

21 mm. in diameter. The smaller specimen differs in other details from the larger; there is but one oscule, and the oscular conules are not so much longer than those of the general surface as they are on the larger specimen; the colour is almost snow-white, while the larger one is tinted faintly brown. These external differences are accompanied by a difference in the length but not in the thickness of the spicules, those of the smaller specimen being the shorter. It occurred to me that these differences might possibly be sexual, and thin slices from both specimens were therefore particularly examined for sexual elements; in neither, however, do they exist.

The cortex presents the typical *Craniella* structure; the outer layer is from 0.32 to 1.0 mm. thick, the inner layer 1.43 to 1.93 mm. thick, and the total thickness is from 1.75 to 2.4 mm.

The flagellated chambers measure about 0.0276 and 0.037 mm. along two diameters, the prosodal canals are short, not over 0.016 mm. long, the aphodal canals are longer; the choanocytes are about 0.0039 mm. in diameter and 0.0039 mm. long, where the flagellum is not extended; where it is, they are 0.006 mm. long, and the flagellum over 0.01 mm. long.

*Craniella schmidtii*, n. sp.

*Sponge* spherical, similar to *Craniella cranium*.

*Spicules*.—I. Megascleres. 1. *Somal oxea*, fusiform, the proximal end more sharply pointed than the distal, but not filiform; 1.34 by 0.03 mm. to 1.6 by 0.04 mm.

2. *Cortical oxea* fusiform, 0.414 mm. by 0.0276 mm.

3. *Protriæne*, of this there are two varieties which pass into each other; one with shorter and stouter, the other with longer and more slender cladi; in the latter the rhabdome has a diameter of 0.0118 mm., and the cladi measure from 0.142 by 0.012 mm. to 0.16 by 0.016 mm., in the former the diameter of the rhabdome is 0.0237 mm., and the cladi measure 0.127 by 0.0237 mm.

4. *Anatriæne*, a rapidly tapering rhabdome, with the cladi extending horizontally for a great part of their course before recurving. Cladi 0.075 by 0.0158 mm., chord 0.01 mm.; the axial fibre of the rhabdome extends 0.0158 mm. beyond the origin of the cladi.

II. Microsclere. 5. *Sigmataspores* numerous, 0.0197 mm. long.

*Colour*.—Greyish-white.

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

*Remarks*.—This little sponge, 4.5 mm. in diameter, resembles in outward appearance and general structure *Craniella cranium*, Müll., of which I have given a full account in my