

WANDERINGS
IN
NEW SOUTH WALES,
BATAVIA, PEDIR COAST, SINGAPORE,
AND CHINA;
BEING
THE JOURNAL OF A NATURALIST

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

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IN TWO VOLUMES.

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W A N D E R I N G S
IN
N E W S O U T H W A L E S,
&c.

CHAPTER I.

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

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

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

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

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

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

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

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

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

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

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

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

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

This beautiful molluscous animal inhabits the

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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