

*Myriastra subtilis*, Sollas (Pl. XIV. figs. 23–28).

*Myriastra subtilis*, Sollas, Prelim. Account, Sci. Proc. Roy. Dubl. Soc., vol. v. p. 188, 1886.

*Sponge* (Pl. XIV. fig. 23).—Small, cylindrical, compressed, rounded above, produced into a few short rounded lobes below; at the summit a few small oscules of different sizes, each leading into a deep cloacal tube, which receives several small excurrent canals. Pores in sieves, generally distributed over the surface.

Flagellated chambers from 0·02 to 0·036 mm. in diameter, with an apopyle from 0·0118 to 0·016 mm. in diameter; aphodus short, about 0·016 mm. long, and of the same diameter as the apopyle; sometimes absent, when the chamber becomes eurypylous.

*Spicules*.—I. Megascleres. 1. *Oxea* (Pl. XIV. fig. 24), fusiform, straight or slightly curved, ends variable, sharply or bluntly pointed, or rounded off, or somewhat mucronate, like a lead-pencil point; 1·33 to 1·51 by 0·0316 mm.

2. *Dichotriæne* (Pl. XIV. fig. 25), with a straight conical rhabdome, pointed variably like the oxea, and bifurcated cladi, the protocladi projecting forwards, the deuterocladi extending horizontally. Rhabdome 1·16 to 1·33 by 0·04 mm., protocladi 0·16 mm., deuterocladi 0·0413 mm. long; chord 0·4 mm.

3. *Anatriæne* (Pl. XIV. fig. 26), with a straight, cylindrical, sharply pointed rhabdome, and short, curved, sharply pointed cladi; distal outline of the cladome nearly semicircular. Rhabdome 1·16 by 0·012 mm., cladi 0·04 mm. long, chord 0·06 mm.

II. Microsclere. 4. *Chiaster* (Pl. XIV. figs. 27, 28), actines tylote, variable in number, frequently very numerous, rarely reduced to three or four; from 0·008 to 0·01 mm. in diameter; when reduced to a triradiate form, each actine 0·008 mm. in length.

*Colour*.—Greyish-white.

*Habitat*.—Kobé, Japan; depth, 8 to 50 fathoms.

*Remarks*.—Two specimens of this sponge are in the collection; one fragmentary, and the other complete, the latter is 15 mm. high, 10 mm. and 11 mm. in breadth and width. At the summit are three oscules, the largest 1 mm. in diameter. The ectosome varies from about 0·18 to 0·32 mm. in thickness; it consists of collenchyme, which immediately below the outer epithelium passes in some places into a layer of darkly stained tissue containing numerous minute oval vesicles, about 0·006 mm. in diameter, each containing an oval protoplasmic mass; these cells become more densely crowded together as they are traced towards the exterior; elsewhere this tissue is replaced by a layer of fusiform cells, probable myocytes. In the midst of the ectosome occur small cell-like aggregates, about 0·012 mm. in diameter, consisting of minute homogeneous, spherical, deeply stained bodies, about 0·003 mm. in diameter; these aggregates, the nature of which is problematical, occur in considerable numbers,