

4. *Anatriænes* (Pl. VIII. fig. 13) of one form only, rare; a long rhabdome, of which no complete example has been observed, and three conical widely extended cladi; rhabdome 0.03 mm. wide; cladi 0.138 by 0.0276 mm., chord 0.21 mm.

5. *Oxytylote*; a long stout conical rhabdome sharply pointed at the proximal end, at the distal end swollen into a rounded tylus, within which the axial fibre terminates abruptly without branching. One example measured 6.06 mm. by 0.095 mm. in width just below the tylus; the tylus is 0.115 mm. in diameter, and the axial fibre terminates 0.059 mm. from its end; a second example is shorter but with a thicker tylus, 3.2 mm. by 0.087 mm.; tylus 0.1302 mm. in diameter, the axial fibre terminates 0.075 from the end.

II. Microscleres. 6. *Oxyasters* (Pl. VIII. figs. 14-19), large and exceedingly numerous. The actines are long and stout, one actine of a tetrad form 0.197 by 0.0237 mm.; of a triad 0.21 by 0.025 mm.; of a dyad 0.258 by 0.024 mm.

7. *Metaster*; predominant form, a short slender axis curved once, with comparatively few long spines, proceeding from its convex side and in whorls near its ends. Total length of the spicule 0.0355, of a single spine 0.016 to 0.02 mm.

8. *Spiraster*; predominant form, a slender spire with spirally arranged spines having a roughened surface; total length 0.0355, of a single spine 0.008 to 0.015 mm.

*Colour*.—White with a somewhat yellowish-brown tinge.

*Habitat*.—Station 302, off west coast of South America, December 28, 1875; lat. 42° 43' S., long. 82° 11' W.; depth, 1450 fathoms; Globigerina ooze; bottom temperature, 35° 6 F.

*Remarks*.—Of this species, which by reason of its lobate margin and flattened form is one of the most curiously modified examples of the genus, six specimens were trawled. The largest is a cake-like mass, flattened above and below, with strongly lobate margins, the poriferous areas being confined to the sides of the lobes or the sinuses between them. It measures 50 by 35 mm. in length and breadth, and only 8 mm. in thickness; the other specimens are not so depressed as this, one measures 35 by 27 mm. in length and breadth, and 17 mm. in height or thickness, and another 30 by 27 mm. and 11 mm. In all the excurrent canals near the upper surface are plainly visible through the skin as dark channels, which radiate in stellate fashion from the oscule, subdividing as they approach the margin of the sponge.

Beneath the fenestrated membrane there is as usual a sinus or large subdermal cavity, from which the incurrent canals originate, their communication with the sinus being guarded by a sphinctral velum.

The ectosome varies from the thin skin covering the subdermal cavities to a layer 0.19 to 0.395 mm. in thickness, where it forms the pillars connecting this roof with the choanosome. The collenchyma of the ectosome contains in places collencytes, in which, enclosed within a spherical vacuole, is a darkly stained finely granular mass of reserve