

proboscis, inasmuch as it has a mouth (*Figs. 2<sup>a</sup>, 2<sup>b</sup>, and 2<sup>c</sup>, m*) which at times opens as widely (*Fig. 2<sup>a</sup>, m*), and is as changeable in shape, as that of the sterile forms (*Figs. 1<sup>b</sup>, 1<sup>c</sup>, 1<sup>d</sup>, 1<sup>e</sup>, and 2<sup>d</sup>, m*); and, in fact, considering the mobility and activity of particular parts of the mouth and proboscis, independently of other parts of the body, we have no hesitation in saying that it is as truly an organ for the prehension and reception of food, as is the proboscis of the sterile forms. Sometimes the tentacles separate, and simply disclose the mouth (*Fig. 4<sup>a</sup>, m*), without protruding the proboscis. In such cases, the tentacles are usually arranged in two rows, those of one row alternating with those of the other, and forming, together, a depressed, turban-shaped mass (*Figs. 1, A h, 1<sup>e</sup>, t, 3, 4, h, and 4<sup>a</sup>*). The tentacles, as a usual thing, are globular, but now and then, during the dilatations of the head and proboscis, they stretch to a slight extent at the base, so as to stand out (*Fig. 2<sup>b</sup>, t*) from the head on a short, thick pedicel (*Fig. 2<sup>f</sup>, a*). It can hardly be said that this pedicel belongs to the tentacle, but is rather a lateral hernia of the walls of the head, with a hollow interior (*Fig. 2<sup>f</sup>, d*), such as is never found in the tentacles, either of the sterile forms of *Hydractinia*, or among any of the marine *Hydroids*. They vary in size and number without any apparent reference to the age or size of the hydroid to which they respectively belong. Of two fully-grown hydroids, one (*Fig. 1, A*), for instance, may have numerous and small tentacles (*h*), and the other (*Fig. 1, B*) only a few large ones (*h*). The highest number of tentacles that we have ever been able to count on any one head is sixty (*Fig. 2, K*), and the lowest, only four (*Fig. 1, F*). In the latter case, they were larger than any we have ever observed upon older hydroids of the same species. When seen in an extended state (*Fig. 2<sup>f</sup>*), it becomes evident that the tentacles are composed of two walls, the outer one of which (*a*) is continuous with the outer wall (*Fig. 3, a*) of the body, and almost entirely composed of densely packed lasso-cells (*Fig. 11, a b*), while the inner wall (*Fig. 2<sup>f</sup>, b*) is continuous with the inner wall (*Fig. 3, b*) of the body.

The body of the hydroid, or that portion which is above the horizontal uniform layer, is composed of two walls. The outer one (*Fig. 3, a*) is so thin, when compared to the inner one (*b*), that it appears like an epidermis to the latter. It commences at the tip of the proboscis, and, including the thick, lasso-cell layer of the tentacles, extends to the base of the hydroid, where it becomes continuous with the uniform, horizontal layer (*Figs. 5, a, 5<sup>a</sup>, d, 5<sup>b</sup>, a, 5<sup>c</sup>, a, and 6, d*), which forms the common basis of all the hydroids. When the hydroid is full of medusæ-buds, it is an easy matter to see that this outer wall (*Fig. 3, a*) is continuous with the outer wall (*a'*) of the medusoids. (See, also, *Figs. 7 and 8, a b*.) There are but few lasso-cells in the outer wall, below the head, the great mass of them being congregated on the tentacles.