

*c d e h i k* cells laid open, and exposing their numerous transverse partitions; *f g* mouths of cells not opened by the section; *j* transverse partition of *k*; *l* common bottom of *i* and *k*; *m* bottom of *h* and *c*, and perhaps of others. 5 diameters.

Fig. 15, 15<sup>a</sup>. *Seriatopora subulata*.

Fig. 15. Tip of a branch. *a b c d e f g h i* the cells; *f* and *i* the quadruple aperture of the cell; *k* the projection of the central column, from which four partitions radiate to the walls of the cell. 40 diameters.

Fig. 15<sup>a</sup>. Longitudinal section of a cell of fig. 15, one inch from the top of the branch. *a* mouth and *b* bottom of the cell; *c* axial column; *d e* the four cavities around the column; *f g* transverse partition; *h i* solid part of the coral; *j* bottom of the uppermost cell. 40 diameters.

TABLE XVI.

## HYDRACTINIA POLYCLINA Ag.

[Figs. 1, 1a, 1b, 1c, 1d, 1e, 2, 2a, 2b, 2c, 2e, 4a, 4b, are drawn from nature by A. Sorel; the others by H. J. Clark.]

Fig. 1. A female hydromedusarium. A B C F fertile individuals; D E G H I sterile individuals; K basal or stolon layer; *e* medusa; *h* head of fertile individuals; *p* proboscis; *s* spiny, horn-like processes from the base. 25 diameters.

Figs. 1<sup>a</sup>, 1<sup>b</sup>, 1<sup>c</sup>, 1<sup>d</sup>, 1<sup>e</sup>, different attitudes of the proboscis and tentacles which the sterile heads assume. *m* the mouth or actinostome; *t* the tentacles. 100 diameters.

Fig. 1<sup>f</sup>. Profile of a sterile female strongly contracted. *m* mouth; *t* tentacles. 60 diameters.

Fig. 1<sup>g</sup>. A fertile female hydra without any medusæ. *t* tentacles. 100 diameters.

Fig. 2. A male hydromedusarium. A B C K the fertile individuals; D E F G H I sterile individuals; letters as in fig. 1. 25 diameters.

Fig. 2<sup>a</sup>. A fertile male with the proboscis expanded and the mouth (*m*) wide open. *t* the globular tentacles. 100 diameters.

Fig. 2<sup>b</sup>. The same as fig. 2<sup>a</sup> with the mouth (*m*) shut.

Fig. 2<sup>c</sup>. A sterile male strongly contracted, so that the tops of the tentacles are globular, and in two rows (*t t'*). 100 diameters.

Fig. 2<sup>d</sup>. The tentacles more strongly contracted than in fig. 2<sup>c</sup>; the proboscis reverted and the mouth wide open. 125 diameters.

Fig. 2<sup>e</sup>. The same as fig. 2<sup>b</sup>, but the proboscis (*p*) more enlarged.

Fig. 2<sup>f</sup>. A globular tentacle of a fertile male. *a* outer and *b* inner wall; *d* prolongation of the digestive cavity. 500 diameters.

Fig. 2<sup>g</sup>. A sterile male strongly contracted. *p* proboscis; *t* tentacles. 60 diameters.

Fig. 2<sup>h</sup>. The proboscis of a sterile male. *a* outer and *b* inner wall; *d* digestive cavity; *m* mouth. 300 diameters.

Fig. 3. A fertile female crowded with medusæ. *a* outer and *b* inner wall; *a'* outer and *b'* inner wall of the medusa; *c* peduncle of the medusa; *d* digestive cavity; *d'* digestive cavity of the proboscis of the medusa; *e* eggs; *p* proboscis of the medusa; *t* tentacles; *A* a medusa foreshortened. 300 diameters.

Fig. 3<sup>a</sup>. View from the actinal end of a medusa of fig. 3. *a'* outer and *b'* inner wall; *v* yolk sac; *y* yolk; *p* Purkinjean vesicle; *w* Wagnerian vesicle; *v'* Valentinian vesicle; *A* one of the eggs in a superficial view. 500 diameters.

Fig. 4. A fertile male crowded with medusæ, which are discharging their spermatic particles. *a* partially empty and *b* entirely empty medusæ; *h* the head. 125 diameters.

Fig. 4<sup>a</sup>. Actinal end of a fertile male hydra. *a* to *i* different stages of development of the medusæ; *m* the open mouth. 100 diameters.

Fig. 4<sup>b</sup>. Similar to fig. 4<sup>a</sup>, but younger. *h* the head.

Fig. 5. A young sterile male and a portion of the retiform stolon. *a* outer wall of the stolon; *a'* outer wall of the hydra; *b* network formed by the interior wall; *c* digestive cavity; *d* inner wall; *e* and *f* horn-like spines; *p* proboscis; *t* tentacles. 300 diameters.

Fig. 5<sup>a</sup>. A portion of the edge of a stolon layer to show a budding of a new channel (*f*); *c* outer wall; *a b* line of the section from which fig. 5<sup>b</sup> was taken; *d* cells of the outer wall; *e* chymiferous canal; *f* young canal budding; *g* granular contents of *e*. 400 diameters.

Fig. 5<sup>b</sup>. A very young male hydra budding from the base. *a* outer and *b* inner wall of the stolon; *a'* outer and *b'* inner wall of the hydra; *c* digestive cavity. 400 diameters.

Fig. 5<sup>c</sup>. A section through *a b*, fig. 5<sup>a</sup>. *a a'* outer wall; *b b'* cells in *a a'*; *c* chymiferous canal of the inner wall (*d*).

Fig. 6. One of the horn-like spines of fig. 5, to show that it is covered by the retiform stolon. *a* interstices of the net-work; *b b'* the canals; *c* the spinules of the spine; *d* outer wall. 300 diameters.

Fig. 7. A very young male medusa bud. *a* outer