

bases (*Fig. 1^c, t¹*) of its tentacles (*t*), and expands slightly where the latter originate, and then suddenly contracts into a broad, conical or convex termination. At this point it is pierced by an aperture, the mouth (*Fig. 1^c, m*), which leads to the cavity (*p¹, p²*) below. The tentacles of the proboscis, like those below, are in a single row, and in full-grown heads there may be twenty-four of them. These parts of the hydroid are present all the year round; but at certain seasons, in the summer and autumn, ten or twelve slender branches, covered with medusoids (*Fig. 1^b, a, b, c*), may be seen hanging down between the tentacles. The branches are attached at pretty regular intervals, around the base of the proboscis (*p*). They are usually arranged in two or three rows, but the largest are in one series. Whether those in each row become successively developed and attain a superior size to the others, we cannot say positively; but it would seem probable that they have such a systematic mode of growth, since the smaller branches bear young medusoids, whilst the larger ones, at certain times, bear full-grown medusoids, some of which have already set free their young, and are withering. The medusoids appear at a very early period in the growth of the hydroid, at a time when the head, from its base to the tip of the proboscis, is not more than one tenth of an inch long (*Fig. 1, g*). A full-grown head is five tenths of an inch long (*Fig. 1^a*).

Having thus alluded to the relation of the different organs to each other, we may now proceed to describe them in detail. There are as many as twenty-four tentacles (*Fig. 1^b, t, Fig. 1^c, t*) at the end of the proboscis of the largest hydroids. They are cylindrical, and tapering from the base to the tip, which is rounded off in an oblique manner (*Fig. 1^c, c*). At their bases they touch each other, and from thence are decurrent, in juxtaposed broad ridges, which give the proboscis (*Fig. 1^b, p*) a longitudinally ribbed appearance. The upper side of the bases of these tentacles project in approximated ridges (*Fig. 1^c, t²*) to the very edge of the mouth (*m*), just in the same manner as obtains in *Thamnoenidia spectabilis* and *tenella* (Pl. 22, *Fig. 18*). This gives to the conical area around the mouth a radiated aspect, reminding one very forcibly of a similar appearance, in a homologous position, among *Polypi*. There are two walls (*Fig. 1^c, a, b*), or, perhaps, more properly speaking, two layers of different kinds of cells which enter into the composition of each tentacle. The outer wall (*a*), a continuation of the outer wall of the proboscis, and, in fact, of the whole body, is a comparatively thick layer, and closely embraces, like a sheath, the axial layer (*b*). The latter is a solid mass of cells, in direct prolongation from the inner wall of the proboscis. The tentacles have the appearance of being hollow on account of the dark pigment granules which are collected at the inner ends of the cells of the axis. The whole tentacle, from tip to base, is thickly covered by lasso-cells. In confinement,