

of either hydra or medusa; a^2 the thickened oral end of the disk; b and b' inner wall of the same; b^2 the spermatid mass; c and c' the horn-like sheath; d proboscis of the medusa; e and e' ephymerous canal or cavity; f stolon; m mouth of the hydra; t tentacles.

Fig. 17. A hydra (B) and a young medusa (A) arising from the same stolon.

Fig. 18. A very young medusa, with a large proboscis.

Fig. 19. A half ripe medusa, with the proboscis expanded.

Fig. 20. A ripe medusa, with a shrivelled proboscis.

Fig. 21. A medusa which has discharged its spermatid particles.

Fig. 22. A medusa metamorphosing into a hydra.

Fig. 23. Spermatid particle of the medusa of fig. 20. A is magnified 500 diameters; B is exaggerated, to show the form.

PLATE XXI.

CLAVA LEPTOSTYLA Ag.

[Figs. 1, D, and fig. 3, from nature, by H. J. Clark; the others by A. Sorel.]

All the figures are lettered correspondingly. a the tentacles; b the medusae; c the head of the hydra; d the slender base of the hydra; e the stolon; f the outer, and f' the inner wall; g the digestive cavity or ephymerous canal; g' the mouth; n the pedicel of the bunch of medusae; p the proboscis of the medusae.

Fig. 1. A hydromedusarium attached to a sea-weed. Natural size.

Fig. 2. A hydromedusarium, magnified to show the various forms and attitudes of the individual hydras. A to H. 25 diameters.

Fig. 3. A young hydra, just commencing to bud. 60 diameters.

Fig. 4. A young hydra, with very few tentacles. 60 diameters.

Fig. 5. A young hydra, transversely wrinkled by contraction. 60 diameters.

Fig. 6. A young hydra, having nine or ten tentacles, with the mouth wide open. 60 diameters.

Fig. 7. A young hydra, with no more tentacles than that of fig. 6, but much larger. 60 diameters.

Fig. 7^a. View of fig. 7 from above, the mouth wide open. 60 diameters.

Fig. 8. Mouth and upper tentacles of a full-grown hydra, showing the proboscis reverted. 80 diameters.

Fig. 8^a. A single bunch of medusae from fig. 8. 80 diameters.

Fig. 9. The same as fig. 8, but strongly contracted. 200 diameters.

Figs. 10 and 10^a. The young hydra or planula, just escaped from the medusa, and swimming about by means of vibratile cilia. 200 diameters.

PLATE XXII.

Figs. 1-20, THAMNOCNIDIA SPECTABILIS Ag.; Figs. 21-30, T. TENELLA Ag.

[Figs. 1-16 and 17, drawn by H. J. Clark; the others by A. Sorel.]

In figs. 1 to 14, a outer wall of the medusa; a' outer wall of the pedicel of the medusa; b inner wall of the medusa; b' inner wall of the pedicel; c ephymerous cavity; d proboscis; d' proboscis seen through the young hydroid; e germ basis; e' young hydroids; e'' cavity of the disk; f tentacles; st basal end of the hydroid; p proboscis of the hydroid; t tentacles of the hydroid.

These figures (1-15) represent the origin and mode of growth of the medusa and the hydroids which it contains. Figs. 1, 4, 6, 6^a, 7, 8, 9, 10, 11, 12, 13, and 14, are magnified 100 diameters; figs. 2, 3, and 5, 300 diameters; figs. 4^a and 8^a, 200 diameters; fig. 15, 60 diameters. August, 1851.

In figures 15 to 30, excepting when stated otherwise, a is the base of the proboscis; b the oral end of the proboscis; b' the top of the stem; c the inner margin of the open mouth; d the medusae; d' young medusae-buds; e medusiferous branches; p proboscis; p' decurrent bases of proboscidal tentacles; t coronal tentacles; t' proboscidal tentacles; t'' branching coronal tentacles; t''' aperture of proboscis.

Fig. 15. A young hydroid just set free. 60 diameters.

Fig. 16. Hydromedusarium of *T. spectabilis*. Natural size.

Fig. 17. A bunch of female medusae, in different stages of growth. 25 diameters.

Fig. 18. End view of the proboscis.

Fig. 18^a. Profile view of fig. 18.

Fig. 19. Birds-eye view, showing the gaping mouth and the constricted proboscis.

Fig. 20. The proboscis enormously distended.

Fig. 21. Hydromedusarium of *T. tenella*. Natural size. a the new branches; b the stems of the individual hydroids.

Figs. 22 to 30. Magnified 25 diameters.

Fig. 22. Shows the coronal tentacles, contracted so as to appear globose at the tip.

Fig. 23. Birds-eye view, to show the circle of medusiferous branches around the proboscis.