

the boundary of the nucleus should have been defined by a dark line. At first I was inclined to regard these cells as developing ova, but subsequent examination leads me to think that they may be the parents of the pigment-cells, for frequently one may observe one of rounded form becoming resolved at the outer margin into a number of spherical protoplasmic bodies of about the same size as the pigment-spherules; and in one instance I observed the nucleus of one of these cells unchanged in character, but surrounded by a crowd of spherical protoplasmic bodies, many of them presenting a central cavity in which a small spherical granule could be discerned.

Canal System.—The incurrent canals of the ectosome do not form chones, they wander irregularly across it, and are continued without modification into the incurrent canals of the choanosome. The flagellated chambers are either aphodal or slightly diplodal, they vary from 0.024 by 0.028 mm. to 0.03 by 0.03 mm. in diameter.

The Skeleton.—The chief megascleres are oxeas, which are not collected into bundles or fibres, nor are fusiform cells associated with them; indeed fusiform cells are remarkably scarce in all parts of the sponge, chiefly, if not solely, occurring in the outermost layer of the ectosome. The ectosomal oxeas, which do not differ from those of the choanosome, lie in various directions, some at right angles to the surface, some obliquely, and many tangentially; a superficial layer of tangentially-lying oxeas occurs immediately below the outer epithelium. No sort of arrangement can be distinguished in the distribution of the choanosomal oxeas, which densely crowd the interior of the sponge. The dichotriænes are of remarkably small size compared to the oxeas, and are confined to the ectosome. In the plate (Pl. XIX. fig. 7) a second smaller oxea is represented as a characteristic spicule of the sponge; this is an error, due to the presence of the incrusting Monaxonid, the spicules of which must have got mixed with those of the *Stryphnus* on boiling out. The amphiasters occur throughout the sponge, but are especially characteristic of the ectosome; the oxyasters are almost peculiar to the choanosome, but a few occur in the ectosome.

Subfamily 4. RHABDASTERINA.

Heterasterose Stellettidæ in which the additional microscelere is a microrabd.

Genus 9. *Psammastra*, n. gen.¹

The ectosome is a thick fibrous cortex containing embedded foreign bodies; its surface is conulose. The megascleres include peculiar cladoxeas. The microrabd is a microstrongyle.

¹ ψάμμος, ή, sand.