

ing the cost after much observation of its evils and some extensive trials of their own, to be followed by many more.—W. R.

BOOKS.

A NATURALIST'S VOYAGE.*

THIS book is one of the best written by its celebrated author, and we have now the pleasure of seeing a finely printed library edition and issued, we believe, as many as fifty years after the first edition. As Mr. Murray remarks in his preface, the "difficulty of getting authentic and original representations of the various places visited has never been overcome until now." Most of the views are from sketches made on the spot by Mr. Pritchett, with Mr. Darwin's book by his side. It was a good idea to bring out this well printed and illustrated edition of a book that is one of the most famous of its kind ever penned, and for which there should be a large demand, as such a work of its entertaining and instructive character so richly deserves.

This record or journal of research into the natural history and geology of the countries visited by Mr. Darwin in his voyage round the world in H.M.S. *Beagle* may be read by everyone with profit, and to the geologist and lover of natural history the minute and accurate descriptions convey much valuable information in a style at once charming and simple. Until now no attempt has been made to produce an illustrated edition, but the thing is accomplished, and makes the reading of the work the more enjoyable from the profuse and excellent sketches of birds, insects, and tropical scenery. As it deals for the most part with natural history and geology, it has less practical value to the gardener than the naturalist and geologist, but in the vivid descriptions of the native scenery, the characters of the people, their habits and customs, he will find plenty to entertain; while the more elaborate descriptions of birds and insects are written with such charming simplicity—unlike the dry, technical records of some writers—that they will prove a never failing source of delight and instruction. As with others, on their first sight of the luxuriant vegetation of the tropics, it produced on Mr. Darwin a feeling of intense admiration. He depicts in clear graphic language his experience of the delight of a naturalist who for the first time has wandered by himself in a Brazilian forest. "To a person fond of natural history, such a day as this brings with it a deeper pleasure than he can ever hope to experience again;" and the reader will find a good illustration of virgin forest depicting the wild tangle of growth; but though the jungle fills him with wonder and delight, there is a monotony in its evergreen luxuriance that forces comparison with the freshness and exquisite charm of an English spring. In writing of New South Wales, in which "the extreme uniformity of the vegetation is the most remarkable feature in the landscape," he shows his appreciation of the English spring:—

The inhabitants of this hemisphere and of the inter-tropical regions lose perhaps one of the most glorious, though to our eyes common, spectacles of the world—the first bursting into full foliage of the leafless tree; and to us, now welcoming the annual revelation of budding growth, the brightness and joyousness of spring never fail to excite pleasure, which is perpetuated as the leaves change to the full green of summer and the rich mellow tints of autumn. There is no weariness in the delightful variation the English landscape undergoes from January to December.

In the second chapter, which embraces Rio de Janeiro, an illustration is given of the Mandioca or Cassada, which is cultivated on the estate at Socógo of Senhor Manuel Figuereda, a relation of one of

Darwin's party. Coffee is the chief product of this portion of the country, but the Mandioca is also cultivated in quantity, and is remarkable for its great use.

Every part of this plant is useful; the leaves and stalks are eaten by the horses, and the roots are ground into a pulp which, when pressed dry and baked, forms the farinha, the principal article of sustenance in the Brazils. It is a curious though well-known fact that the juice of this most nutritious plant is highly poisonous.

In the woods of Socógo the Cabbage Palm luxuriates, and a neat illustration shows the characteristics of this majestic plant, which "waves its elegant head at the height of 40 feet or 50 feet above the ground."

The Botanic Gardens at Rio de Janeiro are briefly alluded to, but the simple description tells of the richness of the vegetation in this sunny clime. Here the Camphor, Pepper, Cinnamon and Clove trees give out a delightful aromatic perfume, and the Mango, Bread-fruit, and Jaca spread out their magnificent foliage, very different from the aspect of vegetation in the valley of the Rio Negro, where a "dry gravelly soil supports tufts of brown withered Grass, and low-natured bushes armed with spines." It was here that Darwin saw a famous tree, of which he gives a graphic description, that may interest those of our readers who have not read the book.

We came in sight of a famous tree, which the Indians reverence as the altar of Walleecbu. It is situated on a high part of the plain, and hence is a landmark visible at a great distance. As soon as a tribe of Indians come in sight they offer their adorations by loud shouts. The tree itself is low, much branched and thorny. Just above the root it has a diameter of about 3 feet. It stands by itself without any neighbour, and was, indeed, the first tree we saw. Afterwards we met with a few others of the same kind, but they were far from common. Being winter, the tree had no leaves, but in their place numberless threads, by which the various offerings, such as cigars, bread, meat, pieces of cloth, &c., had been suspended. . . . To complete the scene the tree was surrounded by the bleached bones of horses which had been slaughtered as sacrifices. All Indians of every age and sex make their offerings; they then think that their horses will not tire, and that they themselves shall be prosperous.

On the journey to Mercedes, on the Rio Negro, immense beds of the Thistle, Pampas and Cardoon are met with—the Cardoon growing as high as the horse's back and the Thistle even over-topping the rider himself.

One of the most interesting chapters in the book is that which deals with the Patagenians, and in this region Darwin found a species of Cactus, named in honour of the great naturalist. A small outline out shows it to have spikes of unusual length and sharpness. Tierra del Fuego and Chile are vividly described, and in ascending the Campana, or Bell Mountain, of Central Chile, noticed that—

In a few places there were Palms, and I was surprised to see one at an elevation of at least 4500 feet. They are excessively numerous in some parts of Chile, and valuable on account of a sort of treacle made from the sap. . . . A good tree will give ninety gallons. In Central Chile the Cactuses or Opuntias were often met with, and one of a spherical figure, which, including the spines, was 6 feet 4 inches in circumference. The height of the common cylindrical branching kind is from 12 feet to 15 feet, and the girth (with spines) of the branches between 3 feet and 4 feet.

One of the most important plants described and illustrated in the book is *Gunnera scabra*, called here the "franke," and which by reason of the luxuriance and breadth of its massive foliage is used with the best effects in English gardens, planted in some isolated spot, where its huge Rhubarb-like leaves are sheltered from storms of wind, which quickly tear and spoil their rich beauty. It is hardy, at least sufficiently so to stand an English winter, if a slight protection is given during spells of unusual cold by a layer of dry leaves placed amongst the stems, and with the foliage bent down to give shelter to the crowns. There was formerly a specimen in the herbaceous ground at Kew. In its native country Darwin no-

ticed some fine specimens growing on the sandstone cliffs, and mentions that the inhabitants eat the stalks, and tan leather with the roots and prepare a black dye from them. One measured nearly 8 feet in diameter, and, therefore, no less than 24 feet in circumference. The stalk exceeds a yard in height, and from four to five of the gigantic Rhubarb-like leaves are carried by each plant.

The Apple trees in Valdivia form an interesting paragraph. The town is in the midst of Apple orchards, and Darwin records, "I have never seen any country where Apple trees appeared to thrive so well as in this damp part of South America. On the borders of the roads there were many young trees evidently self-sown." A description then follows of the native method of forming Apple orchards, which appear to supply considerable food to the inhabitants of this fruit-embowered town, that vies with the neighbourhood of Mendoza, where vineyards flourish, and orchards of Figs, Peaches, and Olives abound. This must have proved a paradise of fruit, as "we bought Water Melons for a halfpenny apiece, and for the value of threepence, half a barrowful of Peaches."

Tahiti, with its luxuriant vegetation and luscious tropical fruits, was a source of keen delight to the great naturalist, and forms one of the best chapters in the book. Here,

In the midst of Bananas, Orange, Cocoa-nut and Bread-fruit trees, spots are cleared where Yams, Sweet Potatoes, the Sugar-cane, and Pine-apples are cultivated. Even the brush-wood is an imported fruit tree, namely, the Guava, which through its abundance has become as noxious as a weed.

The Bread-fruit is often noticed by Darwin, who dilates on the beauty of groves of the tree, as vigorous as the English Oak, and bearing a heavy burden of large nutritious fruit.

On every side were forests of Bananas, the fruit of which, though serving for food in various ways, lay in heaps decaying on the ground, and he considered the young leaves of the wild Arum better than Spinach, and the roots when well baked are good to eat.

It sounds strange to hear now the uncomplimentary remarks of Mr. Darwin on New Zealand, but of course, since the first issue of the book, a vast change has come over the continent of Australia and New Zealand. Speaking of the latter, he says,

I believe we were all glad to leave New Zealand. It is not a pleasant place . . . and the greater part of the English are the very refuse of society.

But he has a kindly word for Waimate and its Christian inhabitants and where he received a cordial welcome from the missionaries. The sight of English produce, crops of Barley and Wheat in full ear, was exceedingly pleasant.

One of the last places described is St. Helena, of which the vegetation is essentially British, brought about by the importations made from England. We can fancy the delight of the naturalist, far away from English shores, feasting his eyes on sloping banks of Gorse covered with bright yellow flowers.

Weeping Willows are common on the banks of the rivulets, and the hedges are made of the Blackberry producing its well-known fruit. When we consider that the number of plants now found on the island is 746, and that out of these 52 alone are indigenous species, the rest having been imported and most of them from England, we see the reason of the British character of the vegetation.

Those who have not yet read this delightful summary of one of the most interesting voyages made round the world, should not fail to become at once acquainted with its rich contents, that appeal not only to the general reader, naturalist, and geologist, but to the gardener as well, as the brief review here given will amply prove.

Chinese Narciss, or Joss Flower.—In reply to an inquiry of W. C. Atkinson, I purchased in December, 1889, four bulbs of the above, and the roots placed in sand and water have flowered beautifully, some having single and others double flowers. Some of the bulbs have nine stems, each bearing from six to eight flowers. The roots did split, and the bowls sold with them were rather small, so I put th-

* "A Naturalist's Voyage: Journal of researches into the natural history and geology of the countries visited during the voyage of H.M.S. *Beagle* round the world." Illustrated edition. By Charles Darwin, M.A., F.R.S. London: John Murray.