

frequently collected together into clusters, and though most conspicuous in the ectosome, are not confined to it, but extend generally throughout the sponge.

The subdermal cavities communicate with the exterior by short, dome-like, upward extensions, which, penetrating the roof, open in the pores. The sarcenchyme of the choanosome extends up to the epithelium of most of the canals; but the main excurrent canals are surrounded by collenchyme, which forms a strong partition between them, where they approach each other about the axis of the sponge. The collenchyme in this position is rendered highly fibrous by numerous fibrillated fusiform cells irregularly distributed through it. The main incurrent canals are crossed by vela.

The flagellated chambers communicate with the excurrent canals by short wide aphodi, which are sometimes absent, the chambers then becoming curypylous.

A complete passage can be traced from the young triænes with simple cladi, which lie in the choanosome, up to the adult forms with bifurcate cladi, which extend beneath the outer epithelium. The chiasters are most numerous in the ectosome, and in the walls of the larger excurrent canals; in the neighbourhood of the flagellated chambers they are rare.

Myriastræ simplicifurca, Sollas (Pl. XII. figs. 29-33).

Myriaster simplicifurca, Sollas, Prelim. Account, Sci. Proc. Roy. Dubl. Soc., vol. v. p. 189, 1886.

Sponge (Pl. XII. fig. 29).—Small, rounded, compressed, cylindrical, produced into lobes below; one small oscule on the upper surface,¹ pores in sieves generally distributed.

Spicules.—I. Megascleres. 1. *Oxea* (Pl. XII. fig. 30), fusiform, straight or curved slightly, usually sharply pointed, 2.0 by 0.0316 mm.

2. *Orthotriæne* (Pl. XII. fig. 31), a straight conical rhabdome attenuated to an exceedingly sharp point, and with three simple cladi springing forwards at an angle of about 45° with the produced axis of the rhabdome, and then extending horizontally; rhabdome 2.325 by 0.055 mm., cladi 0.366 by 0.054.

3. *Anatriæne* (Pl. XII. fig. 32), a straight, slender, cylindrical, usually very sharply pointed rhabdome, and curved, conical, sharply pointed cladi, which proceed from the rhabdome almost at right angles for about half their length, and then curve backwards till nearly parallel with it. The front of the cladome is thus usually flattened, though sometimes rounded; rhabdome 1.86 by 0.0296 mm., cladi 0.12 mm. long, chord 0.127 mm.

II. Microscleres. 4. *Chiaster* (Pl. XII. fig. 33), actines tylote, 0.012 mm. in diameter.

Colour.—Yellowish-white.

Habitat.—Station 186, September 8, 1874; lat. 10° 30' S., long. 142° 18' E.; depth, 8 fathoms; bottom, coral mud.

¹ The sponge as represented in the plate is inverted.