

Figs. 1-13. *Corallistes masoni*,

Figure 1. Sponge; nat. size.

„ 2-8. Spicules—

Fig. 2. Dichotriæne; × 63.

„ 2a. Cladome, seen *en face*; × 63.

„ 3. A very young form of desma; × 73.

„ 4. Another young form, more enlarged, showing the crepis; × 180.

Fig. 5. A stage further advanced; × 180.

„ 6. A stage still later; × 73.

„ 7, 8. Fully grown desmas; × 73.

„ 9. Section through part of the choanosome, showing a strand of fusiform cells, the function of which is unknown; × 225.

„ 10. A part of the choanosome, showing flagellated chambers; × 225.

„ 11. Epithelial surface seen on the walls of one of the canals; × 430.

„ 12. Section through part of the cortex, showing vacuolar connective tissue; × 360.

„ 13. Section at right angles to the surface of the sponge, showing the general appearance of the cortex: the clear oval spaces of uniform size are the vacuoles of the vacuolar connective tissue; × 95.

Figs. 14-19. *Corallistes typus*,

„ 14. The sponge; nat. size.

„ 15. The face of a section taken through a median vertical plane; nat. size.

„ 16. Section at right angles to the surface, showing the arrangement of the hard parts in the ectosome; × 125.

„ 17. One of the problematical hollow siliceous bodies (Diatoms?) strewn through the ectosome; × 292.

„ 18. Dichotriæne; × 63; fig. 18a, cladome of the preceding seen *en face*; × 63.

„ 19. Centrotylote microxea, which was observed as an adventitious form apparently resulting from the modification of a spiraster; × 292.

Figs. 20-22. *Pachymatisma johnstonia*,

„ 20. Part of figure 21, more highly magnified; × 292.

„ 21. Transverse section through one of the oscular canals of the cortex; × 51.

„ 22. The epithelium of an intercortical canal, seen *en face*; × 360.