

covered with lasso-bearing papillæ at the base. In segments 4 and 5 another arm is visible with its marginal lobes and papillæ removed, in order to show that the arms have the same structure in the Discophorm Rhizostomæ as in the Semnostomæ, only that their margin is soldered in the Rhizostomæ, having only narrow openings for the admission of the food, instead of forming open channels. In segments 7 and 8 the base of the arm, with its papillæ *m*, is alone preserved. In segments 10 and 11, and parts of 9 and 12, the base of the oral appendages is removed to show the main cavity of the body *c c*. In segments 6' and 7 the ramifications of the chymiferous tubes are represented as they appear through the lower floor when injected. In segments 8, 9, 10, 11, and 12 different aspects of the lower surface of the lower floor are represented; in segments 11 and 12 from a specimen in which it was almost smooth; in segments 9 and 10, with various folds, concentric near the margin, convolute further inward, and pennate between the principal chymiferous tubes. In segment 8 the same arrangement prevails, but differently combined.

Fig. 3. Young specimen of *Polyclonia frondosa* seen from below. *o* eyes; *t* arms or oral appendages.

Fig. 4. Internal view of the main cavity with the four sexual pouches *o os oa*. *o* sexual organ suspended between the folds *os* of the sexual pouches; *oa* openings of the sexual pouches, alternating with the arms *t t*, *t' t'*, *t'' t''*; *s* openings of the channels of the four arms into the main cavity.

Fig. 5. Central cavity seen from below, with a few chymiferous tubes radiating from one of its corners.

Figs. 6 and 7. Openings of the channels leading into the main cavity.

Figs. 8, 9, 10, 11, 12, 13, and 14. Various kinds of lasso-bearing papillæ, *l*, from the base of the arms.

Figs. 15 and 16. Lobes of the margin of the arms with their fringes *l*, to show the openings *s*, leading into the main channel of the oral appendages.

Fig. 17. Lasso-cells.

PLATE XIII^a. Side view of *Polyclonia frondosa*, with various structural details.

Fig. 1. Profile view of *Polyclonia*, with the disk somewhat raised in front to show the opening of a sexual pouch between two arms.

Fig. 2. Transverse section of the disk.

Fig. 3. Portion of the same, magnified. *g* upper floor; *a'* layer of the chymiferous tubes; *o* lower floor.

Fig. 4. Portion of an arm, seen from its outer side, with the marginal lobes and fringes extended.

Fig. 5. The same, from the inner side. *s* channels leading into the main cavity; *d* marginal lobes and fringes; *d'* papillæ of the base of the arm.

Fig. 6. View of the disk from above.

Fig. 7. Segment of the same, in which the colored ring is not divided into several zones as in fig. 6.

Fig. 8. Portion of the margin, with two eyes, *o' o'*, in the same spheromere.

Fig. 9. Magnified portion of the margin, showing the anastomoses of the chymiferous tubes *a'*.

Figs. 10, 11, and 12. Margin of the disk, to show how the edge is thinned out into a sort of veil, beyond the marginal lobules, between which the eyes, *o* (figs. 11 and 12), are situated.

Figs. 13, 14, and 15. Eyes.

Figs. 16, 17, 18, 19, 20, 21, and 22. Eggs in various stages of development.

Fig. 23. Spermatic particles.

PLATE XIV.

STOMOLOPHUS MELEAGRIS, *Ag.*

[Drawn from nature by A. Sonrel and J. Burckhardt.]

Fig. 1. Profile view of *Stomolophus Meleagris*.

Fig. 2. Profile view of the oral appendages, presenting two rows of prominent crests, the upper of which is concealed under the disk in their natural position.

Fig. 3. Transverse section across the upper part of the oral appendages, just below the main cavity.

Fig. 4. View of the oral appendages from below. The letters and figures in figs. 2, 3, and 4 correspond to one another.

Fig. 5. One of the crests of the upper row seen sideways.

Fig. 6. The same, its two halves being separated.

Fig. 7. One of the crests of the lower row seen sideways.

Fig. 8. The end of the same seen from above.

PLATE XV.

PENNARIA GIBBOSA *Ag.*, MILLEPORA ALCICORNIS *Linn.*,
POCILLOPORA DAMICORNIS *Lmk.*, SERIATOPORA SUBULATA *Lmk.*

[Figs. 1, 1a, 2, 9, 10, 11, 12, 13, 14, 14a, 15, and 15a drawn from nature by A. Sonrel; figs. 4, 5, 5a, 5b, 5c, 6, 7, and 8 by H. J. Clark, from sketches by L. Agassiz and the help of alcoholic specimens; fig. 3 by J. Burckhardt.]

Millepora, Pocillopora, and Seriatopora were thus far referred to the Polyps.