buds are not freed have no more the special structure of the Polyps described above, than those which produce free Medusæ.

Whether we consider their special structure or their genetic relation to certain Medusæ, the Hydroids must be associated in close connection with the Medusæ

proper; while their peculiar mode of reproduction, and the greater simplicity of their structure when compared to that of the covered-eyed Medusæ, show that they form a distinct group in that class. This will be still more evident, should I succeed in showing that all Hydroids produce, in the same way, Medusæ buds; even though these Medusæ do not in all of them separate from the mother stem to lead an independent life. The family of Tubulariæ is most interesting in that respect, because, while they all agree in their Hydroid state, there are some, among them the genus Hybocodon (Fig. 11), for a Stem of a single Hydra. - o Its mouth surinstance, in which the buds (Fig. 11 d d, and Fig. 12), rounded with tentacles. - tt Its marginal though at first not differing from those of other kinds, Medusa buds.



tentacles .- d d d The most advanced of its

become free and lead an independent life as distinct, sexual, naked-eyed Medusæ (Figs. 13, 14). In others, such as Tubularia proper, Thamnocnidia, and Parypha, the Fig. 13.



Medusa bud of HYBOCODON PROLIFER, Ag. a Base of attachment to the Hydra stock. - o Proboscis. - c Circular chymiferous tube. - b Radiating chymiferous tube. - d t Proliferous Medusa with its single tentacle. - t Single tentacle of the primary Medusa. - Near c Auother small proliferous Medusa-bud, and several others upon the main radiating tube of the proliferous Medusa dt, between the letters d and t; exhibiting a striking analogy to Siphonophore.

Free Medusa of HYROCODON PROLIFER, Ag.

The largest vertical tube being seen in profile. At first sight this Medusa resembles much the Steenstruppin of Forbes; yet it differs generically.

v Probosels. - r o Radiating tubes. - s Circular tube. - / Tentacle. - m Buds of Meduse, proliferous from the base of the single tentacle.



Free Medusa of HYBOCODON PROLIFER, Ag.

Facing the largest chymiferous tube, from the lower end of which hangs the single tentacle, with many small proliferous Medusæ buds.

a Point of attachment before its separation from the Hydra stock. - be Radiating or vertical chymiferous tubes, c pointing to the circular tube, -t Tentacle. - f Bunch of proliferous Meduste buds. - e Rows of epithelial cells forming distinct bands at the surface. - o Proboscis.

Medusæ buds produce new Hydroids without freeing themselves; and yet mese Medusæ buds show all the characteristic features of genuine naked-eyed Medusæ. In Tubularia proper, for instance (Vol. 4, Pl. XXIV. and XXVI., figs. 3 and 4), they have four radiating tubes with a pendent proboseis and a circular tube, but hardly a trace of tentacles; while in other genera these characters are variously