

hills and peaks, here and there bristling in bare rock, and connected by long blue lines of curtain.

“Though our prospect lacks the sublime and glorious natural beauty of Niagara, tempered by the hand of man, and though we find in Paulo Affonso none of the sapphire and emerald tints that charm the glance in the Horseshoe Falls, still it is original and peculiar. In ‘geological’ times the stream must have spread over the valley; even now, extraordinary floods cover a great portion of it. Presently the waters, finding a rock of softer texture and more liable to decay, hollowed out the actual ‘Talhadao,’ or great fissure, and deepened the glen in the course of ages. We have also here the greatest possible diversity of falling water; it consists, in fact, of a succession of rapids and caldrons, and a mighty Fall ending in the Mãi da Cachoeira; upon whose terrible tangle of foam we have just looked down. If Niagara be the monarch of cataracts, Paulo Affonso is assuredly a king of rapids; an English traveller who had seen the twain, agreed with me in giving the palm to the latter, as being the more singular and picturesque of the two, which are both so wondrous and so awful.”—*Captain R. F. Burton, “The Highlands of the Brazil,”* vol. ii., pp. 444–448.

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Page 621.—A CORAL REEF.

In further illustration of the text, we quote Mr. Jukes’ vivid description of a coral reef:—

“In a small bight of the inner edge of this reef was a sheltered nook, where the extreme slope was well exposed, and where every coral was in full life and luxuriance. Smooth round masses of *mæandrina* and *astræa* were contrasted with the delicate leaf-like and cup-shaped expansions of *explanaria*, and with an infinite variety of branching *madreporæ* and *seriatoporæ*, some with mere finger-shaped projections, others with large branching stems, and others again exhibiting an elegant assemblage of interlacing twigs, of the most delicate and exquisite workmanship. Their colours were unrivalled—vivid greens, contrasting with more sober browns and yellows, mingled with rich shades of purple, from pale pink to deep blue. Bright red, yellow, and peach-coloured *pulliporæ* clothed those masses that were dead, mingled with beautiful pearly flakes of *escharæ* and *retepora*—the latter looking like lace-work in ivory. In among the branches of the corals, like birds among trees, floated many beautiful fish, radiant with metallic greens, or crimsons, or fantastically banded with black and yellow stripes. Patches of clear white sand were seen here and there for the floor, with dark hollows and recesses beneath overhanging masses and ledges. All these, seen through the clear crystal water, the ripple of which gave motion and quick play of light and shadow to the whole, formed a scene of the rarest beauty, and left nothing to be desired by the eye, either in elegance of form or brilliancy and harmony of colouring.”—*J. Beete Jukes, “Narrative of the Surveying Voyage of H. M. S. Fly,”* vol. i., pp. 117, 118.

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Page 628.—FORMATION OF CORAL ISLANDS.

Mrs. Somerville’s account of the development of coral-building in the ocean is as follows:—

“Four distinctly different formations are due to the coral-building polypes in the