

Figure 1. Sponge; nat. size.

„ 2. The same, showing the cut face from which the thin slices were prepared; nat. size.

„ 3-8. Spicules—

Fig. 3. Dichotriæne; × 73.

„ 4. Oxea; × 73.

„ 5. Microxea; × 73. The two figures to the right the same; × 292.

„ 6. Spiraster; × 73. The four figures vertically below this are examples of the same more highly magnified, the first three × 292, the last × 360.

„ 7, 7a-7e. Rhabocrepid desmas, × 73; 7b', the crepis, × 292.

„ 8. The young desma at a very early stage; × 73.

Fig. 8a. The same at a stage slightly more advanced, showing the crepis in the middle of the epirabd; × 73.

„ 8b, 8c, 8d. All young forms of desma; × 73. 8d'. The crepis as seen in 8d more highly magnified; × 292.

„ 8e. The epactine of a desma showing the crepis and the enveloping granular and clear layers; × 292.

„ 8f. Two desmas, showing the mode of zygosis; × 73.

„ 9. Section at right angles to the surface, showing the general characters of the cortex and choanosome; × 12.

„ 10. A part of the choanosome of the preceding, more highly magnified, to show the characters of the chamber-system; × 292.

„ 11. Flagellated chambers, showing the fenestrated membrane; × 430.

„ 12. Two choanocytes; × 540.

„ 13. Part of the cortex to show its histological characters; × 360.

„ 14. A problematical cell from the choanosome; × 430.

„ 15, 15a. Sections at right angles to the surface of desmas, showing associated protoplasmic structures; × 540.

„ 15b, c, d. Protoplasmic structures coating the surface of the desmas seen *en face*; × 540.