

arrangement which theory predicts is exactly maintained. We may therefore regard the canal system in this sponge as produced by a regular symmetrical longitudinal folding of a more or less spherical Rhagon, followed by an outgrowth at the oscular and ant-oscular poles of special excurrent and incurrent tubes. Since the symmetrical arrangement occurs in an exceptional and remarkably specialised form of Stellettid, and no trace of symmetry is present in the more normal and less specialised species, it cannot be regarded as of any phylogenetic significance.

Genus 8. *Stryphnus*,¹ Sollas.

The somal megascleres are colossal oxeas, closely strewn through the sponge, not aggregated to form fibres and not radiately arranged. The ectosomal megascleres include ortho-, plagio-, or dichotriænes. The microscleres are some form of euaster and an irregular amphiaster or sanidaster. The ectosome is composed of collenchyma densely crowded with megascleres.

Stryphnus niger, Sollas (Pl. XIX.).

Stryphnus niger, Sollas, Prelim. Account, Sci. Proc. Roy. Dubl. Soc., vol. v. p. 193, 1886.

Sponge (Pl. XIX. fig. 1), compound, massive, growing from a wide base into erect lobes and an erect winding wall-like plate of unequal height, and with a rounded margin. Oscules large, collected in groups on the summit of the wall, and on projections from its sides, and the sides of the lobes; incurrent canals large, descending from the oscules vertical to the surface. Pores singly distributed. Cortex thick, collenchymatous, oxeas distributed through it, in both tangential and radial directions. Surface even, but rough to the touch.

Spicules.—I. Megascleres. 1. *Oxea* (Pl. XIX. fig. 2); large, stout, fusiform, usually curved, variously pointed—obtusely, sharply, or rounded off; 2·38 by 0·061 mm.

2. *Dichotriæne* (Pl. XIX. figs. 3, 6), small; rhabdome conical, obtusely pointed; protocladi projecting chiefly outwards, very slightly forwards, deuterocladi horizontal. Rhabdome 0·446 by 0·0356 mm., protocladi 0·055 mm., deuterocladi 0·079 mm. long, chord 0·254 mm.

II. Microscleres. 3. *Oxyaster* (Pl. XIX. figs. 5, 8), a very small centrum and numerous slender, conical, sharply pointed actines; a single actine measures 0·014 mm. in length.

4. *Amphiaster* (Pl. XIX. fig. 9), various in form and size; typically a straight, short, cylindrical axis, with a whorl of spines at each end; occasionally the shaft terminates in sharp points, and the spines also are conical and sharply pointed; most usually the ends

¹ στρυφνός, harsh, rough; in allusion to the roughness produced by the irregularly and loosely aggregated oxeas, whether hispidating the surface or projecting from a broken face of the sponge.