

terminal rays are, further, for the most part somewhat wavy in their curvature (Pl. LIX. figs. 8, 9). I did not discover any small discohexasters.

The dermal and gastral skeletal elements correspond almost perfectly to those of *Bathydorus stellatus*, though it may be noted that the gastral oxyhexacts are here very varied, sometimes rough, sometimes spinous, and rarely quite smooth, as represented in Pl. LIX. fig. 7. In general, in spite of the larger size of the specimen, the rays of its hexact gastralialia are less strongly developed than in the much smaller specimens of *Bathydorus stellatus*.

The pleural and marginal prostalia are, like those of *Bathydorus stellatus*, simple smooth oxydiacts, 8 to 10 mm. in length.

4. *Bathydorus baculifer*, n. sp. (Pl. LIX. figs. 10-18).

In the middle of the South Pacific (Station 286, lat. 33° 29' S., long. 133° 22' W.), from a depth of 2335 fathoms and a red clay ground, the trawl brought up a small fragment of a sponge which apparently belongs to the genus *Bathydorus*. The specimen, as figured in Pl. LIX. fig. 10, is a tolerably smooth, approximately semicircular plate, 2 mm. in thickness. From the smooth surface some isolated simple oxydiacts project obliquely for 10 to 20 mm., while the other surface appears uniformly rough.

The spicules of the parenchyma are long, narrow, smooth diacts, with rough, conically pointed, rounded, or more rarely slightly club-shaped ends, with or without central nodes, exactly as in the other species of *Bathydorus*. Medium-sized simple hexacts occur here and there. Between these there is a very abundant occurrence of oxyhexasters with short principal rays and long straight terminals (Pl. LIX. figs. 12, 13). A few discohexasters also occur with short principal rays, each of which bears usually three diverging terminals, bent convexly outwards at their base, and carrying on their extremities minute, transverse, four-toothed, somewhat convex discs (Pl. LIX. fig. 18).

The dermal skeleton contains medium-sized hypodermal pentacts, with rough, rounded, or somewhat conical extremities, and small autodermal diacts or monacts, which are rough all over, are rounded off at their ends, and exhibit at the central point a definite swelling of the axial canal, or the trace of undeveloped rays, usually in the form of two opposite, or more rarely four cruciate tubercles (Pl. LIX. figs. 14, 15, 16, 17). The hypodermal pentacts form, by the apposition of their opposite tangentials, a quadrate lattice-work. The autodermal diacts and monacts occur in irregular disposition in the dermal membrane (Pl. LIX. fig. 11). In the diacts the two rays belong as a rule to the same axis, but forms occasionally occur, as figured in Pl. LIX. fig. 16, where the two rays form a right angle. In the monacts, which occur in tolerable abundance, the end which represents the centre of the original six-rayed form, and which therefore contains the node of intersection of the axial canals, exhibits a club-shaped thickening, and it may