

seen from the outside, and Pl. V<sup>a</sup>. *Fig.* 14, seen from the inside. The pillars themselves, Pl. IV. *Fig.* 2 *I I*, and Pl. V<sup>a</sup>. *Fig.* 15 *I*, are also a simple prolongation of the lower floor, only that the gelatinous substance, between its outer and inner layer, is so thickened as to form solid columns between adjoining genital pouches, attached to the margin of the broad concentric areas of folds, which are immediately adjoining the ambulacral areas of concentric folds facing the intervals between the two adjoining arms of the pillars. As these pillars are themselves connected with one another, at the corners of the so-called mouth, by similar thick beams of gelatinous mass, trending horizontally, while the pillars trend radiatingly, the genital pouches are surrounded, from three sides, by these thickened portions of the lower floor; sideways, by the pillars (*I I*), as best seen in Pl. V<sup>a</sup>. *Fig.* 15, and Pl. IV. *Fig.* 2, near the mouth, by the transverse beams *3 4*, and outside, by the radiating folds, which may be seen gradually fading into the outer surface of the pouches themselves. Owing to the extraordinary amplitude of the genital pouches, which are much wider than the outline of their attachment, their walls are thrown into innumerable folds, gathered into fewer bunches, as may be seen Pl. IV. *Figs.* 1 and 2, and Pl. V<sup>a</sup>. *Figs.* 15, 18, and 19. In a transverse section of the whole animal, as seen in Pl. V<sup>a</sup>. *Fig.* 14, we look directly, in the centre of the figure, into the cavity of one of these pouches, where the attachment of its margin to the concentric folds and to the pillars of the actinostome and the horizontal beam which connects them, is plainly visible; while right and left of it two other genital pouches, opposite one another, are seen in profile. The essential difference between the genital pouches of *Cyanea* and *Aurelia* consists in the even thickness of the lower floor, over the whole of its extent occupied by the pouches; while in *Aurelia* the lower floor thickens around the genital pouches, and its thickened portions converge from all sides, so as to form a funnel-shaped cavity below the genital pouches, which remain stretched on a level with the spread of the disk; while in *Cyanea*, they hang down like large sacks, floating between the bunches of tentacles and the flowing curtains of the actinostome, as may be seen in Pl. III. and in Pl. V<sup>a</sup>. *Fig.* 14.

In order the better to appreciate the relations of the sexual organs to the genital pouches to which they are attached, one of them (Pl. V<sup>a</sup>. *Fig.* 18) has been represented as separated from the other parts of the lower floor, in such a position as to show the interior of its cavity; *o s* being the folds attached to a transverse beam of the actinostome, while the semicircular outline is the margin connected with the pillars of the actinostome and with the concentric folds. The lobes on the outside, *o f*, are the result of the folding of the sexual organ itself, forming small sacs, arranged in undulating lobes, alternately turned in opposite directions. *Fig.* 19 represents a portion of the pouch, showing its connection with the con-