PLATE XLI.

PAGE

Figs. 1–4. *Disyringa dissimilis*, ... 161

Figure 1. The sponge; nat. size. On the right of the upper end of fig. 1*d* a section is shown of the cloacal tube; in a corresponding position at the lower end a transverse section of the poriferous incurrent tube; fig. 1*b* represents the termination of the cloacal tube; the sponge of fig. 1*c* possesses the longest incurrent tube observed, and this is not complete.

„ 2. The sponge, restored from the fragments shown in the preceding figure; nat. size.

„ 3. A diagrammatic median longitudinal section through the sponge; nat. size. *a*, A transverse section through the cloacal tube; *b*, a transverse section through the incurrent tube; *c*, a transverse section through the sponge in the region just where the incurrent tube divides after entering the sponge.

„ 4. Transverse section through the body of the sponge, showing the symmetrical arrangement of the excurrent and incurrent canals which alternate with each other. *I*, incurrent, *E*, excurrent canals; × 4.

„ 5. A facial view of the wall of the excurrent tube of *Tribrachium schmidtii*, seen from without; × 73. (The figure would answer as well for the excurrent tube of *Disyringa dissimilis*.)

Figs. 6–21. *Tetilla pedifera*, ... 6

„ 6. The sponge; nat. size.

„ 7. Section at right angles to the surface, showing the folding of the spongophare; sperm-clusters will be observed in places; × 73.

„ 8–12. Spicules—

Fig. 8. Anisocladal protrisene; × 180. The rhabdome of this should have been represented as broken at the centripetal end.

„ 9. Promonæne; × 180.

Fig. 10. Cladal end of anisocladal prodisene; × 180.

„ 11. Cladal end of anisocladal protrisene; × 180.

„ 12. Cladal end of an anamonæne; × 180.

„ 13. Spermatoblast; × 292.

„ 14. The earliest stage of segmentation observed; × 292.

„ 15. A developing sperm-cluster; × 292. Fig. 15*a*, a few of the segmentation cells of the preceding, more highly magnified; × 576.

„ 16. Sperm-cluster, almost mature; × 292. Fig. 16*a*, some of the developing spermatozoa, more highly magnified; × 576.

„ 17. A sperm-cluster in a stage somewhat later than that of fig. 15; × 292. Fig. 17*a*, some of the segmentation cells, more highly magnified; × 576.

„ 18. Sperm-cluster in a stage more advanced than the preceding; × 292.

„ 19. An abnormal appearance presented by a sperm-cluster; × 292.

„ 20. A mature spermatozoon; × 576.

„ 21. A problematical body, apparently the segmentation of an ovum; × 292.