

*Psammastra murrayi*, Sollas (Pl. XXXVIII. figs. 1-12).

*Psammastra murrayi*, Sollas, Prelim. Account, Sci. Proc. Roy. Dubl. Soc., vol. v. p. 195, 1886.

*Sponge* (Pl. XXXVIII. fig. 1) more or less spherical, resembling *Craniella*; surface raised into conules of unequal size and unequal distances apart; reticulately ridged, ridges on the sides of the conules, radiating from their summits. Oscules, more than one in number, small, opening at the base or sides of the conules. Pores small, in sieves in oval areas formed by the reticulation of the surface. Cortex thick, fibrous, crowded with embedded grains of sand and other foreign bodies, produced at the base into strong fibrous processes for attachment.

*Spicules*.—I. Megascleres. 1. *Oxea*, straight, fusiform, sharply or roundly pointed; 4.65 by 0.065 mm.

2. *Plagiotriæne* (Pl. XXXVIII. fig. 3), rhabdome conical, sharply or roundly pointed at the proximal end; cladi simple, short and stout, conical, gently curving forwards and outwards. Rhabdome 3.9 by 0.071 mm., cladi 0.097 to 0.116 mm. long, chord from 0.16 to 0.175 mm.

3. *Cladoxeas* (Pl. XXXVIII. figs. 4-8), or modified triænes. Rhabdome a strongyloxa, at the oxeate end sharply or roundly pointed, at the cladal end strongylate; cladi variable in number, from two to four, usually three; simple, conical, or one or more bifurcate in a horizontal or vertical plane; proceeding from the rhabdome a little distance below its strongylate termination, sometimes projecting at right angles to the axis of the rhabdome, sometimes recurved, sometimes one or more projecting forwards, and the others backwards; the axial fibre usually proceeding outwards and backwards for the first part of its course. Rhabdome 3.22 by 0.0775 mm., extending distally beyond the cladal origin a variable distance, frequently 0.045 mm.; cladi 0.05 mm. long measured from the exterior of the rhabdome, 0.065 mm. from the cladal origin. The dimensions are very variable, and those given are to be regarded as averages.

II. Microscleres. 4. *Microstrongyle* (Pl. XXXVIII. fig. 10), a short cylindrical strongyle, sometimes constricted in the middle, minutely and irregularly spined all over the surface; 0.012 to 0.016 by 0.00395 mm.

5. *Oxyaster* (Pl. XXXVIII. fig. 11), centrum small or inappreciable, actines slender, conical, bearing a few minute erect spines near the extremities, total diameter 0.02 to 0.024 mm.

6. *Spheraster* (Pl. XXXVIII. fig. 12), centrum about one-third of the diameter of the spicule, actines conical, numerous, sharply pointed; total diameter 0.012 to 0.016 mm. The oxyasters and spherasters occur mingled together, and can only be regarded as accidental modifications of the same form.

*Colour*.—Ochreous-brown on the sides and upper surface, the ends of the conules