

sheath of finely spinous oxyhexacts (Pl. LVI. fig. 12), in which the radial ray, directed towards the centre, projects into the lumen of the gastral space, while the opposite radial ray intrudes into the subgastral space, and the tangential rays, intersecting at right angles, lie in the gastral membrane (Pl. LVI. fig. 2).

The medium-sized oxydiacts, which project freely from 3 to 5 mm. outwards and upwards beyond the external surface, are unfortunately for the most part broken. They occur somewhat irregularly and are not very numerous, being probably to a large extent lost. I have not discovered any pentact prostalia similar to those which occurred in *Rossella*, and must therefore conclude that they are absent.

2. *Acanthascus dubius*, n. sp. (Pl. LVII. figs. 8-13).

To the south of Puerta Bueno, in Patagonia (Station 310, lat. $51^{\circ} 27' 30''$ S., long. $74^{\circ} 3' W.$), from a depth of 400 fathoms and a blue mud ground, a Hexactinellid was trawled, of which unfortunately only the basal part, which had grown on the ramifications of a colony of *Lophohelia*, was preserved, and that imperfectly. What remains is about the size of a man's fist, and represents the basal portion of a cup-shaped sponge, which in its entirety must have been about four times as long. The remnants of the external surface still preserved seem to be approximately smooth, but it is impossible to decide as to the presence or absence of elevations with freely projecting spicules. On the interior gastral surface of the wall (2 to 3 cm. in thickness), there are large round apertures, 3 to 8 mm. and more in diameter,—the openings of the efferent canals into the gastral cavity. The latter must have been at least 5 cm. wide.

The tissues are a good deal macerated, so that the skeleton is somewhat loose, and would have altogether fallen to pieces were it not that the larger spicules of the parenchyma are thoroughly bound together by means of synapticula and siliceous cementing masses. The somewhat thick parenchymal skeleton consists of numerous oxydiacts, either isolated or in strands, and often bound together as above noted. They vary in length, but attain no considerable thickness. Especially in the lower portions of the sponge which had grown on the *Lophohelia*, the parallel, straight, rod-like spicules are very thoroughly bound together by numerous transverse synapticula (Pl. LVII. fig. 12). The terminal portions of these spicules are usually tuberculated or rough, and are either gradually narrowed or conically pointed, or else rounded off, and sometimes even somewhat clubbed. The regular oxyhexacts which occur here and there between the numerous long diacts, are under medium size, either spinous or smooth, and in rare instances exhibit thickened or tubercled central nodes (Pl. LVII. fig. 13). Here and there small smooth oxyhexacts occur, with slender, straight rays, which do not exceed in size the numerous rosettes about to be described. Among these there is a special abundance of oxyhexasters