

2. *Orthotriæne* (Pl. XXVIII. fig. 4), rhabdome conical, with slender cladi, curving at first outwards and very slightly forwards, afterwards extending horizontally; both rhabdome and cladi usually bluntly pointed or strongylate. Rhabdome 0.393 by 0.0237 mm., cladi 0.21 mm. in length.

II. Microscleres. 3. *Sterraster* (Pl. XXVIII. figs. 5, 6, 10–12), very various in form, more or less resembling a finger-biscuit, or shuttle-shaped, or lozenge-like; surface granulated with numerous short, cylindrical, or abruptly truncated, conical spines, which are absent over a small central area on one side, corresponding to the hilum of a *Geodia* sterraster; usually about 0.14 by 0.032 to 0.175 by 0.026 mm., sometimes narrower and longer, 0.197 by 0.0236 mm., or shorter and wider, very rarely reaching 0.122 by 0.0474 mm.; the thickness varies from about 0.008 to 0.01 mm.

4. *Somal centrotylote microstrongyle* (Pl. XXVIII. figs. 7, 13), fusiform, smooth, with rounded ends, usually curved, with a central ellipsoidal tylus, 0.07 by 0.006 mm.

5. *Choanosomal oxyaster* (Pl. XXVIII. figs. 8, 9), a few long, slender, cylindrical actines proceeding from a very small centrum, sometimes smooth, sometimes minutely spined near the sharply pointed or abruptly terminated extremities; a single actine 0.0315 mm. long, total diameter 0.063 mm.

6. *Choanosomal chiaster* (Pl. XXVIII. figs. 27, 28), centrum small, actines numerous or not, slender, cylindrical, usually roughened or minutely spined, abruptly truncated, or tylote, 0.012 to 0.016 mm. in diameter.

*Colour*.—Violet-grey.

*Habitat*.—Bahia, September 1873; depth, 7 to 20 fathoms.

*Remarks*.—The single specimen of this sponge, which is nearly but not quite complete, a small portion of the base having been torn away, measures 55 mm. in length, and about 20 to 25 mm. in breadth and height. Of the three oscules present the largest a little exceeds 2 mm. in diameter, the smallest is a little less than 1 mm.

The oscule (Pl. XXVIII. figs. 1, 2) is the slightly constricted external opening of a wider cloaca, which in the case of the largest oscule measures 4 mm. in width. The excurrent canals are traceable through the whole thickness of the sponge.

The pores are closely and generally distributed over the whole surface, a few patches here and there, as is usually the case in the Geodiidæ, being without them. They vary in diameter from about 0.064 to 0.125 mm., and are the very slightly constricted apertures of cylindrical chones, which vary from about 0.08 to 0.2 mm. in diameter (Pl. XXVIII. figs. 14–17).

The cortex (Pl. XXVIII. fig. 17), not more than from 0.2 to 0.25 mm. in thickness, consists chiefly of the sterrastral layer, which is from 0.16 to 0.2 mm. in thickness, the sterrasters lying variously orientated in tangential planes; on the inner face this passes into the usual fibrous layer, here very thin, and on the outer face into