

anatriænes; rhabdome swollen in the angle of the cladi. Rhabdome 21·5 by 0·025 mm.; cladi 0·196 by 0·025 mm.; chord 0·19 mm., length of the cladome 0·065 mm.

II. Microscleres. 6. *Oxyaster* or *plesiaster*. The actines usually diverge from a common centre; a single actine of a tetrad form in three different specimens of the sponge gave the following measurements; 0·175 by 0·017 mm., 0·197 by 0·0276 mm., and 0·205 by 0·0177 mm. This spicule is very abundant.

7. *Metaster*; of exceedingly various forms, passing from the spiraster into the plesiaster.

8. *Spiraster*; this is about 0·032 mm. in total length; it presents a short spire about 0·008 mm. long, with spirally arranged slender spines, each about 0·012 mm. long.

*Colour*.—Almost white; faintly grey.

*Habitat*.—Station IV., west of Gibraltar, January 16, 1873; lat. 36° 25' N., long. 8° 12' W.; depth, 600 fathoms; bottom, blue mud.

Station 24, off Culebra Island, March 25, 1873; lat. 18° 38' 30" N., long. 65° 5' 30" W.; depth, 390 fathoms; bottom, Pteropod ooze.

Station 73, near the Azores, June 30, 1873; lat. 38° 30' N., long. 31° 14' W.; depth, 1000 fathoms; bottom, Pteropod ooze; bottom temperature, 39°·4.

Also, according to Schmidt, Florida, 198 fathoms.

*Remarks*.—Four perfect specimens and some fragments of this sponge were obtained; the largest specimen, from Station 73, is 47 mm. high by 55 mm. broad; another from the same station is scarcely smaller, viz., 52 mm. high by 47 mm. broad. Each possesses but a single oscule, which is large, 7 mm. in diameter in the largest specimen. A smaller specimen from Station IV. presents two oscules, or rather three, if a very small one be taken into account. Around the margin of the oscules there is in all the agariciform specimens a smooth annular area 2 to 3 mm. wide (in the case of the largest specimen), white, and translucent owing to the presence of collenchyma beneath it, and furnished with no spicules except spirasters; outside this is the fringe of hispidating spicules, which point towards the centre of the oscule when it is situated on the summit of the sponge; when, on the contrary, it lies on one side, only the upper half of the fringe is developed, and the spicules point downwards, overhanging the oscule.

The spicular fringe of the poriferous recess is chiefly developed along the tegminal edge, and is directed downwards; when the lower margin of the recess is also provided with fringing spicules these also point downwards. The pores of the poriferous membrane are remarkably coarse in the specimens from Station 73, many of them measuring as much as 1 mm. in diameter; those of the specimen from Station IV. are much smaller.

The oscule is surrounded by collenchyma containing numerous concentric muscular fibres; it leads at once into a short wide canal which divides into several branches; these secondary canals are wide and open, not provided with a thick collenchymatous wall, nor