

Genus 4. *Rhabdodictyum*, O. Schmidt.

This genus contains only one species.

Rhabdodictyum delicatum, O. Schmidt (Pl. XX.).

Of the two Hexactinellids (dredged in the neighbourhood of Bequia from a depth of 1591 fathoms) which Oscar Schmidt has distinguished as varieties of one species—*Rhabdodictyum delicatum*—it appears to me, as already mentioned, that the variety A is identical with my *Dictyocalyx gracilis*. For the variety B I retain the original name. O. Schmidt describes this latter form as a “simple or branched tube with a perforated wall, formed of interwoven cords. The cords consist of amalgamated or loosely fused hexradiate spicules. The rays, which are arranged in layers in the longitudinal direction of the cords, are for the most part strikingly prolonged, so that the tissue has the appearance of being composed of irregularly intersecting rods. The free hexradiate spicules are slender, smooth when quite young, but subsequently covered with spines. The rays are very pliable. A beautiful rosette form occasionally occurs, in which each of the six rays is provided with eight intersecting umbels.”

Oscar Schmidt's figure,¹ and still more his description, have convinced me that these skeletons dredged by the Challenger in the neighbourhood of the Bermuda Islands (Station 56), from a depth of 1075 fathoms, and on coral mud, belong to *Rhabdodictyum delicatum*, O. Schmidt. They exhibit slender, almost tubular cups, with a length of 6 cm., and much broken at the upper ends (Pl. XX. fig. 1). The basal portion, which is from 6 to 10 mm. in breadth, is attached by means of a terminal expansion to some solid body, and becomes gradually widened upwards to twice this diameter or more. The wall of the tube, which in the larger specimens measures as much as 4 mm. in thickness, is radially perforated by numerous round holes. These are from 2 to 4 mm. in width, and become somewhat broader towards the exterior, at the same time increasing in diameter towards the upper end of the sponge. The arrangement of these parietal apertures is tolerably irregular in the inferior portion, but towards the superior extremity acquires more and more the character of two somewhat steep, intersecting spiral rows. The siliceous framework which forms the supporting wall is usually from 1 to 3 mm. broad between these foramina, and consists of the greatly prolonged hexact-rays firmly united by soldering and synapticula (Pl. XX. figs. 2, 3, 4).

Since the three specimens which are at my command are all incomplete and wholly macerated there is no trace of the soft tissue nor of the looser spicules of the parenchyma, skin, or gastral membrane, so that no conception of the structure of the entire sponge can be obtained sufficient to enable us to determine whether we have here to deal with a

¹ *Loc. cit.*, pl. vii. fig. 3, B.