

prominences resembling miniature chains of peaked mountains, over and between which it is glabrous; (3) in having the skeleton less compact (this does not affect the tough, compact character of the sponge, which in this case is not dependent on the skeleton arrangement); (4) in having the ends of the spicules more commonly pointed, but still roughened and irregular and very different from the long drawn out, sharply and evenly pointed ends in *Halichondria panicea*.

The specimen in question is 106 mm. in height by about 37 mm. in average diameter. It bears several distinct, circular oscula, about 3 mm. in diameter.

*Locality*.—Off Api, New Hebrides, 60 to 70 fathoms. One specimen.

*Halichondria pelliculata*, Ridley and Dendy (Pl. I. figs. 1, 1a; Pl. II. fig. 9).

1886. *Halichondria pelliculata*, Ridley and Dendy, Ann. and Mag. Nat. Hist., ser. 5, vol. xviii. p. 326.

The single specimen in the collection (Pl. I. figs. 1, 1a) is erect, lobose, increasing gradually in width from below upwards, and marked by a series of transverse grooves and swellings into a number of segments, each of which probably represents a stage in the growth of the sponge; the top is flattened, and the sponge is just beginning to branch into two lobes. In the middle of the flattened top there is a large compound osculum, and a similar one occupies the end of the incipient branch (Pl. I. fig. 1, o, o). The height of the specimen is 62 mm., and the diameter at the top not quite 25 mm. *Colour* in spirit yellow. *Texture*, internally soft and friable, but the surface is hard and chitinous. *Surface* corrugated as above described, but smooth and glabrous. A thin, hard, chitinous membrane covers the entire surface of the sponge, and appears to take the place of the dermal membrane. Whether this is only a post-mortem condition or not, we are unable to say. Just below the surface are great numbers of round or oval, highly granular bodies, about 0.3 mm. in diameter; these may be the gland-cells which secrete the chitinous envelope;<sup>1</sup> they occur in less numbers in the deeper parts of the sponge. *Oscula* (Pl. I. fig. 1, o, o); at the summit of the sponge is a single large round opening, about 6 mm. in diameter, subdivided by a number of vertical partitions which separate the different exhalent canals from one another; a similar, but smaller osculum occurs at the top of the incipient branch.

*Skeleton*.—(a) *Dermal*; a very abundant reticulation of irregularly scattered, horizontally placed, large oxete spicules. (b) *Main*; so far as we have been able to ascertain this is rather sparse, not very regular, and with few distinct fibres, being composed of large scattered oxete spicules. It is, however, very difficult to obtain a satisfactory vertical section, owing to the fragility of the internal tissues. In parts at any rate the skeleton is rectangular in its arrangement, the fibres containing few spicules.

<sup>1</sup> For this very probable suggestion we are indebted to Dr. R. von Lendenfeld.