

PLATE XLIX.

PAGE

Fig. 1. *Raspailia tenuis*, transverse section of axis (*a*) and tissues immediately surrounding it; *g.*, granular cells, seen in transverse section; *c.*, globular cells of unknown function; × 190, . . . . . xxii

Fig. 1a. Portion of longitudinal section in the same region; *a.*, axis; *g.*, granular cells seen in longitudinal section; × 190.

Fig. 2. *Axinella* (?) *paradoxa*, portion of section of choanosome; *i.c.*, inhalent channels; *f.c.*, flagellated chambers; *e.c.*, exhalent channels; *m.c.*, mesodermal cells; × 290, . . . . . xxii, xlvi

Fig. 2a. Portion of a band of elongated mesodermal cells (*g.*) found accompanying a skeleton fibre; × 290.

Fig. 3. *Phakellia ventilabrum*, var. *connexiva*, section through a frond, taken at right angles to the surface; *o.*, oscula; *d.m.*, dermal membrane; *p.*, pores; *i.c.*, large inhalent canals, or subdermal cavities; *e.c.*, exhalent canals; *f.c.*, flagellated chambers; × 18, . . . . . xxx, xli, xliii, xlv

Fig. 4. *Cladorhiza* (?) *tridentata*, radial, vertical section through one of the marginal, globular bodies (*g.b.*); *gl.*, glandular organs; *s.*, jelly-like secretion (?); *ch.*, choanosome; × 44, . . . . . xxxiv

Fig. 4a. Small portion of section through the interior of a globular body, showing the irregularly shaped cells (*c.*), lying in the jelly-like matrix; × 284.

Fig. 4b. Section through one of the cup-shaped, glandular organs; *g.c.*, the individual cells (or nuclei of the cells) of which it is composed; × 284.

*The spicules are printed in blue.*