

PLATE XLVIII.

PAGE

Fig. 1. *Esperella lapidiformis*, portion of section of embryo; *a.*, portion of the main mass; *c.*, cap of large, nucleated cells; *n.*, nuclei; *m.*, investing membrane; $\times 190$,

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Fig. 2. *Esperella murrayi*, portion of horizontal section, taken at right angles to the surface; *ect.*, ectosome; *ch.*, choanosome; *p.a.*, crack-like pore-area, seen in transverse section; *s.*, elongated subdermal cavity, seen in transverse section; *i.c.*, inhalent canal, seen in longitudinal section; *e.c.*, exhalent canal, seen in transverse section; *f.c.*, flagellated chambers, lying in the trabeculæ of tissue between the inhalent and exhalent lacunæ (*l.*); *d.s.*, dermal skeleton; *f.*, fibres of the main skeleton; *e.*, embryo, in the act of escaping through an exhalent canal; $\times 13$, xxx, xxxix, xlvi, &c.

Fig. 2a. Portion of the surface of the sponge, showing the crack-like pore-areas, *p.a.*; the pore-bearing dermal membrane has been removed at *p.a'*, showing the openings of the inhalent canals (*i.c.*) in the floor of the elongated subdermal cavities (*s.c.*); $\times 2$.

Fig. 2b. Portion of the dermal membrane from a pore-area; *p.*, the pores; *f.*, the bands of fibrous (muscular) tissue; *n.*, the nuclei of the epidermic cells; *n'*, the nuclei of the fibrous cells; $\times 180$.

Fig. 2c. Portion of a section like that represented in Fig. 2, more highly magnified; comprising only the ectosome surrounding an inhalent canal (*i.c.*); *c.*, darkly staining, amœboid (?) cells, lying in the gelatinous ground-tissue; *t.*, trichodragmata; *w.*, walls of the inhalent canal; *s.*, sigmata, projecting into the lumen of the inhalent canal; $\times 190$.

Fig. 2d. Portion of section of the choanosome; *f.c.*, flagellated chambers; *c.*, mesodermal cells; *e.*, epithelial cells lining the canals; $\times 190$.

The spicules are printed in blue.