

longer cladus 0.197 mm., the shorter 0.1065 mm. long. In another specimen this spicule is 6.426 mm. long.

4. *Trichodal protriænes* (Pl. I. figs. 10, 11, 12). Similar in general form to the preceding, but much smaller and remarkably tenuous, so as to appear hair-like. The unpaired cladus much longer than the paired cladi. Rhabdome 1.162 mm. long; unpaired cladus 0.06 mm., paired cladi 0.012 mm. long.

5. *Somal anatriæne* (Pl. I. figs. 4, 7). Rhabdome fusiform, expanding at the cladal origin, cladi long and slender, cladome rounded off in a wide curve in front, axial fibre of the rhabdome not produced beyond the origin of the cladi. Rhabdome 0.01 mm. in diameter in the middle, tapering to a filamentous proximal end, distally at first attenuating to a diameter of 0.004 mm., then growing thicker till it attains a diameter of 0.0158 mm. immediately below the cladome; length about 6.0 mm.; cladi 0.118 by 0.012 mm. In another specimen the dimensions of the spicule are as follows:—Rhabdome 7.4 by 0.0197 mm. below the cladome, diminishing to 0.004, increasing to 0.0078 mm., and then attenuating to the proximal extremity; cladi 0.079 by 0.0118 mm., chord 0.142 mm.

6. *Radical anatriæne* (Pl. I. fig. 6). This is distinguished from the somal anatriæne by the characters of the cladome, which is more massive, and terminates distally in a rounded mucrone; the axial fibre of the rhabdome is continued forwards past the origin of the cladi to the end of the mucrone. Rhabdome from about 6.05 by 0.0355 mm. to 6.79 by 0.0276 mm., cladi 0.154 by 0.0237 mm., distal extension of axial fibre 0.0276 mm. In another specimen this spicule has the following dimensions:—Rhabdome 7.5 by 0.0276 mm. below the cladome, diminishing to 0.0118, and then increasing to 0.0158 mm.; cladi 0.122 by 0.0197 mm., chord 0.118 mm., axis of rhabdome continued past the origin of the cladi for 0.0197 mm.

II. Microsclere. 7. *Sigmaspire* (Pl. I. fig. 8). Of the usual form, from 0.0138 to 0.0197 mm. long.

*Colour*.—Ashen-grey.

*Habitat*.—Station 320, off the Rio de la Plata, South America, February 14, 1876; lat. 37° 17' S., long. 53° 52' W.; depth, 600 fathoms; bottom, green sand; bottom temperature, 37°.2.

*Remarks*.—Six specimens of this sponge were trawled. All are more or less spherical, except one which is a prolate ellipsoid. The specimen figured measures 15 mm. in height, or 30 mm. if the anchoring filaments be included, and 17 mm. in breadth; the smallest specimen is 5 mm. high by 4 mm. broad.

The single oval oscule is excentrically placed on the obliquely depressed upper surface of the specimen figured. It measures 3.18 by 1.6 mm. Its margins are produced into a short membranous tube, strengthened by a dense layer of longitudinally