When they are taken, they are punished with the greatest severity; but what appears perhaps to be a ^{cruel} cruel treatment, is the effect of dire necessity, as the French are naturally humane; and if very severe examples were not made, they would not live in safety. It is indeed well known, that many inconveniences have resulted from the indulgence of the planters, particularly in granting liberty to the favourite slaves; so that it has been absolutely necessary to abridge that power, and to limit freedom to those alone who have saved the life of their master."

The Theory of the Island, and its Caverns.

On a first inspection of the surface of the Isle of France, there is every reason to imagine, that it has undergone some violent shock; and that all the stones which are found on it have been thrown out of a volcano; or that they have proceeded from some general explosion in the island, which has occasioned the disorder wherein they now appear. Such is the general opinion in the island; but it is not from an inspection of the exterior soil alone, that a right judgment can be formed of the early state of the Isle of France.

When the causeys were made which serve to pass the ravines at the entrance of *Moka* and the *Plains of Willems*, a rampart was thrown up to the right and left, in the adjoining highlands, from twelve to fifteen feet in height, and the earth that was taken from them served to form the upper part of the causeys. On digging to raise these ramparts a reddish earth presented itself, intermixed with blocks of stones of different sizes, but almost all of them round. These stones are not solid, and are very brittle; and their grain is the same as that of the hard stones which are found in other parts of the island: they are enveloped in a kind of hard crust, of the same colour as the ground from which they were extracted. Every part of the island contains these stones in great abundance; some of them are of an enormous size. When the surface of the lands have been cleared, fresh ones always appear after a succession of rains; particularly in those parts where the land descends, as on the *Plains of Willems*.

These stones are formed in the ground, and harden there as in a quarry: they cannot be broken or worked but by gunpowder and the hammer; they are withal

very porous, and covered with small holes of little depth, whose cavities are filled with a kind of crystalization.

The source of the Rampart river is in a mountain which cannot be less than twelve hundred feet in height. The woods, which are beautiful towards the bottom of it, diminish in its ascent, and at the top dwindle into young trees and shrub-wood. There is the fountain-head of the river, which falls a few feet in the form of a cascade, into a small bason. The water issues from the ledge of an horizontal rock which rests on a thick bank of earth of a greyish-white colour, and of a consistence to be cut with a knife, but does not harden in the air. It is covered with an infinite number of small black spots, which have the appearance of coal, but are, more probably, particles of ferruginous matter.

In a valley at the foot of the same mountain there is very excellent stone for building, which appears to be of the same nature, or at least to have the same grain as the earth that is at the top: it is pierced also with holes, and is full of the black particles; from whence it may be concluded, that these stones are formed in the bosom of this mountain, that the substance was originally as soft as that of the earth, and that the rains and torrents having worn away one part of the mountain, these rocks have been carried down into the valley.

At the foot of the mountains of Villebague, on the road which leads to a deep bottom called Nicoliere, stones of the same kind are seen in the channels formed by the rain; they are in an half-hardened state, and have been uncovered by the impetuosity of the torrents. These stones, which are of about two or three pounds weight, are easily broken; and the more so, as by being exposed to the air, they are already cracked; they are covered, as well within as without, with spots of different dimensions, for the most part of a bluish cast; which are, without doubt, particles of iron ore.

The same cause which has formed and hardened all these rocks in the earth, has formed and hardened those which are so numerous in all the rivers of the island. These rocks, that continually interrupt the course of the rivers, appear as if they had been artificially heaped upon one another.

This effect is remarkable in an hundred parts of the island, but principally in the river of Pamplemousses on quitting Villebague, which is a plain, considerably elevated above the district of Pamplemousses. This river is very much inclosed, and continues to be so for the distance of a quarter of a league, while the ground sinks in

that length from two hundred and fifty to three hundred feet, which forms a considerable declivity. In this extent of a quarter of a league, the bed is from sixty to eighty feet beneath the surface of its banks; and, like the other rivers, is full of rocks which have fallen to the bottom of the precipice. The river is no more than ten feet broad beneath these frightful ramparts, which afford an intermediate space of three hundred feet at their summits. On each side, on these precipices, there are rocks, many of which are half bare, while others appear to have so slight an hold, as to awaken the expectation that the next moment will precipitate them to the bottom. During three parts of the year these rivers may be crossed by stepping from rock to rock.

Besides the rocks or stones which are formed in the bosom of the earth, large banks or ranges of them are very frequent, whose clefts are filled with a crust of earth which is very hard, and generally ferruginous; a sufficient proof that the form of the island has not been effected by any violent concussion of the earth. These banks are of a different thickness from eight to ten feet, and seldom more. It is a range of this kind which interrupts the river between the Reduit and the plains of Willems. The stream flows over it, and then precipitates itself in a fall of more than sixty feet, forming a magnificent cascade. The river of the plains of Willems, as well as that of Moka, have similar falls. Immediately after these three cascades, which are almost upon the same line, and all of them within the space of half a league, the three rivers unite to form one stream, which is called the Great river.

The banks of stones exactly correspond to each other on both sides of the river; they are from eight to ten feet thick, and have no other inclination than that of the ground which supports them. In these ravines may be distinguished three or four banks of the same kind, one above the other, and separated from each other by beds of earth of an equal thickness, which contain other rocks, like those which have been already mentioned, that cover the surface of the island.

There is likewise a very remarkable example of these beds of horizontal rocks, in the plain that leads from the port to the Royal battery. This plain is covered with stones from the foot of the mountain of the Decouverte. Here also is obtained the stone which is used in building.

In the same plain, on the road from the port to Moka, facing the right side of the first river, and on the top of the declivity, at some hundred paces from the brink, there is an horizontal bed of large rocks, about one hundred fathom long,

and composed of two ranks of enormous rocks, placed on each other, which resemble the artificial foundation of some vast edifice. They are likewise split in a perpendicular manner, and the clefts seem to have been filled with some kind of cement. This range had certainly been covered with earth, like those which are found in the neighbouring plain, between the port and the Great river: but, from its elevated position, the torrents have, by degrees, carried away the ground that covered it into the neighbouring ravine.

About half way between the plantation, in which the forges are established, and the Bay of Turtles on the shore, at about a league from the sea, is a frightful solitude. It consists of a large open country, whose surface is parched, barren, and rocky, with horizontal banks of stone which are level with the earth in some places, and in others only present their points, &c. Numerous spots of this kind seem to militate against the opinion, that the island is nothing more than various beds of matter, heaped upon one another.

Over the Rampart river, on the road leading to Flacq, about three leagues from Port Louis, is a bridge which was constructed in 1770, and certainly does not announce the progress that has been made in the construction of bridges and causeys within the last fifty years: but the object which more particularly engages our attention in this place, is a ledge of rocks beginning at this bridge, and stretching along the sands in the road of Flacq. At the bridge the river takes a bold meander, which forms a kind of peninsula or isthmus. To the right, in going to Flacq, the bank is interrupted and divided by the course of the river, which is not more than from twenty-five to thirty feet wide at the bridge; so that it has the appearance of having been cut away to give a free current to the water. It is the more remarkable, as this bank, which is ferruginous, is of the greatest hardness: the two beds of stone, also, exactly correspond with each side of the river. This bank is formed of beds from one to two feet in thickness; it rests upon the ground, and is a little inclined towards the water, which proves that it has given way on that side. In some parts the ground beneath has been carried away, and has formed what appears to be the hollow entrances of a cavern. A little farther onward are to be seen some portions of the same bank, which, having been broken off above, have probably fallen into the river. Continuing the road to Flacq, at sixty or eighty fathom from the bridge, this bank is like the upper part of a large vault, from thirty to forty fathom broad: it stretches out very far to the right and left, and

loses itself in the woods. It cannot be doubted that this vault, for it is certainly made by the hand of nature, rests on a bed of earth, and that this bed in the course of time being carried away by the water, a cavern will remain in its place: perhaps the cavern already exists. In fact, at the mouth of this same river at the distance of two or three leagues, there are several caverns of great depth. A great part of the road which leads from the river of the rampart to Flacq, is formed on beds of rocks: in some places it appears to be hollow, and resounds beneath the horses' feet.

A part of the plantations in the highlands of Flacq, are absolutely horrible, from the quantity of rocks which they contain. There are also plots which consists only of one single rock, some parts of which are rather more elevated than the others, and have the appearance of flag-stones. The low plantations, which are nearest to the sea shore, have fewer rocks, and a better soil, which is maintained at the expence of the highlands, whose earth is carried off by the waters, and spread on the lower grounds.

So many facts and circumstances, and many others of the same kind, which are visible to every eye, seem to contradict the opinion of volcanoes in the island, and an universal change in the state of it.

Observations on the Isle of France, by M. le Gentil.

M. le Gentil also delivers the following opinion. "They say in the country, that volcanoes have pervaded every part of it. If however, there have been any volcanoes in the Isle of France, the part which I saw had been preserved from them; for what must have been the force and explosion that could have shattered it as a mine would have done, and have lifted up enormous rocks from its bowels, to scatter them about upon its surface; while this same force should have suffered them to remain in their horizontal positions, an hundred feet deep or upwards, in the ravines, as well as in many other parts?"

Volcanoes never fail to leave traces of their ravaging power; such as calcined and melted stones, pumice stones, lavas, cinders, &c.; but none of them are to be seen in the Isle of France. The mountains are in general indented with points like the comb of a cock. Those which are flat on the summits, present the appearance of a pavement, and no signs of a funnel are to be seen in any part. These mountains have been covered with earth and trees; but at present their summits are almost entirely naked. The same change has taken place with respect to them, which is

now operating on the mountain of Moka; and every year the ravaging progress of the hurricanes and rains, in despoiling it of its ground and trees, is visible. During the heavy rains, these naked places are lost in waterfalls of a transient nature, which form agreeable objects. It is thus that the mountains called *Trois Mamelles*, *Pieterbot*, &c. have been deprived of their earthy covering. It may indeed be said, that pumice stones have been found in the Isle of France; but this circumstance may be easily explained. The only spot where they are to be seen, is on the windward side of the island, towards the isles of Amber, which have isles of coral, and are consequently open. It may therefore be reasonably supposed that these pumice stones come from the volcano in the Isle of Bourbon, and are driven to the isles of Amber by the winds and currents; in the same manner as in India, those extraordinary cocoa nuts have been brought, whose origin has not been known more than fourteen years.

As a last resource, the partizans of volcanoes throw themselves into the caverns, which they insist have been the mouths of the volcanoes, that have produced the present appearance of the island; but, on visiting them, they seem to be nothing more than quarries of stone, originally resting upon earth, which has abandoned them. They now sustain themselves like vaults formed by human labour; and the proof is, that all these quarries are situated on gentle declivities. Some of them are to be seen on the plains of *Willems*, &c.

The most difficult circumstance to explain in these quarries are the parapets that crown them, which are of equal breadth and height; particularly on the cavern of *Piton de la Decouverte*, in the plantation of the late *M. Le Juge*, first in rank in the supreme council. Immediately before the entrance of it, there is a kind of cylindrical opening, about twenty paces diameter, and worked in the rock like the coating of a well. This hole may be twelve feet in depth, and its stones are whole and entire, a proof that they have not suffered the operation of fire: the descent into this hole is by an easy declivity, which consists of a rude mass of rocks and earth, and immediately faces the entrance of the cavern, from whence the same declivity passes under a kind of arcade, and descends eight or ten feet. A large cave succeeds, from seventy to eighty paces wide, and from twelve to fifteen feet in height. It presents a fine vault formed with free stones of an enormous size, through which the water filters in every part: the ground, that is of black hue, is consequently soft; and the drops of water, which mark the place where they fall by a

small hole, lose themselves in the earth. Though the ground possesses sufficient consistency to bear a man, a stick of five feet long may every where be plunged into it with the greatest facility. There is a small hole at the extremity, through which it would be impossible to pass without the assistance of the creeping plants and shrub-wood which grow about it: by clinging to them, a person may draw himself through it. Through the greater part of this cavern there is, on both sides of it, a parapet wall, that rather inclines from its perpendicular, and is from three to four feet in height. This cavern must have been formed by a sinking of the ground, and probably has been deeper than it is at present, as the rains which enter it, always bring something with them.

These parapets are the more remarkable in the caverns, as the mountains themselves appear also to possess them. On examining the bottom of the river Lataniers, near the plantation of the priests, which is among the mountains, it is perceptible that these steps, or parapets, rise from the bottom of the river up the mountains, and extend along the chain of them. The Long mountain, that lies to the left, has them also. They are likewise apparent in the mountains that form the bay called Ance Courtois, which is traversed to go to the quarter of Moka. These small banks have a slight inclination; and all these mountains resemble, in their united shape, the foot of a goose, as they surround Port Louis. The highest of these mountains, according to the measurement of the Abbé de la Caille, is upwards of two thousand four hundred feet above the level of the sea. They are blocks of very hard stone, whose substance appears somewhat different from that of the rocks of quartz, which have been already mentioned as being formed in the earth. A piece of the stone, taken from this mountain, being thrown into the furnace of a workshop established on the spot, and withdrawn in an almost liquified state, produced a grain of lead, about the size of a large pin's head. In every other respect this mountain appeared, like all the others, a kind of *schisteuse* stone,* in horizontal, vertical, and shelving beds, in whose interior parts are found small crystals. This rock is very hard, and its parts equally tenacious. The undermining it with gunpowder had very little effect, as it probably found a vent through clefts in the beds, which though apparently well united, are not without many imperceptible, as well as visible openings, which offer a sufficient passage for the air. Aqua fortis being poured on a piece of this stone, caused an effervescence in several parts.

* (Hist. Nat. Mineralog.) Schistus, saxum sissile, lapis sissilis: a kind of slate.

This rocky mountain is in the first place covered with a thin crust, which is easily removed; but the most singular circumstance of it is, that the upper part is covered with a bed of vegetable earth, from two feet and an half to three feet thick, which likewise encloses round stones, similar to those already mentioned as covering the face of the island. This bed of earth appears to form a rich soil, which affords a plentiful nourishment to the beautiful trees that spring from it.

The top of the mountain of Pouce forms a level, which is steep on every side, and is not less than a league and an half in circumference. This piece of ground has a very gentle declivity on the side of the Ance Courtois, and then rises insensibly to the foot of the Pouce, which possesses a much higher elevation, and is an entire rock. This level spot is covered with very fine wood, as has already been noticed. A road has been begun on this mountain, to shorten the road from the port to the quarter of Moka, which is directly behind it.

On this flat there are three small and very shallow rivers, which, running over the bare rock, fall into the Ance Courtois. Very little labour on the side of the port, would render this spot an impregnable situation, which might be defended by stones only.—M. de la Bourdonnais, the founder of the Isle of France, had projected to form it into a redoubt, or secure place of retreat. The small rivulets which water it would be an invaluable resource, as an enemy could not turn their course; and if the streams should not be sufficiently abundant, réservoirs might be contrived to remedy the deficiency. Great care also should be taken of the woods, which protect these rivulets from the heat of the sun, and prevent them, probably, from being frequently dried up, as they appear to be supplied by the rains and moisture of the situations. Besides, if the woods were to be cleared away, there would be danger of losing the soil, which, no longer connected and kept together by the roots, &c. would slide off into the Ance Courtois.

The way from the interior part of the harbour to this spot, is through fragments of the mountain, confusedly intermingled with large pieces of rock, and across hillocks which are formed by them.

The soil of the Field of Mars, and at the extremity of the harbour, is composed of a bed of rich clay mixed with flints; beneath which, it is probable, there are the same kind of rocks as are seen in the town, and at the entrance of the plain.

Two small rivers which traverse this plain, skirting the mountain of La Decouverte, discover that the earth in this part has no solidity, being composed only of

flakes of flint, and a kind of clay, but in a small quantity. In the vast plain of the Field of Mars there is a course of clay, almost on the surface, and mixed with gravel. After having passed the Little mountain, on a level with the Field of Mars, it appears again. In some places it is without any mixture; and stakes of eight or ten feet in length may be easily thrust into it, without meeting any resistance. It is what some call quaking earth.

It continues to be mixed with gravel as far as the river of Lataniers, and even beyond a small brook, when the ground rises. It may also be perceived, after having turned the Long mountain, to the foot of Pieterbot. Lastly, it may be traced in the way to the Great river in the Ance Courtois. It is again perceived on approaching the bottom of the mountains; from whence it may be inferred, that the mountains at the extremity of the harbour, those of La Decouverte, the Little mountain, the Long mountain, and even Pieterbot, rest on a bed of clay.

In the district of Moka, clay is again found at the foot of the mountain of the same name. In the environs of this place is the first cascade, which has been already mentioned; and as the two other cascades are on the same line, and on the same level, it is probable that it is the same bank of clay which these three rivers have met with, and which they have carried along with them and destroyed, in these places, by the violence and force of their torrents.

All these facts clearly demonstrate that the Isle of France, as it exists at this day, is not the immediate effect of a volcano.

In the Isle Bourbon there is a volcano, which, however, occupies only a very small part of it; but, notwithstanding this volcano, it must be acknowledged, that from the quarter of St. Denis to the point of St. Gilles, there appears the same kind of conformation as in the Isle of France. The quarter of St. Denis, which is flat and level, presents a very singular arrangement, which must be long posterior to the first effects of the volcano upon this island, if it should ever have undergone any change from them.

This curious arrangement is perceptible at the river St. Denis, whose banks are steep, and which has not less than from fifty to sixty feet depth above the site of the town. Its banks consist of beds of rocks horizontally placed on each other, and are covered with a dry, sandy earth, which produces a kind of coarse grass.

The sea shore is lined with large pebbles, which the waves carry off and throw back again with great force, accompanied by a stunning noise. It is also

remarkable, that under this horizontal bed of rocks, and on a level with the river, is another bed of pebbles, like those which are seen on the sea coast, and at the bottom of the river. On examining the foot of the mountains of St. Paul, in the way to the point of St. Gilles, which is more than half a league, all the rocky shelves rest on a bed of flints or small round stones, which, with a small mixture of sand, form a solid body. The sand of St. Paul is nothing more than the dust of the round stones and pebbles with which this part of the island abounds; but the most remarkable circumstance is, that all this side is perpendicularly cut, and very elevated in certain places; and that the section exposes the different beds of stones, all of which are inclined to the horizon. The point St. Gilles is a kind of cape; and here it evidently appears, that the beds of stone are not horizontal; but, on tracing them for a considerable length, they seem to have the same inclination as the slope of the mountain, which cannot be less than nine or ten degrees. The same inclination is perceptible in the road from St. Denis to St. Paul. This road crosses the mountains, which may be from four to five hundred fathom in height. They all of them stretch from the middle of the island in various branches, which are visibly the effects of torrents. Three of these branches are very steep, and the vallies between them are on a level with the sea. It appears, in the course of this journey, that the beds of stones are not horizontal, but inclined towards the sea; and this inclination is nearly the same as that of the mountain.

According to M. de la Nux, in all the ravines or hollows, called rivers, the shelves of rock possessed a certain degree of inclination. In short, it is a singular circumstance, that the inclination of these rocky beds being given at the point of St. Gilles, from nine to ten degrees, and the distance of this point to the middle of the island, being likewise given, the height of the island is rather correctly ascertained, according to the measurement of M. de la Nux. It may surely be allowed as a reasonable conjecture, that some subterraneous fire, or some other powerful cause, may have forced from the bottom of the sea the block of stones called the Isle of Bourbon.

The Isle of France, and the Isle of Bourbon, seem to have originated from the same cause, as they do not bear the least resemblance to Madagascar. That island may be supposed originally to have formed a part of Africa; but the Isles of France and Bourbon do not appear to have belonged to any continent. The districts of St. Denis and St. Paul, which are two plains that extend to the foot of the mountains, may have been formed, since this epocha, of the broken parts of the highlands,

and the pebbles which the sea may have thrown up. The soil of St. Paul seems to be thus composed, of pebbles and of sand. This kind of dyke has so little solidity, that the sea broke in upon it, in several places, in the hurricane of 1746, and threatened to swallow up the whole of that quarter of the island. At certain times, when the sea runs very high, and the bar swells, it beats upon the shore with such tremendous violence, that each time the surge dashes on it, and particularly near the point of St. Gilles, the ground receives a shock, which is very perceptible to any one who may be standing on it. These convulsive motions of the bar at St. Paul, even in the finest weather, cannot be attributed to any known cause; but it is not improbable that subterraneous fires may promote them. On the recession of the waves from the shore, a person standing there, feels the effect of a sudden and warm vapour passing over his face.

The hospital of Port Louis is situated on a bank of coral, where there are, also, the foundations of a citadel, designed by M. de la Bourdonnais. This bank surrounds the island, at the distance of about a quarter of a league from the shore, except off the steep parts of it, where the rocks prevail.

At the hospital, this bank is upwards of ten feet above the level of the sea, and it appears to be every where of the same height to windward, as well as to leeward of the island, viz. from the Little river to la Flacq, which is nearly a third part of its circumference.

In the plain of Port Louis, called the Camp, at less than a quarter of a league from the bank of the hospital, there are several wells, from forty to fifty feet in depth. In digging them, nothing was found but a bed of flints, and a kind of clay which contained talc and lenticular stones, in a great measure resembling those which are found in the quarries of Montmartre. These wells, which sink nearly to the level of the sea, did not produce any coral, nor is any found in the elevated parts of the island; nor have shells been discovered there, which are so abundant around the foot of the island. All its surface and ravines consist of earth, or a vitrifiable sand; and the mountains are masses of rocks, covered with a thin bed of earth, equally vitrifiable. Thus, there is no appearance whatever that the sea has covered the Isle of France, since it would have left some evidences of such a circumstance, and none are to be found. The bank of coral, which has already been mentioned, being formed by the sea, it is evident that these shores are full of *Polipiers* (*poliprus*).

There are two kinds of these banks of coral; the first consists of rays or vermicular tubes, so fine and compact, that they form a body as hard as stone: it is the immediate work of the polypiers. The second does not appear to be the immediate work of these animals, as the parts that compose it are irregularly connected, like the grès (*lapis arenaceus*), which they resemble in their arrangement; but, being calcinable, are of a very different nature. These coral stones appear to be composed of nothing more than very fine calcinable sand and broken shells. They are, without doubt, formed by the waves of the sea, which, by beating upon the corals and madrepore which it nourishes, reduces them to a very fine sand, whose particles it then drives on shore; and having cemented them by means of a certain juice which it mixes with them, a very hard stone is formed, that is employed in building. The second kind is composed of the first, but it affords a larger portion of lime from an equal quantity. The bank of the hospital is almost entirely of the first kind: this bank is about eighty fathom wide, and one hundred and forty in length; it stretches out between a small arm of the sea to the right, and the port to the left, and is about ten feet higher than the sea. The ascent to it, from the port, is by an easy slope. Here the forges of the port have been erected. This kind of cape is composed of large rocks of quartz, from four to five feet high, which rest on a bottom of reddish sand. This sand, or earth, which is of the same nature as that of the island, when put in aqua fortis, does not produce any ebullition. The bank of coral, which is about four or five feet thick, rests immediately upon one of rock. The same circumstance is visible at the powder mill, near the hospital.

The Isle of Tonneliers is, also, nothing more than a bank of coral and shells, about half a league in length, and half a quarter of a league wide. There are at Flacq two large plains of this kind, which stretch out to the right and left of the port of that name, if it may be allowed that title. These plains are partly covered over with a short grass: there are others, also, near the Great bay, and the Little river. It is proper to observe, that these plains are generally overflowed by the hurricanes, and several of these banks are perpendicularly cleft. The same circumstance is also observable between Port Louis and the Great river.

Besides these plains or banks of coral, which the sea seems to have formed and abandoned, the island is almost entirely surrounded with reefs, which generally extend half a league in the sea. At high water they are covered; but when it is low, there is not more than a foot and half of water over the whole space which

they occupy; and then a passage is practicable over many parts of them. Nothing can be more agreeable than the parties of pleasure among them, when the sea is tranquil, and the weather is fine; as they represent a forest of coral of all colours, whose stems appear above the water. At the same time the polypi are seen to come from their cells in the form of plumes, and various fish of the most beautiful colours also present themselves to the view: the bottom is likewise decorated with oursins* of different kinds and hues; though they are found in still greater numbers in the recesses of the coral.

After gales of wind and hurricanes, the shores are strewed with the remains of the *madreporæ*,† filled with these oursins, and an infinity of fragments of other kinds; and the sea rises in such a manner, and so suddenly, on the edge of these reefs, that vessels may range along them to get into port.

The reefs are nothing more than coral, or *madreporæ*, worked in the sea by the polypi, and form a considerable steep or perpendicular bank, which is continually augmenting, either by the labour of those animals, or the power of the sea, which, in its boisterous state, covers it with fragments of the same substance, which it has broken off from their beds, or forced up from its own depths. The particular spots which the billows have reached during the hurricanes, are evident from the beds of fragments which the sea has left on withdrawing itself to its natural limits. Indeed, there is every reason to conclude, that hereafter a dry passage will be obtained to the very brink of the reefs of the Isle of France; as the foot of the island will be prolonged in such a manner, that the space now under water will become plains, like those which have been already described.

The Isles of Amber, to the windward of the Isle of France, are also a considerable mass of coral, which the sea formerly cast up, and afterwards abandoned, as in the Isle of Tonneliers. There is no doubt but these islands and plains of coral rests on a base of vitrifiable sand and rock of quartz, which may be supposed to be a prolongation of the Isle of France; and that, from the inclination of its beds, it has proceeded, as well as the Isle of Bourbon, from the bottom of the sea.

Luminous Globes, &c.

Luminous globes are occasionally seen at Port Louis; which, being surrounded by very high mountains, that check the course of the winds, are consequently

* *Echini marinus*.

† *Coralla stellata*.

calculated to promote these aerial fires. M. Gentil saw one of this kind, the 1st of December, 1760, at the height of about eighteen degrees from the extremity of the port. It was full twenty minutes in diameter, and divided instantly into two small pyramids, or flames of fire, which remained nearly at the same height, while a small detached portion of it descended some degrees lower. The whole passed off without explosion, and lasted at most five or six seconds, with a very luminous effect during its passage.

On the 11th of June, 1762, at three quarters of an hour after sunset, another of these fiery meteors was seen in the environs of the zenith, which was larger in appearance than the sun or moon, and surrounded with flaming hair. It passed on with considerable rapidity to the south east, and was extinguished without any explosion, behind the top of the mountains, dragging after it a tail like that of a sky rocket. It was about thirty seconds in its passage.

The following Letter was addressed by M. Fortin, to Mr. Abraham, at the Isle of France.

"You must have perceived the meteor that appeared yesterday evening, and I send you the result of my observations.

"I was sitting before my house, when two flashes of lightning, immediately succeeding each other, and of a fiery red, struck my eyes so forcibly, that I imagined some part of my buildings had taken fire. I arose immediately, and not seeing any appearance about me that justified my alarm, I turned my eyes towards the sky, when I perceived two small clouds of smoke, like those produced by bombs when they burst in the air. I hastened instantly to my pendulum, when I observed that it was six o'clock, nine minutes, and about fifteen seconds. I then returned as hastily to examine these small clouds. Some time after, two claps rapidly succeeded each other, like two very loud reports of a cannon, which notwithstanding appeared to proceed from a great distance; they re-echoed afterwards in the air for a moment. I ran instantly to the clock, and found it to be six o'clock, thirteen minutes, and about four seconds. So that allowing for the time in going to and returning from the clock, the total duration of this phenomenon was three minutes and forty-five seconds, which appear to give a great distance."

The following Account of the Isles of France and Bourbon, has been given by M. le Gentil.

“ There are, properly speaking, no diseases in the Isle of France; that is to say, in the plantations; for at the north-west port, the scurvy sometimes makes its appearance. The south-east one, on the contrary, is very wholesome, and persons afflicted with scorbutic complaints are sent there in order to be cured. The inhabitants however prefer the smaller and less healthy, to the other, which is among the finest harbours in the world.

“ The Isle of France may, therefore, be considered as a very happy climate; and the Isle of Bourbon seems to be still superior for the salubrity and softness of the air: nor have I ever known a place in which affability, social cheerfulness, or hospitality, were more prevalent than in the Island of Bourbon.

“ The lands in the Isle of France bear a larger proportion of annual produce than those of France; they do not however lay fallow, nor are they manured. They appear very dry, poor, and arid; and the vegetables draw all the nourishment from the water and the air. In fact, with a certain quantity of water and proportion of heat, the most sandy soil will become productive; which is proved by those small rocky islands scattered through the seas of the torrid zone, and covered with woods of the brightest verdure. The land of the Isle of France is of a dark red, and mixed with ferruginous matter. The sand of the ravines and rivers is the sand of a mine; that of the sea-shore is calcareous; and in the year 1770, the Governor, who had been persuaded by a private person then inhabiting the island, that he would produce crystal glasses equal to those of France, some advances were made towards such a manufacture. The object of such a branch of commerce would be to supply the Indies.

“ The manioc flourishes in the Isle of France, and the finest grow at Pamplemousses, and the Long mountain: it remains eighteen months in the ground before it is fit for use, and then it is as thick as a man's leg.

“ The maize is very successful: it requires a considerable quantity of water and heat, so that the season of the north-east wind agrees with it the best. The district of Flacq, which is a quarry of rocks, produces the finest. Such a soil is not favourable to corn; the inhabitants, therefore, clear away the smallest stones, and plant maize in the places which they occupied, where it is found to luxuriate, and grow

to the height of from eight to ten feet. Though it generally requires a large portion of moisture, any great quantity of rain is not necessary to it in this quarter, as the dews are very abundant; and rocks, which keep the earth from becoming dry, preserve the soil in the requisite state of humidity, so that the crops never fail; and unpromising as the soil is, the inhabitants look for two, and sometimes three harvests in the course of the year:—such is their wealth and their commerce. A certain portion of it they pour into public magazines; with the rest they nourish their slaves, barter for corn, and feed their hogs and poultry, with which they traffic. They have every convenience that is to be derived from water, as Flacq is a kind of archipelago, on account of the various branches of water that intersect it. This quarter also possesses, in the low grounds towards the sea, some parcels of ground which is proper for the cultivation of rice; and M. le Gentil adds, that, in his time, “it was that part of the island which supplied the Company’s magazine with such a necessary article.” The plantations which are more exposed, and have none of these rocks, do not succeed so well in the growth of maize.

“In the Isle of Bourbon the crops are very generally abundant, and its corn approaches in quality that of France, though its situation is between the tropics; but its soil possesses a great degree of elevation.

“I saw,” continues M. le Gentil, “on my return from Pondicherry, in the year 1770, in the Isle of France, under the cultivation of the Curate of Pamplemousses, a small corn field, which wore a very fine appearance, was of an equal height of about three feet, and, according to the declaration of the ecclesiastic, had, in a former year, yielded fifteen fold.

“At Flacq, the corn generally produces twenty fold, and sometimes thirty in fresh ground; but no more than ten in that which has been in a long and successive state of tillage. But to ensure such a produce, there must be a concurrence of favourable circumstances; the rats and the birds must be checked in their devastation; the rain must fall in that degree of moderation as not to beat down the crop; and it must be preserved from the mildew.

“The small quantity of corn which is grown in the Isle of France appears, at first, to be rather extraordinary, as the mode of cultivation is superior to that of Europe. There it is sown, and here it is actually planted, on account of the rocks, which will not allow the use of the plough, and more hands are consequently necessary; but the land is never relieved by a fallow, or sustained by manure.

" M. de la Bourdonnais, whose views in settling the Isle of France were purely commercial, wished to introduce silk-worms and indigo. It is probable that cotton was brought into this island by that distinguished person.

" I have met with people," continues M. le Gentil, " who have pretended that the iron of this island is of no value; but I differ in opinion from them, as I have samples of it which justify my dissent. It cannot indeed be denied that it has a very moderate sale in the Indies, when compared with that which is exported from France; but that proves nothing more than its inferiority to European iron, without confirming the depreciating opinion of it. Besides, the mode of extracting the metal from the earth, and the subsequent process to purify and render it malleable, must, in a great measure, influence its final value. The following experiment, however, will determine the qualities and nature of the iron found in this island.

" The masts of vessels being made in Europe of a light wood, the circles of iron which are applied to strengthen and support them, sink into it. In the Isle of France, the wood which is employed to splice the masts is extremely hard, and not only resists, but, from its elasticity, breaks the circles of European iron. Those made of the iron of the Isle of France, employed in the French vessels during the last war, and worked at the forges of Mr. Herman's, were the only hoops of this kind that resisted, and remained firm. This circumstance appears to be decisive in favour of the iron of this island. It has been said, and many have believed, that the whole of this island is iron. There is certainly some iron there, but not equally abundant; and the forges have been erected where the ore is the least prevalent. It is by washing the earth that the mineral is obtained; and some time since it was brought to the gate of the kiln, on the side of which the *Patouillard* is established, in a fine plain. These works were, for some time, successful from the advantage of a favourable vein, but they have since been abandoned, though the plain has not been completely raked. A small portion of mineral was, however, found in 1770, and that was fetched from more than the distance of half a league from the kiln: besides, the mineral was poor, was found in veins or furrows of little length, and but few feet under ground. I know not," says M. le Gentil, " if the excavation sunk to more than eight feet, after which was a bottom of rock, and a kind of soft, sandy stone, which was good for nothing. The mine at Pamplemousses, if it deserve that title, is not rich, and seems to be furnished with what mineral it contains by the force of the rains, which wash it down from the highlands into the plains.

"It has been said, that one hundred pounds weight of this mineral will give fifteen pounds of wrought iron; but M. le Gentil saw, that nine thousand pounds of mineral gave from fifteen hundred to two thousand two hundred pounds of cast iron. This is about twenty per cent.; but these fifteen hundred, or two thousand two hundred pounds of cast iron, did not give half that quantity of wrought iron; consequently this mine did not produce more than ten pounds of wrought iron for each hundred of mineral.

"At Villebagne the mine appeared to be more abundant; but it is the distance of a league from the forges, in very elevated spots, and intersected by ravines and precipices. In the still more elevated parts, such as the military quarter of *Nouvelle Decouverte*, the mines appeared equally productive; but if Villebagne is excepted, these spots give but little encouragement to establish forges, as there is not sufficient water to answer all their demands: nor is it probable that the proprietors of the forges will ever go two or three leagues from Pamplemousses among frightful mountains, and where there are no roads, to rake up the ground, in order to bring iron to their furnaces; besides, these mines are, as it were, on the surface of the earth. The East India Company had set apart, for these forges, an extent of wood of ten thousand acres, called the Reserves: they then imagined, that, by making regular falls in these lofty woods, they would shoot forth again the following year, and that the young trees being left untouched, would replace the larger ones. But how many generations will pass away before this fine forest is reproduced? as, according to the opinion of M. le Gentil, the woods once cut down, in the Isle of France, do not grow again; so that the forest which is appropriated to maintain the fire at the forges of Mondesir, will soon be transformed into a vast desert. In the year 1770, the people belonging to them were obliged to go a league and an half to fetch charcoal, and every year will proportionably increase that distance: so that the mutual decrease of wood and mineral, will insensibly bring on the decay of this branch of commerce.

"Coffee is a valuable production: it is planted in the Isle of Bourbon at six feet distance. One foot is supposed to give about four pounds; nevertheless a tree is not expected to produce more than a pound of coffee; so that a plantation which possesses fifty thousand feet of coffee, does not yield more than fifty thousand pounds of it; and for every thousand feet a Negro is necessary for its cultivation. The Company has, for a long time, fixed the price of coffee in the Isle of Bourbon, for which it gave eight-pence per pound: so that a planter possessed of fifty thousand

feet of coffee, was secure of the annual profit of twenty thousand livres; which is a very considerable revenue in a country where all the necessities of life are produced in so great abundance, and are so excellent; such as cattle, kids, poultry, vegetables, &c. The articles principally wanted are wine and clothing, and there is plenty of coffee to barter for them; which must consequently be a leading object of commerce.

"The coffee-tree is a native of hot countries, but it does not flourish equally in them all, and from that circumstance proceed its different qualities. The best coffee is from Arabia; that of Martinico and the Isle of Bourbon is the next in estimation; while that of Java and Ceylon is very inferior. Those last places are nevertheless nearer the line; and the heat should be consequently greater there, than in that part of Arabia where the coffee-tree flourishes. Moka being in thirteen degrees and an half of latitude, may possess a degree of heat equal, perhaps, to that of Java and Ceylon; but the heat of Moka does not determine that of Arabia, and no coffee is to be found within fifteen leagues of that place. Betelgaquir, which is twenty-five leagues to the north north-east of Moka, is the market where it is purchased; and Moka, which is situated in the midst of burning sands, that produce nothing but date trees, and are never watered by rain, is the port from whence it is exported to foreign countries. In the mountains of Arabia there are occasional rains; and it is by a judicious management of the water derived from them, as they are not very abundant, that the Arabs invigorate the cultivation of their coffee. They arrange their plantations round the mountains in a spiral form, and place their trees at a small distance from each other, and just below the reservoirs of water, by which they are enabled to water them as occasion may require, by the means of small channels or trenches. At Ceylon and Java the rain is too frequent; for though coffee requires a freshened and moist soil, a too great abundance of rain is fatal to it.

"Although it is very hot at Moka during the summer months, it is rather cool in the winter: it must, consequently, be cold in the mountains where these plantations of coffee are situated; as in this part of Arabia the mountains rise before each other in the form of an amphitheatre.

"The Arabs, to prevent the impoverishment of their land, surround the grain of coffee as soon as it is planted, with a small parapet of stone or pebbles, which protects the foot of the tree. Nor do they mutilate the trees, but let them grow to the height which nature has assigned them, which is from twenty-five to thirty-five feet.

"The natives of this country do not value the coffee that grows in the plains; it is a large berry which is not esteemed in Arabia. In proportion as the country recedes from the sea and rises into heights, the coffee increases in value. It is really cold in the mountains, and there the best coffee is produced. Great heat, therefore, is not the only cause of the superior quality of coffee.

"It freezes even at Senan,* the capital of the states of the Iman, about fifteen degrees of north latitude, where the pools are covered with ice. M. le Gentil cannot ascertain whether there are plantations of coffee in this country, though he has been informed that the coffee tree is found in the gardens of that city, which is situated on a very high mountain. There is, however, a kind of coffee which bears the name of Senan, that is in great estimation, and large quantities of it were formerly purchased by the East India Company.

"Some of the inhabitants of the Isle of Bourbon, residing in the district of St. Paul, had carried their coffee plantations to the utmost possible height; in fact, some of them were in an elevated situation four hundred fathom above the level of the sea. At this height there is neither snow or ice; and the thermometer never sinks lower than within six degrees of the freezing point: the soil, however, was good; nevertheless the proprietors, in the year 1766, destroyed all these plantations, because the trees put forth but few branches, and the knots, which were at too great a distance from each other, yielded but a small quantity of fruit, which was large and spongy, and seldom came to maturity: for even in the lower parts, the harvest, instead of being gathered in the months of July and August, was necessarily deferred to February, so that the proprietors of land found the cultivation of corn to be much more profitable. "This difference may proceed from the nature of the soil, the winds, and particularly from exposition. It has been already observed that the Arabs, in their mode of cultivating the coffee tree, let it attain its natural height, while in the Isles of France and Bourbon, they keep it down in a thicket of no greater height than seven or eight feet. This method is attributed to the circumstances of the climate, and to preserve the trees from hurricanes, which have not so much power over them in their mutilated state. It is also well known that this tree exhausts the ground in which it is planted, so that a coffee plantation

* Or Sanaa, (see the Dictionary of M. de la Martiniere), or Sana, the capital of the Iman in Arabia Felix, 15° 20' latitude, more than 100 leagues from Moka, in the mountains. See a Journey in Arabia, by Niebur. Tom. 1.

scarcely lasts from fifteen to twenty years; and when the trees are become fruitless and perish, it cannot be renewed in the same spot, at least in this island, and fresh ground is required: a circumstance which sufficiently proves, that this tree greatly exhausts the ground in which it is planted. The inhabitants of the Isle of Bourbon, therefore, resolved to plant cotton, which grows in the old as well as in the new plantations.

"The nutmeg has been also brought into this island; but whatever attention may be paid to its cultivation, it will be very inferior in quality to that of the Molucca Islands. This nut requires an arid, spongy soil, composed of cinders, lavas, and volcanoes, with a very hot atmosphere and frequent rains. The Molucca Islands possess these qualities so necessary to the perfection of this tree, which, from a want of them, will not succeed in the Isle of France.

"It was brought there in the year 1770, in consequence of an expedition in which M. Veron was engaged, who died at his return. The nuts, however, which were then principally distributed among the inhabitants, were of the bastard kind, large and oblong, which are the growth of Manilla and the Philippines; and hence it is that the Spaniards boast of possessing the nutmeg in those islands: but this kind is not to be compared with that of the Moluccas, which is small and round, very few of which have been brought to the Isle of France.

"M. le Gentil however mentions, that the inhabitants of the Isle of France spared no labour or expence in the cultivation of this valuable spice, and that a subsequent expedition took place to the Moluccas, for the purpose of procuring more of the best kind. He also adds, that the nutmeg which was shewn at the Academy in the year 1773, as the produce of the Isle of France, was judged by the persons employed to examine it, to be the true commercial nutmeg.

"The cloves which were produced at the Academy, from the Isle of France, were smaller than those of the Moluccas.

"The Mangoustan (*Garcinia*, *Linn.* gen. No. 594) the first of fruits, in the opinion of all those who have tasted it, is a native of the eastern coast of India, from whence young plants were brought to the Isle of France in the years 1754 and 1770, but in so bad a state, that it is not probable this tree will succeed in this colony. The soil in which it grows at Malacca is very rich and strong, as well as swampy, during three parts of the year. It is also very hot there, with heavy falls of rain; so that the mangoustan grows very quick, and in a superior form. On

the contrary, the soil of the Isle of France is light and sandy; nor is it so hot or so much watered as the peninsula of Malacca. This great difference therefore in the soil and climate, sufficiently explains the cause why this tree, notwithstanding the great attention paid to it, has not succeeded in this island.

M. le Gentil appears not to entertain any very confident hopes that the cocoa tree will flourish in the Isle of France. He speaks of it in the following manner.

"When I quitted the Isle of France in 1766, the cocoa tree of Madame Le Juge was already of a promising appearance: on my return in 1770, after an absence of four years, and having seen the cocoa trees at the Philippines, I was not satisfied with that of the Isle of France, nor of the progress it had made during my absence. It was very short, when compared with the trees I had seen at Manilla: it seemed also to have the symptoms of old age, and of a premature decay. It had indeed yielded cones of a fine appearance, but they never became perfectly ripe: it is natural therefore to suppose, that the cocoa tree will not flourish in the Isle of France." Such is the nature of this tree, and that of the Jaca (the *Tijaca marum* of the Hort. Malab.), that they both bear fruit along their thickest branches, and not at the end of them, and sometimes on their trunks, and in their roots. This latter operation of nature is a symptom of their approaching decay. They begin by bearing fruit on the thick branches, then on the trunks, and lastly on the roots. As they advance in age the fructification approaches to the roots, and when the latter become the seat of it, the tree is verging on a state of decay. This circumstance induced M. le Gentil to determine, that the cocoa tree which he saw in the Isle, was advancing to a state of premature old age.

CHAPTER IV.

An Account of the Island of Rodriguez, or Diego Ruys.—Its Situation, according to the Admirals Cornish and Kempenfelt.—Extract from the Voyage of M. le Guat, relative to this Island.—Circumstances of his Arrival there.—The Mode of Life adopted by him and his Companions.—Natural History, Animal, Vegetable, and Marine Productions.—The interesting Departure of M. le Guat, &c. from thence for the Island of Mauritius; their Arrival there; with their Reception, and subsequent Treatment, &c.

THE Island Rodriguez being particularly connected with the Isle of France, the following account, containing a relation of the first remarkable events which happened there, naturally presents itself, as an appropriate link in the chain of our narration.*

This island, according to Admiral Kempenfelt, is situated 19 deg. 13 min. latitude, and the variation of the needle is 10 deg. 13 min. W. It is about twenty-six miles long and twelve broad, possessing a mild climate. The country is mountainous, and in many places full of rocks and large stones, which cover the surface; though there are others in which the soil is excellent, and calculated to produce fruit trees and vegetables of every kind: the garden of the French Governor is full of them: he has also plantations of rice, peas, and tobacco; but the best production of the island is the land turtle, which is in great abundance. Small vessels are continually employed in transporting them by thousands to the Isle of Mauritius, for the service of the hospital. Sea turtles are also very plentiful; the sea cow is often taken, and there is an abundance of fish of various kinds. It is however necessary to observe, that such as are caught beyond the reefs in deep water, are poisonous; while those which are taken in the more shallow parts are excellent; particularly the Pierre bas, the red and grey mullet, and a fish that resembles a whiting, and which the French call *Mort au chien*.

* This island must not be confounded with that of Diego Rayes, which is but one degree north from the equator, and 88 deg. long. east from Ferro; nor with that of Diego Garcia, which is situated between the 7th and 8th deg. south latitude, and 87 long.

Vessels may enter the port with safety, from the end of May to the beginning of December; the other months are subject to very dangerous hurricanes.*

On the northern side of this island there is a bay that affords excellent anchorage, and a secure shelter for ships of all dimensions. There are also ample supplies of wood, and excellent water may be obtained with the greatest facility.†

It is high water at the new and full moon, at three quarters past twelve at noon; N. by E. and S. by W. The spring tide rises from four to five feet perpendicular height, and the common tides seldom more than a foot. There are different points of land which direct a safe steerage into the north-west channel, but that of the north-east has not the same advantages. The principal point of view for the former is, first, the French Governor's house, or rather that of the superintendent, appointed by the Governor of the Isle of France, to direct the cultivation of the gardens there, and to overlook the park of land turtles. Secondly, the park of land turtles, which is on the sea-shore facing the house. And, thirdly, the mountain called the Sugar Loaf, which rises above the Oven valley. In this road there is excellent anchorage in sixteen fathom water; there is also abundance of fish, turtles, and sea cows, with cabbage trees, lemon trees, &c.

The bottom of the road, as well as that of the sides of the vallies, is sand, the same as that which covers the shore. The whole island is covered with mountains, woods, and rocks.

There are two entrances into this bay: that of the north-west is the best, the channel being the largest and deepest. That of the north-east is sufficiently deep, since there is, in every part of it, from five to ten fathom water; but there is not sufficient breadth between the reefs of rocks, which lie from one to four fathom beneath the water. This bay presents to the view one spacious opening; but the centre of it is occupied by a large oblong bank of sand and rocks, of about eighteen hundred fathom in length, and eight hundred broad, which stretches across the opening. This bank, however, is covered with a shallow sea, from one and an half to

* Isle Rodriguez was more subject to hurricanes than the Isle of France.

† This account is given according to a plan of this port taken in 1761, and made by order of Admiral Cornish, who was then cruising near this island, by the late Admiral Kempenfelt; which plan was entrusted to me by the Lords Commissioners of the Admiralty, with the gracious permission to employ it for the illustration of this work. I am under similar obligation to one of the very respectable Directors of the East India Company. (*Note of the Author.*)

ten fathom water, but it would not be safe to pass over it. The north-east passage is between the end of this bank and the Bay *Aux Requins*; it is about nine hundred fathom wide; but there are ten or twelve shelves of rocks in various directions, from one and an half to four fathom beneath the water, which, in fact, narrows the channel on this side to a breadth of an hundred fathom, and cannot be distinguished on the surface of the water, as there are no buoys, nor any guiding points of view on this side of the island. The north-west entrance, which is about a thousand fathom broad, affords a channel, whose breadth is about four hundred and fifty fathom, with from ten to sixteen fathom water; but there being also four shelves of rocks on one side, and three on the other, dispersed through the whole space, from two to four fathom beneath the surface, the superior advantage of this entrance arises from commanding certain points of view, which serve as beacons, and ascertain a secure and certain track for vessels to enter into the bay.

This bay, which is upwards of four thousand fathom in length, and three thousand broad, affords an excellent anchorage, as has been already observed, in from ten to eighteen fathom water. The bottom of the bay consists of a large sandy flat, intermixed with rocks, which is dry at low water; and to the left of it is the small island called the Diamond, which is opposite to a creek of the same name; and another islet, called by the English, Booby island. This flat is surrounded by rocks, which rise from banks of sand. By the side of Diamond island is another bay called Oyster bay, which is the most considerable outlet of this road. To this succeeds the bay of the Oven valley, where the guard-house of the French superintendant is placed. It was entrusted in the year 1740, to a Negro family. The Oven valley, which contains the house and gardens of the French Resident, is a peninsula: to the north of it is the Great bay, on whose shore is the park of turtles: to the west and south-west is the Oven bay; and it is bounded on the east by a river, into which ships enter to take in fresh water; they also take in water from the brooks that cross the neighbouring valley, called Norfolk valley. Still more to the left is another fine valley, called Watson's valley, which is the most convenient place for procuring wood. There is nothing between this valley and the Bay *des Requins*, which completes the enclosure of the Great bay, but two small vallies, called the Dove valley, and the Little valley.

When M. du Quesne, in the year 1690, prevailed on the Dutch government to send a frigate, in order to form an establishment in the Isle of Bourbon in favour

of the refugee protestants of France, some of them gave the following account of that island, where however they did not land, as they unexpectedly found that the French were in possession of it.*

"We very clearly discerned a pleasing variety of woods, rivulets, and plains, covered with the most charming verdure; and if our eyes were delighted with the pleasing prospect, our sense of smelling was not less gratified, as a most grateful odour from the orange and lemon trees, with which the island abounds, was wafted to us, though we were at some distance from the shore; and some of us were as much refreshed by it, as if we had actually landed there."

The account which has been published of this island by M. du Quesne, does not indeed mention this circumstance; while M. Delon has not only confirmed it, but attributes the peculiar privilege of this island, in not being infested with serpents or venomous animals, to the powerful effects of the numerous odoriferous flowers with which it is covered, whose fragrance operates as a poison to them. He even declares that he has himself verified this opinion by actual experiment.

The adventurers from Holland were so much delighted with the first view of the Island of Bourbon, that they were affected with a proportionate disappointment when circumstances compelled them to proceed, without landing there, to the Isle of Rodriguez, where they found indeed more resources than they had any reason to suppose, but which were not unaccompanied with sufferings and misfortunes. One of these adventurers, M. le Guat, has left a relation respecting this island, of which we proceed to give the general circumstances.

Circumstances of their Arrival at Rodriguez.

"On a Saturday morning, being the 25th of April, 1691, we perceived land, which was the little Island of Diego Ruys, or Rodriguez: we approached very near it, by the east point, bearing away to the south. It seemed to be difficult of access, on account of the breakers, that stretch far out into the sea, and with which it is surrounded. At first we perceived neither port or bay, nor any spot which promised a convenient landing. Towards evening we threw out the lead, and found a bottom of rotten rock, at three leagues from the land: here we cast anchor, and remained till Monday the 27th. We employed that and the following day in examining the exterior of the island, in order to discover some accessible spot.

* M. du Quesne had been induced to believe that the French had, at this time, abandoned the Isle of Bourbon.

"On the 28th, about four o'clock P. M. we observed an opening, which had the appearance of answering to our wishes, but night coming on, we stood a little out to sea, and lay to till break of day : about eleven o'clock in the morning, on the 29th, we were becalmed, a circumstance which threatened considerable danger, as a rapid current was evidently carrying us among the rocks, which stretched out more than a league into the sea. In short, we approached so near them as to cause the most serious alarm, when a favourable wind fortunately sprung up, and saved us from approaching shipwreck. We doubled the cape towards the north point, and at noon the boat was hoisted out to go in search of some inlet. In the evening we sailed towards the north-east point, and the long-boat made a signal to inform us that they had found an anchorage. As we were upon rock, in no more than eight fathom water, we were continually obliged to take soundings. At length, however, we anchored in nine fathom, in a sandy bottom, having been towed thither by the long-boat. The following day, being the 30th of April, at an early hour in the morning, we cast anchor in nine fathom, with a similar bottom, and were sheltered from the east and south-east winds, which predominate in this country.

"The island had a very inviting appearance, both at a distance, and on our near approach to it. This little new world seemed to us a seat of delight; though we did not see so many birds as appeared on the shore of the Island Tristan; nor was the air so perfumed with flowers as when we passed the Isle of Bourbon, about a month before. But the aspect of this island was so delightful, that we could scarce satisfy ourselves with gazing at the little mountains of which it is composed, covered as they were with large and beautiful trees. The rivulets, whose course we could discern as they sunk into the vallies, after expanding in various branches over a considerable space of country, which I shall not call either a plain or forest, though either denomination might be applied to it, flowed immediately before us into the sea.

"These scenes brought to our recollection the famous Lignon, and the various enchanting spots which are so agreeably described in the Romance of M. d'Urfé. But other, and more important considerations soon arose in our mind. We admired the secret and extraordinary operations of Providence, which, after having permitted us to be ruined in our country, and to be cruelly driven from it, had at last suffered us to dry up our tears in this earthly paradise to which we had been conducted, and where it depended upon ourselves alone to be rich, free, and happy; by employing our tranquil life in the calm enjoyment of what we possessed, in glorifying the

Author of all good, and advancing our final salvation. We were all of us occupied in such delightful meditations, when the long-boat was hoisted out to take us on shore. As there was a general eagerness to quit the ship, I did not press forward; and the boat being full, I remained behind. In the evening the captain returned, and gave me an account of the wonders which he had seen; but he chose to indulge himself in a strain of exaggeration, which was contradicted by a very early experience. He spoke of animals and fruits which have never been seen in this island; though he brought with him several birds which were fat and well tasted; and I made a very agreeable repast on these new and unknown viands. The next day, May 1, 1691, I joined my companions on shore.

"This island, which is called Diego Rodrigo, or Diego Ruys, or Rodriguez, is situate in the nineteenth degree of south latitude, and about twenty leagues in circumference.

Their Establishment in the Island.

"We established ourselves to the NNW. of the island, in a fine valley, and near a large brook of excellent water: but it was not till we had examined every part, that we preferred the spot, of which I shall now give the description.

"A small river that rises near the middle of the island, and about four or five thousand paces above the scite of our huts, forms, by falling from rock to rock, a succession of cascades, basons, and pieces of water, that would adorn the gardens of a prince. In warm and dry seasons it receives but little water from its source; but, at all times, the tide keeps it full to the spot where the land begins to rise. This side of the river is, in general, less elevated than the other, and is sometimes inundated by the rains that accompany the hurricanes.

"Pierre Thomas, one of our pilots, determined to inhabit a small island formed by the brook. He accordingly built his hut, made his little garden, and threw a couple of bridges over the branches of the stream. During any inundation he used to roost in a tree; and always made his situation pleasant to himself, as well as agreeable to his companions. He sang, played upon the flute, and was the only person among us who smoked tobacco. When his stock was exhausted, he supplied it with the dried leaves of certain trees in the island. The hut nearest to this island was that of M. de la Haye. He was, by profession, a goldsmith, and had constructed a forge, so that he was obliged to make his house somewhat larger than the rest.

"The huts were from ten to fifteen feet square, according to the fancy of the

builders. The trunks of the lataniers formed the walls, and the leaves of the same tree covered the roofs. The huts were at some distance from each other; and a palisade inclosed our gardens. Near the water was the town-house, where our little republic used to assemble to deliberate principally concerning the affairs of the kitchen. This building was twice the size of the others. Here our food was prepared; and under a large tree beside the hut we used to eat it. This tree spread its thick branches over us, and defended us from the heat of the climate. It was in the trunk of this tree that we scooped a niche, as a receptacle for those memorials which I shall particularize in a future page.

"On the other side of the water, exactly opposite to the building which we called the public hotel, was the public garden. It was a spot of fifty or sixty feet square, surrounded by a palisade about six feet high, and formed in such a manner as to prevent the smallest tortoises from passing through it.

"The hut of M. le Guat was situate between two flower gardens, and rested against a large tree, which protected it on the side of the sea. This tree yielded a fruit, which bore some resemblance to an olive, and whose kernel was a favourite food of the parroquets.

"A little lower, and nearer the water, was the abode of M. de la Case.* This brave man, who is at present in America, had been an officer in the troops of Brandebourg, and knew what it was to live in tents.

"On the other side of the rivulet, between the little island and the public garden, M. Testard erected his habitation: his sad fate will soon be related, and the most sincere regret which will ever accompany the remembrance of that amiable and gallant man.

"M. M. B***le and Boyer inhabited the same dwelling, which they had erected at a small distance from the brook, and nearer to the sea. The latter of them died in this island, and his ashes repose there. The epitaph which was inscribed on his distant tomb, declares our opinion of his excellence. The former still lives. When we were at this island he was not more than twenty years of age; but, while he possessed the vivacity natural to his period of life, he had the composure, mildness, and discretion of a more prolonged experience. He had received a good education; and the advantages he had derived from it he was ready to communicate to all around him. It was principally to his inventive genius that we were enabled to

* The names of La Case, and Testard, continue to be well known in the Isles of Madagascar, France, and Bourbon.

construct the vessel, which will be hereafter mentioned, as well as to succeed in the manufacture of hats, which proved so useful to us. I shall also remark, that, excepting Pierre Thomas, and R. Anselin, who were of a low origin, we were, all of us, superior to want, and had not thrown ourselves from despair on a desert island, or from not having a place where to rest the soles of our feet. Many of the party were persons of good family, and some property; but as this colony of M. du Quesne made some noise, and we were young, healthy, active, and without any incumbrances, the spirit of enterprize induced us to make this voyage.

“The trees which were scattered about our little town, were the remains of a much larger number, which we thought proper to clear away. This was no very difficult task, as the soil is very light, and the roots easily separated from it. When we had finished our humble habitations, the captain of the frigate, who had remained fifteen days in the road, bade adieu to us, when he had provided the necessary refreshments. He did not however think proper to leave every thing which had been designed for us: nor did we fail, in our letters to Holland, to give him the character which he deserved; but, as we were afterwards informed, he very discreetly did not deliver them to the persons to whom they were addressed.

“He however left us a quantity of biscuit, with fire-arms and ammunition, tools for agriculture, saws, hatchets, and the necessary implements for building; some household utensils, mills, fishing nets, and linen; besides, each individual had his own baggage and private stores. The medicine chest by some inadvertence, as may be supposed, was not brought on shore.

“Pierre Thomas, who has been already mentioned, had quarrelled with the captain, and being afraid of returning with him, wished to remain in the island; so that he would have repaired the loss of one of our companions who died at sea, near Mascaregnas; but the captain, on the very eve of his departure, came on shore, and took away two of our companions, Jacques Guignies and Pierrot, so that the whole of the little colony consisted of no more than eight persons.

Description of this Island, and of its Natural Productions.

“When the ship was gone, and we were all of us recovered from our fatigues, we made a tour round the island, to discover if it afforded a more eligible spot than that which we had chosen; but though there were several situations equally convenient, there was not one which equalled that which we had selected, in point of beauty; we therefore adhered to our first choice.

"As soon as we had cleared as much ground as was necessary for our principal garden, we sowed our seeds, of which we had great abundance, and of various kinds; but those which were brought from Holland were spoiled by the sea air, as we had omitted to put them in bottles, and seal them close: we had, however, procured others at the Cape of Good Hope. There came up but five plants of the common melons, and no more of the water-melon; three of endive, the same number of wheat, with some artichokes, purslane, radishes, mustard, stocks, and trefoil. The stocks grew to be of a considerable size, but they did not bear flowers, and in a short time they all perished. The radishes were all destroyed by the worms before they were in a state to be eaten; but the melons required a very small degree of cultivation, and produced fruit of an uncommon size and exquisite flavour; and though eaten to excess, did not produce any unpleasant effect. They were in a continual state of production throughout the year; but we found from experience, that those which were planted in the shade, succeeded better than such as were entirely exposed to the sun. Among the five water-melon plants there were two kinds, the red and the white; and they sometimes grew to such a size, that the whole party found one of them too much for one repast. When we mixed a few ashes with the earth in which they were sown, they produced an uncommon quantity, and acquired an higher degree of flavour. The artichokes grew most luxuriantly, but they yielded a very small fruit; indeed we were disposed to suspect that they were of an inferior kind. The endive, purslane, and mustard, exceeded our expectations; but we could not, by any cultivation in our power, deprive them of a bitter taste. Of the three grains of wheat which were sown, we could preserve but one plant. That however put forth more than two hundred stems, and encouraged us to expect a proportionable harvest: but the plant soon degenerated, and at length produced a kind of tares: a circumstance which caused no common disappointment, as it deprived us of the pleasing prospect of obtaining bread.

"It is not however to be concluded, that the change of wheat into tares is a natural consequence in this island, because such a degeneration often happens in Europe; on the contrary, it may rather be supposed to have arisen from the inconsiderate manner in which the seed was sown.

"The air of Rodriguez is very pure and wholesome; and, as a proof of it, not one of us was sick during the two years we remained there, notwithstanding the great difference of climate and mode of nourishment. The worthy man whose remains we left behind us, lost his life in consequence of violent fatigue. The

heats of the summer are very much moderated; as, at eight o'clock in the morning, a light north-east or north-west wind constantly rises, and gives such an agreeable freshness to the air, and such a temperature to the hottest season, that the whole year appears to be one continual spring or autumn; as it is never too cold to forbid the pleasure of bathing. The nights are mild and refreshing. It rains but very seldom; at least we never experienced rain but for a few weeks after the hurricane, in the months of January and February. Within an hour after the rain has fallen, the ground is sufficiently dry to admit of walking. The dews, which are abundant, supply the place of showers; and as for thunder, which is sometimes so tremendous in various parts of Europe, it is never heard in this tranquil abode.

"The island, as it has been already observed, consists of a succession of hills of various and pleasing shapes, which are covered with flourishing trees, whose perpetual verdure offer the most pleasing scenery; and being seldom embarrassed with underwood, form delightful groves; which, while they afford a most refreshing shade, break the views, some of which embrace a large extent of ocean, into pleasing and magnificent prospects. The vallies that serpentine between the hills possess the finest soil in the world: it may be said to be entirely composed of decayed trees and leaves, which, being reduced to a kind of compost, are washed by time down the sides of the hills to enrich the vallies beneath them: this soil being very light, requires little or no culture, and is pregnant with fertility.

"The vallies are shaded with different kinds of palms, the ebony, and various other trees, whose branches and foliage do not yield in beauty to those of the finest trees in Europe. In the bottom of these vallies there are streams of limpid water, which are plentifully supplied from perennial springs in the middle of the island; and had the course of these rivulets been expressly directed by the hand of art to water this little country, they could not have been contrived with better effect. But to their beauty, may be added the utility they afford to the spot, which they at once refresh and adorn. Seven water-falls may be seen at the same time tumbling down from the rocks into as many basons, and uniting to form one delightful stream.

"These waters abound with eels of a very extraordinary size and exquisite taste. Some of them were so large, that one was a heavy burthen for two men. As the streams are not deep, and perfectly transparent, these monstrous fish, which are seen crawling along the bottom, may be easily struck with an harpoon; though there was no occasion to employ any other means to take them than the hook; as the

bait was no sooner thrown into the water than they instantly seized it. They have sometimes indeed been shot, with the ordinary ammunition of the sportsman.

"The vallies, which are fertilised by these beautiful rivulets, insensibly widen as they approach the sea, till they extend sometimes into plains of two thousand yards broad, whose soil, to the depth of eight or ten feet, possesses the most fertile qualities: they are also covered with those delightful groves which have been already mentioned, beneath whose shade, in the noon-tide of the hottest season, the air possesses a most agreeable and enlivening freshness. The trees shoot up their tufted tops to the same height, and interlacing their branches with each other, form a succession of leafy canopies which blend, as it were, into a large platform of never-failing verdure; while the stems, like so many strait and lofty pillars, at once support and nourish it: an unrivalled example of the architecture of nature. At the same time the greatest part of the trees which adorn this little paradise, are not less useful to the service, than gratifying to the senses of man. The different kinds of palm tree, are so many astonishing magazines to supply the necessaries of life: their fruit is excellent; while the juice which flows from their trunks is, without any preparation, a very delicious and salutary beverage. The leaves of some of them are esculent, and of a grateful taste; while others bear a resemblance to linen and silken stuffs. These wonderful trees abound in every part of the island, and it may be expected that some account should be given of them.

Of the different sorts of Trees.

"Palm trees, of which there are more than thirty kinds, have been so frequently described, as to render a minute account of them superfluous: it may be proper, however, to give some general account of those which we found in the Isle of Rodriguez. They are in general about thirty or forty feet in height; their trunk is strait and without leaves, but covered with a kind of sharp scales, which are somewhat raised at the point: others have a smooth bark. At the upper part of the trunk grow the branches of palm leaves, which hang around like so many plumes of feathers: beneath these branches grow long clusters of fruit, which is green, and of the size as well as the shape of an egg: it is known by the name of date. In the centre of this large leafy plumage, and on the summit of the trunk, grows what is called the cabbage: it is not visible; as the branches rise all around and over-top its situation. It is composed of tender leaves, which adhere closely to each

other, and form a mass like that of a cabbage. It is about two feet in height, and of the same thickness as the trunk. The large outward leaves of this mass are white, sweet, supple, and strong: they may be used as goat skins, when skillfully dressed; or linen, or satin, or napkins and towels; such is their various utility. The membranes or leaves of the heart are tender and crisp, like that of a lettuce: it may be eaten raw, and tastes like a nut; and forms an admirable ragout, when dressed with the fat and liver of the land turtle.

"The nectar of this island is the palm wine, so well known throughout the Indies. There were two modes employed to obtain it: we sometimes made an hole, about five inches diameter, in the trunk of the tree, at the height of about six feet, and a vessel being suspended under it, was soon filled with this pleasant liquor: at other times the cabbage was scooped out of the tree; by which operation a cistern was formed on the top, from whence two or three times a day the juice might be drawn. Either way the liquor was equally good; but in order to spare the trees, the first method is the best; as after the reservoir, formed by the removal of the cabbage, has furnished its liquor for about a month, the tree becomes so exhausted as to decline and die. But the incision, if not made too deep, is not attended with any fatal effects: the liquor will not however flow from one aperture more than four days, when the tree must be left to recover its strength: besides, if a very large wound should be made, it may weaken the trunk to such a degree as to disable it from resisting the hurricanes.

"The *Latanier* (*Corypha umbraculifera*, Linn.) is placed by botanists in the class of palm trees. In the Isle of Rodriguez this tree has a strait trunk, formed, as it appears, of a succession of large rings of equal thickness, with a smooth bark. At the top there is cabbage similar to that which has been just described; at the bottom of which several large leaves shoot forth, whose stalks are six or seven feet in length. These leaves are strong and thick, and resemble an open fan; some of them are eight feet in diameter, so that they form an excellent covering for houses: they may also be shaped into hats and umbrellas. The stalk, which is hollow, is four fingers broad, and upwards of an inch thick, and rather round on the sides: the extremity of it, which springs from the tree, and in a great measure embraces it, presents a large and concave shape, which is sometimes more than a foot in diameter, is about the thickness of a crown piece, and was made to serve the purpose of plates and dishes. The exterior rind of this stalk may be employed for ropes, and the fibres

of the interior one will serve as a sewing thread. It appears indeed that it might be woven into linen, if the filaments were properly prepared. The wine drawn from the latanier does not differ, either in the taste or other qualities, from that of the palm tree: but it is necessary to apply it to immediate use; as on the third or fourth day it begins to be sour, and on the seventh or eighth it acquires as sharp an acid as the strongest vinegar, without any change in its colour.

"The dates of the latanier are of a larger size than those of the palm tree; but as there was plenty of better things, such as flesh, fish, fruits, &c. we abandoned the dates to the doves and other birds, of which a future description will be given.

"Around the lower part of the cabbage of the latanier, and between the stalks of its large leaves, there grows a kind of cotton of a light lemon colour, which is known throughout the Indies by the name of Capoe, of which we made excellent matrasses: this cotton may be spun and employed to every purpose of the weaver, &c. We should indeed have endeavoured to manufacture the capoe, as well as the fibres or filaments of the leaves of the lataniers, into some kind of useful fabric, but we were well furnished with linen and cloth; and the air withal was so mild, as to render our clothes in a great measure unnecessary.

"This island also produces several other kinds of wholesome fruit trees: that which bears a species of pepper, is about the size of a plumb tree, and has a leaf like that of the jessamine; the fruit grows in small bunches, and served to heighten our culinary preparations.

"The sea having brought some cocoa nuts to our shore, whose germ began to appear, we planted one of them some months after our arrival, and when we quitted the island it had risen into a tree of four feet in height.

"There is every reason to conjecture that these cocoa nuts, which sometimes weigh five or six pounds, and are thrown upon the coast of this island without suffering the least injury, come from the Isle St. Brandon, which is from sixty to eighty leagues to the north and windward of Rodriguez. The sea never brings any thing but on that side; which justifies the opinion, that we were indebted for these presents to the currents, as well as to the wind and tide. It is very probable, that in the hurricane season, the whirlwind may have blown these fruits from the Isle St. Brandon to a considerable distance in the sea, when they became subject to the course of the waves.

"There is also in the Isle Rodriguez the Indian Fig tree (*Ficus indica*), its

branches extend in a circular form, and are so thick as to be impenetrable to the solar rays. Some of these trees are so large that two or three hundred persons may take shelter under them: this circumstance arises from the peculiar property of the branches, which bend down to the earth, take root there, and form a progeny of stems that, by shooting forth new branches, compose this vast extent of shade: the inhabitants of the East hold this tree in great veneration, and frequently erect their pagodas beneath it.

“According to Boulaye le Gout, this tree is called the sacred Kasta, and is held in such high estimation by the devotees, because their god Kan is said to have diverted himself with playing the flute beneath the umbrage of its wide spreading branches. The same author adds, that the inhabitants do not venture to rob it of a single leaf, from the apprehension that death will inevitably follow within a year of such a violation. He also refers his reader to what Herodotus and Quintus Curtius have written concerning it. Tavernier also mentions, that it is called Lul by the Persians; but that the Franks gave it the name of Banian, because the penitent Faquirs and Banians perform their devotions within its bowers. M. de Rochefort calls it Pareturier, in his natural history of the Antilles. According to his description, the leaves of its young branches are like those of the quince, the upper part being green, and the under part whitish and downy: they are the favourite food of the elephants. Its fruit consists of small figs of the same size as those of Europe, but not so well tasted: they are of a red colour both within and without. The natives of the country where this tree grows make some kind of dress of the bark.

“The Kasta of the Isle of Rodriguez has a leaf the size of an human hand: it is thick, and resembles the shape of an heart, like that of the lilac, and to the touch is soft as satin. The flower is white, and emits a pleasing odour; the fruit is round, its colour red, and of the size of a small plum. Its skin is hard, and contains small seeds like those of our figs. It is not unwholesome, but its taste is insipid: it is the common food of the bats, who roost in great numbers among the tufted branches of the tree.

“The wood of the trees in this island is, in general, very hard; that which we employed in building our huts, became full of worms within a few weeks after it was cut down; but if it is left to soak during a month in the sea, the worm cannot enter it.

“There is a tree which, from its foetid smell, we called the stinking wood: it

is the most serviceable of any other for carpentry ; but, from its obnoxious qualities, little use could be made of it.

“ This island does not produce any kind of tree, shrub, plant, or herb, that is of the growth of Europe, except purslane, which is found in the vallies. We sowed some of it, which was brought from the Cape of Good Hope, and it proved to be exactly the same as the native purslane of the island.

Animals.

There are no four-footed animals at Rodriguez, but rats, lizards, and land turtles. Of the latter there are three different kinds ; and some of them are so large as to weigh an hundred pounds. Their flesh is wholesome, and not unlike our mutton, but more delicate. The fat, which is white, does not congeal, and is never known to cause an indigestion : we considered it as superior to the finest butter of Europe : it is also a sovereign remedy for sprains, rheumatism, and similar complaints. The liver is a most delicious food, and is very large in proportion to the animal, as it is equal to one-third of the whole weight of the flesh. The bones are solid, and consequently without marrow.

“ These turtles lay their eggs in the sand, with which they cover them ; when they are left to the slow operation of being hatched by the sun. They are perfectly round, like billiard balls, and are not larger than those of our common fowls. The shell is soft, and the interior part is excellent food.

“ There is such an abundance of these land turtles, that they are sometimes seen in flocks of two or three thousand. They collect together towards the evening, in the coolest places they can find, and in such close array, that the spot which they have chosen seems to be paved with their shells. It has been observed that some of them constantly take their post at a small distance from the main body, as if to perform the duty of centinels : but the utility of this arrangement is not readily comprehended, as the turtle possesses no means of active defence, or the least capacity to save itself from danger by flight.

“ There are also sea turtles in great abundance ; and some of them have been taken that weighed upwards of a quarter of a ton. They lay their eggs in sandy places near the sea, and always in the night : they deposit them in an hole about three feet in depth, and a foot broad ; and the largest lay about two hundred in the short space of two hours : having covered them with sand, they leave them to be

hatched by the heat, which effects the purpose at the end of six weeks. The young ones, at their birth, are not larger than chickens; and, on coming out of the shell, hurry instantly to the sea. We sometimes diverted ourselves with carrying some of them to the distance of a quarter of a league within land; when, being placed on the ground, they took the strait road to the sea. At this period they walk or crawl faster than when they are grown to a larger size. The *frégates* (*sula fregata*) and many other birds destroy them in such numbers, that not a tenth part escapes from such voracious enemies: but as the turtle lays every year from a thousand to twelve hundred eggs, the multiplication is not easily calculated.

"These eggs are not so grateful a food as those of the land turtles; neither is the flesh so delicate. The eggs of both, however, are of the same shape; and the white is so soon desiccated, that the egg may be properly said to contain nothing but the yolk.

"The liver of the sea turtle has scarcely any taste; but the smell is rancid; and it excites an unpleasant sensation in the stomach for a considerable time after it has been eaten.

"These animals feed on the herbs that grow at the bottom of the sea, and are never seen on shore but when they lay their eggs. Previous to that operation, they remain nine days in a state of coition.

"Their fat, after it has been once melted, remains in a liquid state. Its taste, as well as that of the land turtle, is very grateful to the palate, and a most excellent article for culinary purposes.

"The sea turtle will live upwards of a month without eating, provided it has discharged its eggs, and is dashed, from time to time, with pails of sea water. Its blood is cold.

Fish.

"The Lamentin, or sea cow, (*trichechus manatus*, *Linn.*) is also found in great abundance in the seas that surround this island, and appears in large herds. Its head resembles that of a hog, with a less pointed snout. It has no fins, but in their place two paws. The body is thick as far as the navel; and the tail has this peculiarity, in common with the whale, that the breadth of it is horizontal, when the animal is laid on its belly. Its blood is warm, and its skin is rough, hard, and of a blackish hue. A small quantity of hairs is scattered over it, though they are

scarcely perceptible. Its eyes are small; and two holes which it opens and shuts at pleasure, may be denominated its gills and ears. As it seldom shews its tongue, which is not large, many have asserted that it has none. It has grinders, and even tusks, which appear as in a wild boar, but it has no fore teeth. Its gums are very hard, and with them it tears up and browses upon the grass at the bottom of the sea. Its flesh is excellent and wholesome, and resembles that of the best veal. The largest of these animals are about twenty feet in length.

"The females have breasts like those of a woman. Some mention that it has two young ones at a time, and that it suckles them both together, supporting them at its bosom with its paws; but as I never saw it embrace more than one, I am inclined to believe that the former account is erroneous.

"This extraordinary nurse seems to verify the description of the prophet Jeremiah, in his Lamentations, ch. iv. 'Even the sea monsters draw out the breast; they give suck to their young ones; but the daughter of my people is become cruel, like the ostriches in the wilderness.'

"This fish is taken with great ease. It feeds in flocks like sheep, not more than three or four feet from the surface of the water; and when we went into the midst of them they did not quit their station, so that we could take which we pleased, either by shooting them, or dragging them by main force on shore; though the latter mode would employ three or four men to effect it. We sometimes found three or four hundred of them feeding together, and so little disposed were they to avoid us, that we often touched their breasts in order to select the fattest. By tying a rope round the tail, they were dragged out of the water; and as the flesh of the smaller ones is the most delicate, our fishery was confined to them. The fat is firm, and well flavoured; and neither in its appearance or taste can the flesh be distinguished from that of butcher's meat. This animal dies immediately on losing a little blood.

"Our discovery of its being an inhabitant of these seas, arose from our finding a dead one on the shore, some months after our arrival in the island. We did not however observe that it was amphibious; indeed, it is to be doubted whether it is able to drag along its unwieldy shape on the land.

"A large number of other kinds of fish inhabit the surrounding seas; all of which, excepting oysters and eels, are different from those of Europe.

"Sea-eels were easily caught with a line, as well as those of the fresh water.