

however, very different from those of the latter genus, since they have no common peduncular axis of attachment. In *Hybocodon* the first medusa (*Fig. 13*) arises directly from the actinal area of the disk (*a b*), while from the marginal termination (*b'*) of one of the radiating tubes (*b''*) of this medusa numerous similar medusæ are developed, the latter again giving rise to other medusæ (*c' c'' h i' i''*), in the same manner, and from a corresponding place on their margin. In this way is produced a branching axis, which extends laterally as well as longitudinally, and, in the full breeding season, crowds the disk with its burden of medusæ (*Fig. 2, d d' d'' c*).

The head of the hydroid, as we have before said, is joined to the stem by a constricted neck, which is capable of great distension, and when in this state (*Fig. 3*) the internal longitudinal rows (*a*) of orange-red pigment are very easily seen through the walls. But it is not the pigment lines alone which give rise to the ridged appearance of the stem, for upon making a transverse section of the walls (*Pl. XXIII^a. Fig. 10*) we find, that between every double pigment row (*Figs. 10 and 11, dd*) there is a ridge (*g'*), or semi-partition, very similar to that described in *Parypha* (*Pl. XXIII^a. Fig. 7, g'*). It is transversely, broadly triangular, and projects more or less into the cavity of the stem, but the combined ridges never form a solid central core, as in *Tubularia*. In the oldest hydroids we have counted sixteen of these ridges at the upper part of the stem, but, passing downwards, they merge into each other, as in *Parypha* and *Tubularia*. The inner wall (*Fig. 10, d*), upon which the semi-partitions are based, is composed of a single layer of cells, and is about $\frac{1}{8}$ of an inch thick, or four fifths of the thickness of the outer wall (*b bb*). The whole interior surface, excepting where it is covered by the pigment cells (*ddl*), is lined by vibratile cilia. The outer wall consists of a double layer of cells (*b bb*), and is $\frac{1}{10}$ of an inch thick. Both of these walls are so transparent that it is possible to see the mesoblasts (*Fig. 11, g'*) of the cells of the semi-partitions through the latter.

Proles medusoidea.—There is a close resemblance between the free medusa of this genus (*Pl. XXV. Figs. 14, 14^a, 15, and 15^a*), at the time it drops from the parent, and that of *Coryne mirabilis* at a corresponding age (*Pl. XVIII. Fig. 15^a*), except in the number of their tentacles; in fact, a medusa of *Hybocodon* may be said to be a *Coryne* with only a single tentacle. Nor does the fact that the former produces medusæ from the base of its tentacle invalidate the comparison, for some of the *Sarsia* do the same. The proportions of the disk, or bell-shaped umbrella, its size, the relations of the outermost, the middle, and the innermost walls, the radiating and circular canals, the two walls of the proboscis, and the three walls of the transverse septum, are the same as in the medusa of *Coryne*, to which we refer the reader for full details of the structure of these parts. The