

Euplectellid or not. It is not even certain whether the parietal apertures observed in the skeleton are really open during life, or whether they are covered by the soft parts.

Genus 5. *Rhabdopectella*, O. Schmidt.

Only one species has yet been referred to this genus.

Rhabdopectella tintinnus, O. Schmidt (Pl. XII. figs. 8-12).

Among the Hexactinellida from the Bay of Mexico which have been studied by Oscar Schmidt, a form occurs represented by several fragments and by one whole young specimen, in which the cup-shape manifest in the young form at least, the method in which the spicules are united by fusion and synapticula in the basal part, but more loosely in the upper portion, and further the form of the loose spicules present in the soft parts, justify its reference to the Euplectellidæ, though we do not know either the form or structure of the entire adult sponge. The inferior portion of the mature *Rhabdopectella tintinnus*, as figured by O. Schmidt,¹ presents so firm and stalk-like a mass that in spite of the muddy character of the ground in question, I am far from accepting the opinion of Oscar Schmidt, that a root-tuft must have been present, for the expanded basal plate of the young specimen by no means excludes the supposition that the sponge was fixed to some hard body.

The wide-meshed lattice-like framework of the cup-shaped body, composed as it is of greatly prolonged hexacts and numerous diacts, may well be compared with that of *Regadrella* and other firmly sessile Euplectellidæ. Of the looser spicules Oscar Schmidt has carefully described and figured several noteworthy forms. Among these the floricoles, which agree throughout with *Euplectella* floricoles, deserve special attention; further, there are discohexasters of different kinds—first, those with small transversely disposed stellate plates on the thin extremities of the long secondary rays, of which two or three are attached to every principal ray; secondly, those with hemispherical, marginally toothed terminal umbels borne by the thin, but externally conically thickened terminal rays, of which four occur on each principal, and in which the S-shaped curvature (Pl. XII. fig. 8) produces a mutual entanglement; thirdly, a form resembling the latter but with long, parallel, marginal prickles which run back from the hemispherical terminal disc, close to the axis of the terminal ray; and finally, a very small, on the whole spherical form in which each of the long, thick, principal rays bears five strong terminals. These five terminals are arranged in a regular manner, so that a somewhat shorter straight ray forms the direct extension of the principal, while the four other longer and slightly bent rays are disposed in a cross, and run obliquely outwards. Every terminal ray is provided with a hemispherical

¹ *Loc. cit.*, pl. viii. fig. 9.