

form a quadrate lattice-work. They are usually curved slightly inwards. Opposite the straight proximal radial ray which penetrates almost through the thickness of the body-wall, a small distal protuberance is occasionally developed, though usually absent. These pentacts, especially in the neighbourhood of the oscular margin, sometimes protrude beyond the surface of the sponge, and form with their tangential rays, as in *Rossella*, a sort of veil over the skin; but this differentiation occurs only locally and exceptionally.

The dermal membrane itself includes a large number of small, simple, roughened oxytetracts, in which the arms, intersecting at right angles, seem to be usually somewhat bent inwards (Pl. LVIII. figs. 2, 5).

The gastral skeleton seems wholly destitute of hypogastralia, and consists merely of the very numerous gastral oxyhexacts, in which pointed rays are thickly beset with fine spines. The ray which projects radially inwards into the gastral cavity is usually quite as long as the five others (Pl. LVIII. figs. 2, 6). The marginalia, which project in cuff-like form round the superior oscular margin, are smooth oxydiacts, 8 to 10 mm. in length, without definite central swelling or formation of knots, and with simple pointed ends.

At Station 241 (lat. $35^{\circ} 41' N.$, long. $157^{\circ} 42' E.$), from a depth of 2300 fathoms and a red clay ground, the trawl brought up some flat fragments, 1 mm. in thickness, which corresponded in their whole appearance to the above described *Bathydorus*. They exhibited the same structure as the above, with the single exception of the parenchymal oxyhexasters, in which the long terminal rays were never so thickly disposed in perianth fashion, as was frequently the case in the above-described form. Here they all diverge more or less, as was indeed occasionally the case above. The spinous gastral hexacts exhibit somewhat longer radial rays than do those in the form already described. I do not think, however, that these slight differences justify the erection of a distinct species, but believe rather that we have here to deal merely with a local variety, and therefore refer these fragments without hesitation to *Bathydorus fimbriatus*.

2. *Bathydorus stellatus*, n. sp. (Pl. LIX. figs. 1-5).

In Messier Channel, off Patagonia, right in front of Port Grappler (Station 307, lat. $49^{\circ} 24' 30'' S.$, long. $74^{\circ} 23' 30'' W.$), from a depth of 140 fathoms and a blue mud ground, the trawl brought up a small inconspicuous sponge form, about 15 mm. in length. The thin-walled saccular body was divided superiorly into two terminal tubes, 6 mm. in breadth, with terminal apertures. On the otherwise smooth external surface, some thin pointed spicules project obliquely outwards and upwards for 5 to 6 mm. At the terminal oscular aperture no distinct crown of marginalia is to be seen, but this is perhaps the result of slight injury.

The parenchymal spicules are long, narrow, straight or gently curved diacts, with or