

highest part, which is nearest the aperture of the disk, assumes an arched contour (*Fig. 10, f*). In consequence of the mode of formation of the tentacles, their interior is hollow. If we look along the plane of one (through *a-c, Fig. 12<sup>a</sup>*), a very narrow cavity (*Fig. 12<sup>b</sup>, b*) may be seen, between the opposite double walls. In profile the double walls (*Fig. 12<sup>a</sup>, d e*) are very readily detected; the outer one (*d*) is very thin, but the inner one (*e*) is extraordinarily thick, next the top of the crest.<sup>1</sup> Along the whole length of the base of the crest a narrow fissure (*Fig. 12<sup>a</sup>, b b' b''*) extends, and serves as a passage-way from the cavity of the tentacle into the interior of the disk. When the young hydroids are pretty far advanced in their development, and are numerous, the medusoid parent becomes spherical (*Fig. 12*) and the tentacles (*f*) higher in proportion to their length, and the transition into the disk is not so gradual. When most of the young have escaped from the parent, the latter becomes elongate (*Fig. 14*), and the tentacles (*f f'*) assume a great height, equal to two thirds the length of the base, which now occupies much less extent. In this condition, when seen with a low magnifying power, they appear like cylindrical bodies (*Fig. 1<sup>b</sup>, b*), and are very conspicuous among the other, globose or oval, medusoids. The proboscis, during these later periods, moves about with great freedom, and oftentimes projects far beyond the aperture of the disk, but as the medusoid approaches the end of its breeding season, and the young are nearly all discharged, the proboscis diminishes and retracts toward its base (*Fig. 14, d*), but yet retains its activity. When the germ-basis has almost separated from the proboscis, the part which remains (*Fig. 17, a*) oftentimes appears like an outer wall, but in later stages (*Fig. 14, d*), when the germ-basis is altogether developed, the proboscis is clearly single-walled.

Throughout the whole course of the development of the medusoid, there has not been the least trace of radiating or circular chymiferous tubes within the disk; and the only place where chyme has been seen to circulate was in the proboscis, which we have shown above to be in open communication with the canal of the pedicel. After the young are all excluded, the parent shrivels, dies, and falls off. The medusa-buds of *Parypha* thus appear to belong to the simplest forms of *Acalephs*. Morphologically, they are as genuine *Medusæ* as those which, being freed from their parent stock, assume an independent life, during which the reproductive organs are developed at a late stage of their life; but, as far as the complication of this structure goes, they do not rise above the level of ordinary *Hydroids*, being, like them, destitute of radiating and circular chymiferous tubes.

<sup>1</sup> These two walls are so conspicuous, when seen in profile, as to give the tentacles the appearance of being margined, and, on this account, the

genus has been called *Parypha*, from *Παρυφή*, a border or hem. Another species of this genus has been described by McCrady as *Tubularia cristata*.