

PLATE XLII.

Figs. 1-4. *Diplosoma macdonaldi*, n. sp.

Figs. 5-16. *Diplosomoides molle*, n. sp.

*bl.* Bladder cell.  
*br.* Branchial aperture.  
*br.s., br.s'* Branchial sac.  
*d.l.* Dorsal lamina.  
*d.t.* Dorsal tubercle.  
*en.* Endostyle.  
*i., i'* Intestine.

*l.* Languet.  
*l.v.* Fine longitudinal vessels of branchial sac.  
*m.f.* Muscle fibres.  
*œ.* Œsophagus.  
*p.p.* Peripharyngeal band.

*sg.* Stigmata of branchial sac.  
*st, st'* Stomach.  
*t.c.* Test cells.  
*tn, tn'* Tentacles.  
*tr.* Transverse vessel of branchial sac.  
*v.ap.* Vascular appendage.

- Fig. 1. Colony of *Diplosoma macdonaldi*, attached to a Hydroid Zoophyte along with a Polyzoon and a Sponge; natural size.
- Fig. 2. Part of colony of *Diplosoma macdonaldi*, showing Ascidiozooids; magnified (S., 1 inch).
- Fig. 3. Part of test of *Diplosoma macdonaldi*; highly magnified (S.,  $\frac{1}{4}$  inch).
- Fig. 4. Part of branchial sac of *Diplosoma macdonaldi*; highly magnified (S.,  $\frac{1}{4}$  inch).
- Fig. 5. Colony of *Diplosomoides molle*; natural size.
- Fig. 6. Part of colony of *Diplosomoides molle*, showing Ascidiozooids; magnified (S., 1 inch, reduced).
- Fig. 7. Ascidiozooid of *Diplosomoides molle*, seen from right side, showing gemmation (*br.s', st', i'*); magnified (S., 1 inch).
- Fig. 8. Another Ascidiozooid of *Diplosomoides molle*, seen from right side, showing gemmation; magnified (S., 1 inch).
- Fig. 9. Ascidiozooid of *Diplosomoides molle*, seen from left side; magnified (S., 1 inch).
- Fig. 10. Vascular appendage of *Diplosomoides molle*; highly magnified (S.,  $\frac{1}{4}$  inch).
- Fig. 11. Optical section of bulb on vascular appendage; highly magnified (S.,  $\frac{1}{4}$  inch).
- Fig. 12. Spicules from test of *Diplosomoides molle*; highly magnified (S.,  $\frac{1}{4}$  inch).
- Fig. 13. Anterior end of Ascidiozooid seen from branchial sac, showing tentacles, &c.; highly magnified (S.,  $\frac{1}{4}$  inch).
- Fig. 14. Part of branchial sac of *Diplosomoides molle*; highly magnified (S.,  $\frac{1}{4}$  inch).
- Fig. 15. Small part of dorsal edge of branchial sac of a young Ascidiozooid of *Diplosomoides molle*, showing languets; highly magnified (S.,  $\frac{1}{4}$  inch).
- Fig. 16. Dorsal languets of an adult Ascidiozooid of *Diplosomoides molle*; highly magnified (S.,  $\frac{1}{4}$  inch).