

ground, must have appeared unnatural to those who were familiar with the large free Medusæ so common everywhere; and it is hardly a matter of surprise that even now, there should be naturalists who oppose the views I have here presented. Let it be remembered, however, that it is not so very long since the pedunculated Crinoids were arranged among the Polyps, and that it has only required a direct comparison between them and the free Crinoids to show their close affinity with the other members of the class of Echinoderms. Now, the pedunculated Hydroids bear the same relation to the swimming Hydroids (the Siphonophoræ) as the pedunculated Crinoids bear to the free Crinoids; and, the close affinity of the Siphonophoræ and Hydroids proper once admitted, their mode of reproduction renders their separation from the higher Aculephs forever impossible, while it forbids, at the same time, their association with the Polyps.

That *Lucernaria* (Figs. 75 and 76) and *Millepora* (Figs. 77, 78, and 79) belong to the Hydroids proper has already been shown (pp. 59 and 61). The nearest affinity of *Millepora* is with *Hydractinia* (compare Figs. 61 and 62); but its mode of reproduction has thus far remained unknown.

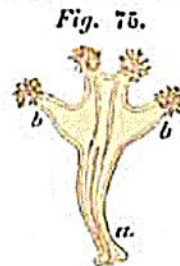


Fig. 75.  
LUCERNARIA,  
Seen in profile.  
a Peduncle. — b b Tentacular bunches.

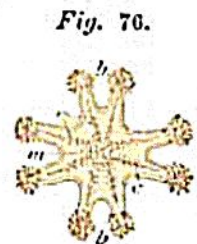


Fig. 76.  
LUCERNARIA,  
Seen from above.  
m Mouth. — c c Ovaries.  
b b Tentacular bunches.

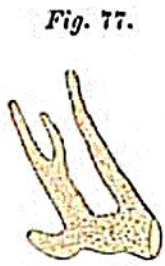


Fig. 77.  
MILLEPORA ALCICORNIS, Lmk.

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.

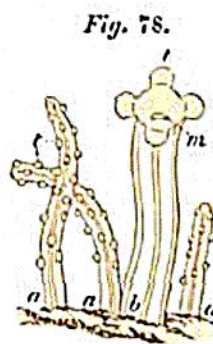


Fig. 78.  
MILLEPORA ALCICORNIS, Link.  
Magnified view of the extended Polyps or Hydroids of the same Coral stock.  
a a Smaller Hydroids. — b Larger Hydroid, m its mouth, t its tentacles.



Fig. 79.  
MILLEPORA ALCICORNIS, 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.

The structural features of all these various representatives of the class of Aculephs will, of course, be more fully illustrated in the following chapters. My object here was mainly to show, upon the most general evidence, what are the types of Radiates that constitute the class of Aculephs, and incidentally to call attention to their special affinities. If the views I entertain upon this subject are correct, this class embraces three orders,—the CTENOPHORÆ, the DISCOPHORÆ proper, to the exclusion of the naked-eyed Medusæ, and the HYDROIDÆ, including the