

summits of little conical elevations. Pores dispersed on the outer face, singly and centrally perforating a poral area.

Spicules.—I. Megascleres. 1. *Desma* (Pl. XXXIV. figs. 7, 8), various in form, branches short, expanded at the ends, bearing simple and compound tubercles, the latter with a cylindrical stem and an expanded hemispherical head, raised into low rounded secondary tubercles. The epiabd of a simply curved desma measures on the average 0.6 by 0.052 mm.; the branches of complex forms are about 0.024 to 0.032 mm. long; the larger tubercles 0.039 to 0.045 mm. wide across the head.

2. *Dichotriæne* (Pl. XXXIV. figs. 2, 2a), rhabdome straight, conical, rounded off at the end; protocladi extending outwards and forwards, deuterocladi horizontal, frequently slightly recurved close to the end, which is rounded off. Rhabdome 0.75 by 0.039 mm., protocladi 0.026 mm., deuterocladi 0.155 mm. long. These spicules, as observed by Bowerbank, differ greatly in size, even when fully grown. The largest measured by Bowerbank is stated to be $\frac{1}{8}$ inch (0.658 mm.) long, with a chord of $\frac{1}{10}$ inch (0.31 mm.), dimensions very nearly those of the longest spicule observed by me, of which measurements are given above.

3. *Oxea*, long, slender, cylindrical, or fusiform, sharply pointed, simply curved or sinuous, 0.92 by 0.007 mm. These spicules are arranged to form fibrous groups, which near the surface lie parallel with the shafts of the dichotriænes.

II. Microsclere. 4. *Spiraster* (Pl. XXXIV. fig. 12), a spiral axis, with spirally arranged spines, 0.02 to 0.024 mm. long, spines 0.004 mm. long. This spicule occasionally passes into an amphiaster, 0.27 mm. long, with spines 0.0118 mm. long; or sometimes even into minute quadriradiate or triradiate plesiasters, like the corresponding spicules of *Thenæa*; the spines of these modifications are about 0.014 mm. long.

Colour.—Yellowish-white.

Habitat.—Porta Praya, St. Iago, Cape Verde Islands, August 1873; depth, 100 to 128 fathoms.

Madeira (Bowerbank).

Remarks.—Bowerbank gives an excellent description of this sponge, taken from a remarkably fine specimen, much larger than any which have passed through my hands. The Challenger specimens are indeed all fragments, with the exception of one small and evidently young form, which is fairly complete. This is somewhat fan-shaped, about 38 mm. by 30 mm. in length and breadth, and 23 mm. high; the thickness of the plate is about 6 to 7 mm. The base, which is well preserved, is slightly expanded. The largest fragment (Pl. XXXIV. fig. 1) bears oscules on the convex side of the two attached plates of which it consists; these plates, however, are bounded by broken edges, and so joined at the base as to suggest that they form parts of a single fold, and if this be so, as I do not doubt it is, the oscular faces would have formed the inner surface of the fold when