

sending this chapter (on the Madreporaria Tabulata) to the press, we learn that Professor Agassiz has studied the mode of the organisation of the soft parts of the Milleporidæ, and has proved that these Zoophytes are not corals, but Hydroid Acalephs very nearly related to the Hydractiniæ. Professor Dana shares the opinion of Professor Agassiz; and Agassiz believes that the Favositidæ, as well as all other species of which the septa are not continued vertically, ought to be considered strangers to the class of corals. But the facts on which he grounds his opinion are not as yet sufficiently ascertained for us to be able to form a critical opinion of their value; and, until more ample information is received, we shall continue to rank the polyps in question according to the method adopted in our former works."

Professor L. Agassiz, in his Contributions to the Natural History of the United States,<sup>1</sup> figured the animals of *Millepora*. He placed *Millepora*, *Heliopora*, *Seriatorpora*, *Pocillopora*, and the whole of the Tabulate and Rugose Corals with the Hydroid Acalephæ. The principal distinction between these sections and true polyps relied on by Agassiz, was as follows<sup>2</sup>:—"The pits into which the animals (i.e., of the Milleporidæ and their supposed allies) retreat have a horizontal floor extending from wall to wall, and these floors are built successively one above another as the animal rises, the radiating portion never extending vertically through successive floors. Not so with the Actinoid Polyps, in which the radiating partitions extend from the top to the bottom of the pit, while the horizontal floors, if they exist, extend only from one radiating partition to another." Agassiz hoped that deep-sea dredgings would produce additional evidence concerning the affinities of *Millepora*, and genera connecting more closely the Rugosa and Tabulata with one another, and with the Acalephæ, in the shape of branching Heliopores and the like. (A letter concerning deep-sea dredgings addressed to Professor Benjamin Pierce, Superintendent of the United States' Coast Survey, by Louis Agassiz, Cambridge, Mass., Dec. 1871.) He had "not the remotest doubt that the Tabulata were genuine Hydroids."<sup>3</sup> From the time when Agassiz's observations on *Millepora* were published until the completion of the present paper, no one made any examination of the structure of the soft parts of any of the members of the Tabulata, with the exception of Professor Verrill who examined a *Pocillopora*, and found it to be a true Zoantharian polyp with twelve septa and twelve tentacles (Ann. and Mag. Nat. Hist., 1872, vol. ix., 4th series, p. 355, from Silliman's American Journal, 1872, vol. iii. pp. 187-194, On the Affinities of Palæozoic Tabulate Corals with Existing Species). Quoy and Gaimard had, however, long before described the twelve short tentacles of *Pocillopora damicornis*.

Professor Verrill, in the paper above quoted, as he had done before, combated the conclusions of Professor Agassiz that the whole of the Tabulata belonged to the Hydroid

<sup>1</sup> Louis Agassiz's Contribution to the Natural History of the United States of America, vol. iii. pl. xv.

<sup>2</sup> *Ibid.*, p. 61.

<sup>3</sup> *Ibid.*, p. 121.