in the medusoids; but, when full-grown (Pl. XXIII. *Figs.* 12, 13, and 14), they have a simple single-walled proboscis (*d*), a double-walled disk (*a*), and from six to ten tentacles, very much compressed, laterally, crest-shaped, and hollow (*f f*^{1}). When full of young, ready to come out, they have a globular, or broad oval shape (*Figs.* 12 and 13), and the tentacles (*f*) are in the form of a low crest, which is hardly half so high as long; but when the young are nearly, or altogether set free, then the medusoids have an elongate, ovate shape (*Fig.* 14), and the cristate tentacles (*f f*^{1}) have almost twice the height of their centripetal diameter. In this condition they are very conspicuous (*Fig.* 1^b, *b*) among the other globular medusoids. The male medusoids (*Figs.* 2, 2^a, and 15) never have any tentacles, nor do they deviate from an almost perfectly spherical shape. As the details of the structure of the medusoids will necessarily be given in the history of their development, to avoid repetition, we only refer here to the next pages, relating to the embryology of this genus.

Embryology. Proles hydroidea. — We have never been able to find the least trace of eggs in the medusoids, though we have searched diligently for them. It is barely possible that they should have escaped our notice, when all stages of the growth of the medusoids have been closely scrutinized.

At first the medusoid is a simple, double-walled blind sac (*Fig.* 4, *a b*), which is in direct continuation with the walls (*a*^{1} *b*^{1}) of the branch to which it is attached; afterwards the two walls separate and leave a space (*Fig.* 5^a, *c*), which, from the moment of its formation, is filled by a very faintly granular, but excessively transparent substance. As the space between the walls increases in size, the transparent mass grows also, and at the same time becomes more coarsely and distinctly granular (*Fig.* 9, *c*), and deep yellow in color, but otherwise there is no internal change to be noticed. When the medusoid has attained to about one half of its adult diameter, the granular mass (*Figs.* 9, *c*, and 10, *c*) clings more closely to the proboscis (*d*), and has retracted from the region around the aperture of the disk, or, more properly speaking, has ceased to grow as fast as the still increasing cavity of the disk. Soon after this, the mass begins to be subdivided,[1] and, from time to time, throws off large spherical portions (*Fig.* 11, *c*). That which adheres to the proboscis still continues to grow, notwithstanding the process of self-division. The separated portions of the mass lose their yellow color, and, becoming semi-transparent, soon undergo a change, which, very early, indicates their destiny; each becomes flattened and angular (*Fig.* 21), with from six to eight sides, forming a polygonal disk. At first the angles are rounded, and not always equidistant (*Fig.*

[1] The details of the process of subdivision will be found more fully illustrated in the section on Tubularia Couthouyi, in which this phenomenon was first traced.