parent, to lead an independent life (*Figs.* 1 and 2), another set takes their place, and then another after these, and so on successively (Pl. XXIV. *Figs.* 19, 20, 21, 23, 24, and 22), till the whole of the germ-basis is exhausted, and the proboscis (*Fig.* 22, *d*) is left uncovered. As the germs leave the basis, they lose the yellow tint of the latter, and become colorless. Their mode of development is the same as we have described in Parypha (Pl. XXIII. *Figs.* 21, 22, 23, 24, 25, and 26, p. 254), and therefore need not be repeated here.

A short time before birth the young hydroid is endowed with a horny sheath, like that of Parypha (Pl. XXIII. *Fig.* 14ª, *c*); but in Tubularia we have been able to trace it, not only to the base of the head, but even to the tips of the tentacles of the crown (Pl. XXVI. *Figs.* 1 and 2, *b*) and of the proboscis (*c*). On the stem of the hydra, it is as thick as in Parypha (XXIII. *Fig.* 14ª, *c*); but at the base of the head it thins out suddenly, to a very thin, and yet distinct and measurable, film, in which state it covers the whole head and tentacles.[1] At birth there are from ten (Pl. II. *Figs.* 1 and 2, *b*) to fourteen tapering coronal tentacles, and from eight to twelve proboscidal tentacles (*c*); the latter are mere papillæ, and constitute nothing more than a crenulate edge to the mouth. The spermatic particles are similar to those of Parypha (Pl. XXIII. *Fig.* 16).

Proles medusoidea. — The mode of development of the medusa of Tubularia Couthouyi is, with one single exception, identical with that of Thamnocnidia spectabilis; we may, therefore, after pointing out the difference, refer the reader to the embryology of the latter genus for further details. In Thamnocnidia the inner wall (Pl. XXII. *Figs.* 1–8) rises as a solid layer, and, in time, forms a uniform lining (*Fig.* 8ª, *b*) to the inner surface of the outer wall (*Fig.* 8ª, *a*), whereas, in Tubularia Couthouyi, as the inner wall rises, it is channelled (Pl. XXIV. *Figs.* 8, 9, 10, 11, 12, and 13) in the same way, as we have fully described in Coryne mirabilis (Pl. XVIII. *Figs.* 4–12, p. 192). In the last period of the breeding season of Coryne, the male medusoids (Pl. XVII. *Fig.* 11, *u r*) of this genus bear a strong resemblance to the males (Pl. XXIV. *Fig.* 13) of Tubularia, and might easily be mistaken one for the other.

Histology. — All that we have to say of the histology of Tubularia has reference to the stem. The outer wall (Pl. XXIIIª. *Figs.* 8 and 9, *b*) is about one five hundredth of an inch thick, and consists of a mass of moderate sized, polygonal cells, which are disposed in an irregular manner throughout the thickness of the wall. On an average, they are about one four thousandth of an inch in

[1] The alcoholic specimens of Tubularia indivisa sent to us by Sars, happen to be full of young, which, upon examination, we find to possess a horny sheath, to all appearances identical, both in proportions and extent, with that of our American Tubularia Couthouyi.