Fig. 5. A calycle, pedicel, and a joint of the stem, in sectional profile. a a^1 the thickness of the calycle walls (a is one third too thick); e e^1 the thickness of the sheath; f–g upper and lower ends of the joint of the stem; h the base of the pedicel; k the semi-partition; m the deflected edge of k. The arrows are explained in figs. 5ª and 6. 100 diameters.

Fig. 5ª. An end view of fig. 5, seen as if along the arrow 2, a little oblique to the axis. a the edge; e corresponds to a in fig. 5; b the tentacles; d the outskirts of the proboscis.

Fig. 6. A view of a terminal hydra, its pedicel and the last joint of the stem, seen as if along the arrow 3 of fig. 5. a the calycle; b cavity of a; d the proboscis; e the horn-like sheath of the stem; g the base of the joint; h the next joint below g; i outer wall of the stem; k semi-partition.

Fig. 7. The base of a calycle. k l m n various parts of the semi-partition. 500 diameters.

Fig. 8. A stem viewed so that the hydræ (A–F) project toward, and directly from, the eye. 40 diameters.

Fig. 9. A hydrarium creeping over a sea-weed. Natural size.

Fig. 9ª. A view of one quarter of the medusa. a the eyes; β the base of the tentacles; γ the lateral swellings of the tentacles; f the circular canal; f^1 the genital organ; h^1 the base of the proboscis (p); t tentacles; v the veil. 200 diameters.

Fig. 10. The terminal half of an immature hydromedusa. β outer, and γ inner wall of the axis; A A¹ the medusæ; e the chymiferous channel; d the undeveloped end of the axis; k the calycle; k^1 the opercle; k^2 the edge of k^1; m mouth of A; t tentacles of A. 400 diameters.

Fig. 11. A mature hydromedusa. β outer, and γ inner wall of the axis; β' β''' processes from β; β'' outer, and γ' inner wall of the young medusa (G); A–G the medusæ; a the axis; d^1 the chymiferous channel; k the calycle; k^1 the aperture of the calycle; k^2 the depressed base of the neck; k^3 the edge of the depression (k^2); p the proboscis of the medusa; t the tentacles of the medusa. 400 diameters.

Fig. 12. A quarter of a medusa, at the time of birth. a the eyes; β base of the tentacles; γ lateral swellings of t; a outer, and b middle wall of the disk; a^1 outer, and b^1 inner wall of the tentacles; f circular tube; f^1 radiating tube; g^2 wall of f^1; h^4 mouth of the proboscis (p); t t^1 the tentacles; v the veil. 400 diameters.

Fig. 13. A young medusa-bud in profile; h the radi-

nating tubes, or inner wall; h^1 the disk. 300 diameters.

Fig. 13ª. An end view of fig. 13. h as before.

Fig. 14, 14ª. Cells from the outer wall of p, fig. 12. 500 diameters.

Fig. 15. Cells from the lower surface of fig. 12. 500 diameters.

Fig. 16. Two medusæ (A B) from fig. 11. h h^1 as in fig. 13; h^2 outer, and h^3 inner wall of the pedicel. 400 diameters.

Fig. 17. A medusa from fig. 11, in profile; h h^1 h^2 h^3 as in fig. 16; h^4 chymiferous cavity. 300 diameters.

Fig. 18. A medusa just escaped from the calycle; seen from above. Letters as in fig. 12. 300 diameters.

Fig. 18ª. A tentacle of fig 18, a in profile, to show the prominence of the eye (a).

Fig. 19. The natural size of fig. 18.

Fig. 20. A tentacle from fig. 18, seen from above. a outer wall of the disk; b^1 axial or inner wall of the tentacle; f circular tube; f^1 radiating tube; g g^1 innermost wall of the disk; l lasso-cells; β centripetal projection of the axial wall of the tentacle; γ lateral swelling of the base of the tentacle. 500 diams.

Fig. 21. An oculiferous tentacle, from fig. 18, seen from below. a b^1 g^1 f^1; as in fig. 20; a the eye; a^1 the lenticular body of a; v the veil.

Fig. 21ª. The lateral swelling, γ, fig. 21, seen isolately.

PLATE XXXV.

PHYSALIA ARETHUSA *Til.*

[Drawn from nature by A. Agassiz and A. Sonrel.]

Fig. 1. Specimen floating quietly upon the surface of the water, with tentacles drooping loosely, seen from the windward side.

Fig. 2. The same specimen from the opposite side.

Fig. 3. Transverse section of the floating hydra, to show the relations of the secondary hydræ and clusters of hydræ and medusæ.

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