

pushed up from beneath. This forms a cone (*Fig. 6, d*) with a hollow interior (*c'*) which is in direct and broadly open communication with the cavity (*c*) of the pedicel. Although this cone is at no time open at the end, and, consequently, food is never taken in through its instrumentality, yet it is in every respect, homologically, the proboscis of the medusoid. As the proboscis lengthens, its wall thickens, until, by the time the tip of the former has nearly reached the end of the medusoid, the latter (*Fig. 7<sup>a</sup>, d*) has become as thick as the inner wall (*b'*) of the pedicel. From this time the germ-basis, or the spermatie mass, ceases to grow as fast as the cavity of the disk enlarges. This at first makes itself evident near the end of the medusoid, where there is a space, which the germ-basis (*Fig. 8, f*) does not fill up. There is as yet only a single wall (*b*) which protects the space from the surrounding medium, the edge (*c*) of the cup-shaped inner wall (*c*) not being closed over. Simultaneous with this feature there appears another quite as noteworthy, in the comparatively much diminished size, and in the change of shape of the proboscis (*d*). Whereas heretofore it has occupied a very broad basis, nearly equalling the breadth of the medusoid, and also has filled a great portion of the cavity of the disk (*Figs. 6, 7, and 7<sup>a</sup>*); it now projects into the axis of the disk, in the form of a slender cylindrical pillar (*Fig. 8, d*). Soon after this, both in the female (*Fig. 9*) and male (*Fig. 15*), the proboscis (*d'*) forces its way through the germ-basis, or spermatie mass, and even projects through the recently formed opening (*Figs. 9, f, and 15, c*) of the disk. We have not made sure of the fact whether the inner wall closes over by uniting the edge of the cup mentioned above, or not; but in all probability it does not so happen, because the aperture in the disk is formed immediately after the vacant space is left between the outer wall and the germ-basis. In the male no further development, excepting an increase in bulk, takes place; but in the female a remarkable set of tentacles (*Fig. 10, f*) are formed. The time of their development is not always contemporaneous with certain other phases; sometimes they are largely developed before the germ-basis (*Fig. 10, c*) has begun to segment, and at others they have not appeared, although some of the young hydroids (*Fig. 11, c*) have already separated from their basis (*g*). The mode of formation of the tentacles is very simple: around the opening of the disk, the double walls become plicated in the direction of the axis of the medusoid, and these folds, varying from five or six to ten in number (*Fig. 13, f*), project outwardly in the form of low thin crests, the planes of which trend toward the axis of the medusoid. At first they are about as long, at the base, as high, and run out to a blunt point so as to form a triangle. After this, the fold extends toward the pedicel of the medusoid, and reaches sometimes along half the length of the disk, at the same time diminishing in height until finally it runs off into the walls from which it originates; and the