

PLATE IV.

Figs. 1-5. *Polycyclus lamarcki*, n. sp.

Figs. 6-11. *Polycyclus jeffreysi*, n. sp.

Figs. 12-18. *Sarcobotrylloides wyvillii*, n. sp.

a. Anus.
 at. Atrial aperture.
 b.c. Blood-corpucle.
 br. Branchial aperture.
 d.l. Dorsal lamina.
 d.t. Dorsal tubercle.
 en. Endostyle.
 gm, gm'. Buds in different stages of development.

i.l. Internal longitudinal bar of branchial sac.
 m. Mantle.
 n.g. Nerve ganglion.
 o. Oesophagus.
 pig. Mass of pigmented cells.
 p.p. Peripharyngeal band.
 r. Rectum.
 sg. Stigmata of branchial sac.

sph. Sphincter.
 st. Stomach.
 t. Test.
 t.k. Terminal bulb on vessel in test.
 tu. Tentacles.
 tr. Transverse vessel of branchial sac.
 v. Vessel in test.
 z. Prebranchial zone.

- Fig. 1. Colony of *Polycyclus lamarcki*; natural size.
- Fig. 2. Anterior part of Ascidiozoid of *Polycyclus lamarcki*, seen from the branchial sac; magnified (S., 1 inch).
- Fig. 3. Part of the dorsal region of an Ascidiozoid of *Polycyclus lamarcki*; magnified (S., 1 inch).
- Fig. 4. Surface view of the anus of *Polycyclus lamarcki*; highly magnified (S., $\frac{1}{4}$ inch).
- Fig. 5. Optical section of the anus of *Polycyclus lamarcki*; highly magnified (S., $\frac{1}{4}$ inch).
- Fig. 6. Colony of *Polycyclus jeffreysi*; natural size.
- Fig. 7. An Ascidiozoid of *Polycyclus jeffreysi*, seen from the right hand side; magnified (S., 1 inch).
- Fig. 8. Diagram of the vessels in the test of *Polycyclus jeffreysi*; magnified (S., 1 inch).
- Fig. 9. Part of the branchial sac of *Polycyclus jeffreysi*, seen from the interior; magnified (S., 1 inch).
- Fig. 10. Anterior part of an Ascidiozoid of *Polycyclus jeffreysi*, seen from the branchial sac; magnified (S., 1 inch).
- Fig. 11. The atrial siphon of *Polycyclus jeffreysi*; highly magnified (S., $\frac{1}{4}$ inch).
- Fig. 12. Colony of *Sarcobotrylloides wyvillii*; natural size.
- Fig. 13. Vessels from the test of *Sarcobotrylloides wyvillii*, showing the contained buds; magnified (S., 1 inch).
- Fig. 14. Part of the branchial sac of *Sarcobotrylloides wyvillii*, seen from the exterior; magnified (S., 1 inch).
- Fig. 15. Diagram showing the arrangement of the Ascidiozooids in the test of *Sarcobotrylloides wyvillii*; magnified (S., 1 inch).
- Fig. 16. Tailed larva of *Sarcobotrylloides wyvillii*, seen from the dorsal surface; magnified (S., 1 inch).
- Fig. 17. Tailed larva of *Sarcobotrylloides wyvillii*, seen from the side; magnified (S., 1 inch).
- Fig. 18. Portion of the tail of the larva of *Sarcobotrylloides wyvillii*, showing the large cells forming the urochord; highly magnified (S., $\frac{1}{4}$ inch).