

cavity is so entirely surrounded by the innumerable folds of the curtain, that it is entirely shut out of sight in the natural position of the animal; even when reversed, the mouth becomes visible only when the curtains are either removed or stretched out horizontally, as in Pl. IV. *Fig. 1*. It is then seen that the corners of the mouth present an indentation corresponding to the middle of the heavier fold of the arms, which forms the axis of the flowing curtains. These parts are seen from the under-side in Pl. IV. *Fig. 1*; they are seen in profile from the inside in Pl. V^a. *Fig. 14*, and from above in *Fig. 16*, in which the pillars of the actinostome (*l l*), and the genital pouches (*o s*), are cut through at different heights, in order the better to show the structure of these parts. On the right side of the figure, these pillars are cut near their connection with the concentric folds and shown to consist of two branches, separated from one another, as seen in Pl. IV. *Fig. 2*, *l l*; while on the left side of the figure, they are cut immediately above the transverse beams (*β*), so as to show that their two branches are here close together, and pass in unbroken continuity into the rod-like main folds (*s s*) of the flowing curtains. The gelatinous substance which gives strength to these pillars extends also into the main fold of the curtains, and stretches even sideways into the upper portion of that part of the curtains which is attached to the transverse beams (Pl. V^a. *Fig. 17*, *4*). In this figure, *o s* is a portion of the genital sac, *β* exhibits a transverse section of the horizontal beam, and *4* a section of the gelatinous thickening of the lateral parts of the flowing curtains. The horizontal beams, though stretching across from one pillar to the other, are slightly arched outward, as *Fig. 1*, Pl. IV. shows. It is not difficult to understand how the curtain-like portion of the actinostome is thrown into the innumerable folds it presents, as seen in Pl. III. and Pl. IV. *Fig. 1*, and Pl. V^a. *Figs. 14, 15*; since the main fold (*s s*), which corresponds to the axis of each of these curtains, is, properly speaking, homologous to the more solid portion of an arm of Aurelia, while the flowing folds correspond to its thin margin; only that in Cyanea these margins are very long and thin, and grow broader and broader as they are further removed from the medial line. At the same time, they are shorter near the junction of two arms (*dⁿ*), and longest about mid length; while the medial prolongation of each arm becomes as thin and waving as its lateral folds. The natural consequence of this arrangement is, that the main mass of the folds (Pl. V^a. *Figs. 14 and 15*, *d*), have nearly the same length, while those occupying the interval between two arms (*dⁿ dⁿ*) are gradually shorter, up to the point where two bunches meet. Compare also, Pl. IV. *Fig. 1*.

Without being as active as the tentacles, the flowing curtains of the actinostome, with their many folds, are in unceasing motion, rising, or falling, or spreading, in parts, so that larger or smaller masses of these folds may be seen shortening or