

eight tentacles of one head and only four on the other. 100 diameters.

Fig. 87a. The same as fig. 37, with the tentacles retracted.

Fig. 88. A forked tentacle. 100 diameters.

PLATE Xa.

SCYPHOSTOMA OF CYANEA ARCTICA AND AURELIA FLAVIDULA, ETC.

[Figs. 1, 2, 3, 4, 4a, 5, 6, 7, 8, 10, 11, 12, 12a, 14, and 15 are drawn by H. J. Clark; figs. 4b, 9, 18, 15a, 16 to 41, by A. Sonrel.]

All the figures by H. J. Clark, and fig. 9, are *Cyanea arctica*; and all those by A. Sonrel, excepting fig. 9, are *Aurelia flavidula*. Unless when stated otherwise, the following letters refer to the same parts: *a* outer wall of the body; *a'* outer wall of the tentacle; *a''* lasso-cells; *a'''* end of the tentacle; *b* inner wall of the body; *b'* inner wall of the tentacle; *b''* radiating partition in the body; *b'''* transverse wall of the cells in the axis of the tentacle; *c* mouth; *c'* proboscis; *c''* base of the body; *d* digestive cavity; *e* *e'* tentacles; *f*, horn-like sheath; *p*, Purkinjean vesicle; *w*, Wagnerian vesicle; *y*, yolk.

Fig. 1. The mouth and one tentacle of an eight-armed scyphostoma. 500 diameters.

Fig. 2. Partially retracted tentacle of a four-armed scyphostoma. 500 diameters.

Fig. 3. Contracted tentacle of an eight-armed scyphostoma. 500 diameters.

Fig. 4. An eight-armed scyphostoma, showing the strongly contracted tentacles, the mouth wide open, and the horn-like sheath. 200 diameters.

Fig. 4a. Base of fig. 4, to show the details of the horn-like sheath. 500 diameters.

Fig. 4b. Similar to fig. 4, but the tentacles only partly retracted. 200 diameters.

Fig. 5. Actinal end of an eight-armed scyphostoma to show the details of the mouth, radiating partitions, etc. 200 diam. The arrangement of the cells around the mouth and along the tentacles shows an unmistakable resemblance to the plates forming the borders of the corresponding parts in Echinoderms, and especially in Star-fishes.

Fig. 6. Basal portion of fig. 20, Pl. X, to show the cellular structure of the walls. *a'* outer surface of the outer wall (*a*); *b'* outer surface of inner wall (*b*). 500 diameters.

Fig. 7. Tentacle of fig. 14, Pl. X, to show the lasso-cells. 500 diameters.

Fig. 8. Cells from the inner surface of the inner wall of fig. 14^a, Pl. X. 500 diameters.

Fig. 9. A to G lasso-cells of a full-grown *Cyanea*. *a* the wall of the cell; *b* the coil. 500 diameters.

Fig. 10. Lasso-cells from the tentacle of Fig. 14, Pl. X. 500 diameters.

Fig. 11. The second set of tentacles half developed, and two of the first set forked. 100 diameters.

Fig. 12. Shows one hydra fixed temporarily in the mouth of another. 100 diameters.

Fig. 12a. Actinal end of A, fig. 12.

Fig. 13. The third set of tentacles partially developed. *b''* intervals between the radiating partitions (*b''*). 100 diameters.

Fig. 14. Actinal end of a scyphostoma with ten tentacles, developed in fives, and the mouth five-sided. 100 diam.

Fig. 15. Actinal end of a scyphostoma with fourteen tentacles, in various stages of growth; the numbers refer to their relative ages. 100 diameters.

Fig. 15a. Similar to fig. 15, but very much contracted.

Figs. 16 to 24. The serial development of the egg; taken from the ovary of a full-grown *Aurelia*. 200 diam.

Figs. 25 to 36. The progressive development of the free scyphostoma planula of *Aurelia*. Figs. 26, 27, 28, 30, 31, and 32 from the ovary; figs. 25, 29, 33, 34, 35, and 36 from the pouches. 200 diameters.

Fig. 37. The proboscis and sexual organs (*e*) of fig. 22, Pl. XI^a. *a'* lips; *a''* incipient fringes of the edge of the proboscis; *d* aperture of the mouth. 20 diam.

Figs. 39, 40, and 41. Details of the proboscis of fig. 37, with the same letters.

PLATE XI.

STROBILA OF AURELIA FLAVIDULA.

[Drawn by A. Sonrel.]

Unless otherwise stated, all the figures are magnified 15 diameters. In all the figures of Plates XI, XI^a, XI^b, and XI^c, the following letters refer to the same parts, unless otherwise stated.

For the scyphostoma, *c* is the mouth or proboscis; *c'* base of body; *c''* *c'''* *c''''* offshoots from the body; *d* digestive cavity; *e* *e'* tentacles; *g* *g'* *g''* *g'''* *g''''* constrictions preparatory to the formation of the saucer-shaped disks.

For the ephyra, *a* is the proboscis; *a'* the mouth or lip; *a''* the cavity of *a*; *b* the digestive cavity; *b'* limit of *b*; *c* chymiferous canal leading to the eyes; *c'* *c''* branch of