

- Fig. 1. A male hydromedusarium attached to a seaweed. Natural size.
- Fig. 2. A portion of fig. 1. *a* the pedicels of the hydræ; *b* the reproductive calyces; *c* *c*¹ the young hydra-buds; *d* the stolon. 15 diameters.
- Fig. 3. A sectional view of a hydra pedicel (*c*²) and head. *a* outer, and *b* inner wall of the head; *c* the semi-partition; *c*¹ cavity of the calyx; *c*² pedicel; *c*³ top of *c*²; *c*⁴ the stolon; *g* digestive cavity; *t* two opposite tentacles.
- Figs. 4, 5, 6, 7, 8, 9. Progressive stages in the development of the hydra. *a* the outer, and *b* the inner wall of the head; *a*¹ outer, and *b*¹ inner wall of the pedicel; *ab* the tentacular region; *c* the semi-partition; *c*¹ cavity of the calyx; *c*² chitinous sheath; *d* the opercle; *e* point where the walls adhere to the calyx; *g* digestive cavity.
- Fig. 10. A hydra just emerging from its embryonic state. *d* the opercle; *t* the tentacles.
- Fig. 11. The bud of a fertile male hydra. *β* outer, and *γ* the inner wall; *b* chymiferous cavity; *d* the growing terminus; *i* a medusa-bud; *k* the calyx.
- Fig. 12. The same as fig. 11, but much further advanced. The letters the same; also *a*, the chymiferous cavity.
- Fig. 13. A male reproductive hydra. *a* the single chymiferous channel; *c* *c*¹ *c*² the multiple chymiferous channels; *d* the common terminal cavity; *f* radiating tubes of the medusa; *i* the spermatic mass.
- Fig. 13^a. The hydromedusa of fig. 13, taken from its calyx, and allowed to expand so as to show the point of connection (*c*¹) of the medusa to one channel of the multiple axis.
- Fig. 14. A two thirds grown hydromedusa, removed from its calyx. *a* base of the channel of *c*; *b* junction of the medusa with *a*; *c* channel of the axis; *d* expanded terminus of *c*; *f* radiating canals; *i* spermatic mass.
- Fig. 15. A female hydromedusa. *a* the main channel; *b* neck of the medusa; *c* *c*¹ *c*² *c*³ the multiple channels arising from *a*; *d* common cavity into which *c*-*c*³ empty; *e* *e*¹ *f* *f*¹ radiating tubes of the medusa; *h* actinal side of the medusa; *i* *i*¹ the planulae; *k* *k*¹ the calyx.
- Fig. 16. A mature female hydromedusa. *a* *b* *c* *c*¹ *c*² *d* *e* *e*¹ *f* *i* *i*¹ *k* *k*¹ as in fig. 15; *e*² radiating tube; *h* a portion of the medusa protruded from the calyx; *h*¹ neck of *h*; *i*² planulae.
- Figs. 17 and 17^a. A lateral and end view of a planuloid hydra from fig. 15.
- Fig. 18. A the outer cells of fig. 17; B the interior cells of the same.
- Fig. 19. A male hydromedusa, two thirds grown. *a* *b* *c* *c*¹ *d* *e* *e*¹ *e*² *f* *f*¹ *k* as in fig. 15; also *i*, the spermatic mass.
- Fig. 20. B, spermatic particles; A, a diagrammatic figure of A; C, immature spermatic particle.

PLATE XXIX.

Figs. 1-5, *CLYTIA POTERIIUM* Ag.; figs. 6-9 *C. BICOPIORA* Ag.; Figs. 10 and 11, *C. INTERMEDIA* Ag.

[Drawn by H. J. Clark.]

Fig. 1. A hydra which has developed from the head of another hydra. *a* the base of (*a*¹) the pedicel of the upper hydra; *a*² the semi-partition; *b* the terminal ring of the lower pedicel; *b*¹ terminal ring of the upper pedicel. 100 diameters.

Fig. 2. A male hydromedusa. *a* main chymiferous channel; *b* base of the multiple channels (*c*¹ *c*² *c*³); *c*¹ *c*² outer wall of the hydra; *d* common chymiferous cavity; *e* *e*¹ *e*² radiating tubes of the medusa; *f* branches of *e*; *g* *g*¹ furrow in the spermatic mass. 150 diameters.

Fig. 3. A mature male hydromedusa. Letters as in fig. 2; also *i*, the spermatic mass. 100 diameters.

Fig. 4. Similar to fig. 3, and with the same letters.

Fig. 5. A mature male hydromedusa, discharging its spermatic particles, the multiple axis partially retracted. *a* main channel; *b* base of the multiple channels (*c*¹ *c*²); *d* end of the axis; *h* the medusa; *i* *i*¹ the current of spermatic particles; *k* the calyx; *k*¹ the mouth of *k*. 100 diameters.

Fig. 6. A hydromedusarium of *Clytia bicophora*. A-G the hydra; *a* *b* *c* *f* the base of the branch of a hydra; *d* *e* the reproductive hydra; *g* the stolonial sheath; *h* the channel of the stolon. 40 diameters.

Fig. 7. A hydra from fig. 6. *c* the semi-partition; *c*² the terminal ring of the pedicel; *c*³ the teeth; *c*⁴ the sinuses between *c*³. 100 diameters.

Fig. 7^a. End view of fig. 7, with the same letters.

Fig. 7^b. A portion of the calyx of fig. 7, with the same letters. 100 diameters.

Fig. 8. The calyx of an immature hydra. *b* the terminal ring of the stem; *c* the semi-partition; *d* the filmy opercle. 200 diameters.

Fig. 9. The margin of the calyx of a mature hydra just before it emerges. *c*³ *c*⁴ *c*⁵ the teeth; *c*² the decurrent angles of the intervals (*c*¹) of the teeth (*c*³); *d* the opercle; *d*¹ line which divides the smooth from