

*Tribrachium schmidtii*, Weltner (Pl. XVII. ; Pl. XLI. fig. 5).

*Tribrachion schmidtii*, Weltner, Beiträge zur Kenntniss der Spongien., Inaug. Diss. Freiburg, pp. 50-55, Taf. i. fig. 8 ; Taf. iii. figs. 29-41, 43, 1882.

*Sponge* (Pl. XVII. fig. 1), somewhat bulb-shaped ; consisting of a spherical body and a long, tapering, cylindrical, cloacal tube. In addition to a single terminal oscule opening at the end of the cloacal tube by a sphinctrate aperture, oscular pore-sieves occur generally distributed over the sides of the cloacal tube. Pores small, single, distributed in inter-cladal areas of the epithelium of the sponge body. Ectosome a cortex.

*Spicules*.—I. Megascleres. 1. *Oxea* (Pl. XVII. fig. 2), fusiform, with sharply pointed ends, 4.9 by 0.0671 mm. ; the average length is 4.3 mm.

2. *Somal orthotriæne* (Pl. XVII. fig. 3), rhabdome attenuating to a very finely pointed extremity ; cladi conical, sharply pointed or strongylate, diverging at first outwards and forwards, and either gradually curving into horizontality or becoming suddenly bent in the middle of their course ; usually bent in the middle in a horizontal plane, or more or less crooked, sometimes one or more cladi are bifurcate ; seldom of equal length in the same cladome. Rhabdome 4.3 to 4.9 by 0.087 to 0.095 mm. ; cladi of very various dimensions, maximum length 0.475 mm.

3. *Cloacal orthodiæne* (Pl. XVII. fig. 7). This is a reduced orthotriæne ; the rhabdome is cylindrical or slightly fusiform, tapering to a sharp point ; the cladi diverge outwards and forwards for a very short distance, and then wholly outwards. They are conical, sharply pointed and frequently more or less crooked. The forward direction of the cladi near their origin is shown by the course of the contained axial fibres, but not otherwise indicated except by a concavity lying between them in the middle of the front of the cladome. Rhabdome 3.9 by 0.043 mm. at the origin of cladome, increasing towards the rhabdal origin to 0.0592 mm. ; cladi 0.65 by 0.043 mm.

4. *Anatriæne*, often reduced to an anadiæne and anamonæne (Pl. XVII. figs. 4-6) ; rhabdome conical, attenuating to an almost filiform extremity ; cladi variable, usually extending more outwards than backwards, sharply pointed or strongylate. Rhabdome 1.35 by 0.01 mm., cladi 0.0197 to 0.0236 mm. in length, cladus of an anamonæne 0.0355 mm. in length.

II. Microscleres. 5. *Sanidaster* (Pl. XVII. fig. 8), rhabdome straight and slender ; cladi numerous, short, with rounded ends ; total length 0.012 mm., total width 0.004 mm., rhabdome about 0.001 mm. in diameter.

6. *Oxyaster*. This spicule would appear to be characteristically absent, but a single example, 0.0156 mm. in diameter, was observed in a scleroblastic cell, 0.0185 mm. in diameter.

*Colour*.—Yellowish-white.

*Habitat*.—Bahia ; shallow water, 7 to 20 fathoms ; September 1873. Weltner's