

type, belonging to the order of Tabulata of Milne Edwards (*Figs. 44, 45, and 46*), formed by animals entirely different from the true Actinoids, and closely allied, as I shall show hereafter, to the genus *Hydractinia*, constituting a third type of

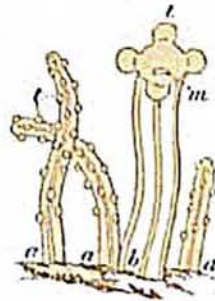
*Fig. 44.*



*MILLEPORA ALCORNIS*, Lmk.

A branch of the Coral of that name, natural size. The little projections along the edge are meant for the extended Polyps. They are extremely shy and delicate, and never show themselves again after a branch has once been taken out of the water.

*Fig. 45.*



*MILLEPORA ALCORNIS*, Lmk.

Magnified view of the extended Polyps or Hydroids of the same Coral stock.

*a a* Smaller Hydroids. — *b* Larger Hydroid, *m* its mouth, *t* its tentacles.

*Fig. 46.*



*MILLEPORA ALCORNIS*, Lmk.

Transverse section of a branch of the Coral stock, magnified.

*a a* Pits of the Hydroids, with their successive floors. It is very difficult to obtain sections of the pits occupied by the smaller Hydroids.

Coral stocks, which, on account of its Hydroid affinities, must be united with the class of *Acalephs*. Moreover, these Corals differ greatly from those of the Actinoid Polyps. The pits into which the animals retreat have a horizontal floor extending from wall to wall, and these floors are built successively one above the other, as the animal rises, the radiating partitions 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 the other.

Among *Bryozoa* we find a fourth type of Corals. These *Bryozoa* are constructed on a totally different plan, and exhibit a perfect bilateral symmetry; for even the whorl of feelers which surrounds the mouth is not circular, but, like a horseshoe, presents two symmetrical halves. From the mouth arises an alimentary canal, extending in the longitudinal axis of the body, which bends itself in the same plane, and, extending again forward, opens below the mouth. There is here no sign of the characteristic partitions and chambers of the true Polyps, nor of the radiating and circular tubes of the true *Acalephs*: so that we need not even take into consideration their bilateral structure, in order to satisfy ourselves that their true position cannot be either with the Polyps or with the *Acalephs*; while their relation to the *Ascidians* and *Brachiopods*, and especially to the latter, is so close as to place it beyond question now, that their true affinities are with the *Mollusks*, and not with the *Radiates*.

I shall hereafter have an opportunity of showing that the comparative simplicity of these animals is no evidence of any relation to the Polyps. The primary question to be decided, in considering the true relations of animals, is not one of