

types. The discovery that the *Millepora* is a genuine Hydroid, and not at all allied to the Actinoids, makes a farther revision of all these Stony Corals, the animals of which have not yet been sufficiently investigated, particularly desirable. This is especially the case with *Pocillopora* (Pl. XV. Fig. 14<sup>b</sup>), which, from the structure of the Coral stock itself, I am now satisfied, must also be referred to the Hydroids with *Millepora*.<sup>1</sup> I believe the same also to be the case with *Seriatopora* (Pl. XV. Figs. 15 and 15<sup>b</sup>).

There is a fifth type of Coral stocks, still more remote in its structure from the Polyps, which, as long as all Corals were considered to be Polyps, was, with the rest, referred to that class. I allude to the so-called Corallines and the Nullipores. When referring them to the Polyps, Lamarck assumed that there existed animals of a very soft nature upon their surface; which, however, could not retreat into distinct cells, and therefore left no mark of their existence upon the dried Coral stock. But since these Corallines have been more carefully examined, no trace of such animals has been observed; and, to say the least, their animal nature has become very questionable. For my own part, I entertain no doubt, that, as the investigations of DeCaisne<sup>2</sup> first showed, they are neither more nor less than genuine Algæ with a tissue largely loaded with calcareous particles, and may fairly be designated under the name of Limestone Algæ. They are true plants of the lowest type, forming, in consequence of the large amount of lime they contain, Coral stocks of no small importance in the economy of the Coral reefs. It is by their agency, since they are capable of sustaining their life even when not permanently under water, that the crest of the Coral reef is raised above the level of low-water mark; and the growth of some of their representatives is so extensive that the exposed part of a large number of the islands of the Florida reef is almost entirely composed of the fragments of these calcareous sea-weeds. I have seen large slabs of rock, used in the construction of the foundations of Fort Jefferson, upon the Tortugas Islands, composed entirely of the joints of these calcareous sea-weeds, which were so distinct as to be recognized with ease.

<sup>1</sup> As the structure of the Coral stock of the *Tabulata* of Milne-Edwards presents in all the same general features, it is highly probable that the whole order will have to be referred to the class of Acalephs. I am farther inclined to believe, that the *Rugosa* will share the same fate. Their typical structure seems to be a combination of the characteristics of *Lucernaria* and the *Strobila* state of the higher *Discophora*. A section of *Strombodes* recalls at once the appearance of a *Strobila*.

<sup>2</sup> DECAISNE (J.), *Essais sur une classification des Algues et des Polypes calcifères*, Ann. Sc. Nat. 2de sér. 1842, XVII. p. 297.—*Mémoire sur les Corallines ou Polypiers calcifères*, Ann. Sc. Nat. 2de sér. 1842, XVIII. p. 96. See also LINDLEY, *Vegetable Kingdom*, London, 1853, 1 vol. 8vo. p. 23.—KÜTZING, *Phycologia Generalis*.—HARVEY, a *Manual of the British Marine Alga*, London, 1848, p. 103. Schweiger already refers the Corallines to the Alga.