

shaped strongyles lie transversely to the hispidating spicules, in the walls of the cloacal tube. It does not appear quite certain that they are proper to the sponge. The characters of the oscules clearly distinguish this sponge from *Pæcillastra*, and, recognising this, I substituted a new genus, *Vulcanella*, to receive it. Subsequently I came to recognise the similarity in the characters of its oscules and those of *Sphinctrella*, O. Schmidt; and as it was upon these very characters that Schmidt seized on founding his genus, there can be but little doubt as to the identity of *Vulcanella* and *Sphinctrella*; on the other hand, the species *Sphinctrella cribrifera* and *Sphinctrella horrida* appear to differ considerably in form and general characters.

*Sphinctrella gracilis*, n. sp. (Pl. XLII. figs. 1, 2).

*Sponge*, incrusting. Oscules large, circular, surrounded by an erect fringe of long oxeas, closed by a thin membrane resembling a velum. Pores (?).

*Spicules*.—I. Megascleres. 1. *Oxea*, stout, fusiform, straight or curved, sometimes irregularly bent, not sharply pointed; 3·8 by 0·1 mm.

2. *Oxea*, long, slender, cylindrical, sharply pointed, straight or curved; 5·6 and over by 0·015 mm.

3. *Calthrops*, seldom quite isoactinate; actines conical, pointed, 0·83 by 0·064 mm.

II. Microscleres. 4. *Microoxea* (Pl. XLII. fig. 1), fusiform, slightly curved, sharply pointed, surface raised into an irregular spiral ridge or a succession of annular ridges, for the middle one-third or two-thirds of its length; 0·35 by 0·0115 mm.

5. *Microoxea*, fusiform, slender, sharply pointed, smooth, curved, usually somewhat suddenly bent in the middle, 0·14 by 0·004 mm.

6. *Spiraster* (Pl. XLII. fig. 2), small, slender, spire of two complete revolutions, spines very small and slender, total length 0·015 mm.; of a single spine 0·004 mm.

7. *Metaster*, small, axis short and straight, 0·004 mm. long; spines 0·012 mm. long.

*Colour* (?).—The sponge is overgrown by some species of Monaxonid, of a black colour, which masks that of the *Sphinctrella*.

*Habitat*.—St. Iago, Porto Praya, Cape Verde Island, August 1873; depth, 100 to 128 fathoms.

*Remarks*.—This sponge occurs incrusting a specimen of *Corallistes masoni*; it measures about 25 by 30 mm. in length and about 4 or 5 mm. in thickness; three oscules are present, each from two to three millimetres in diameter, they closely resemble the oscules of the preceding species, but the membrane lining the shallow cloaca presents a comparatively large central aperture. Possibly the sponge is not fully grown and additional apertures may appear with age. The annulated microoxea bears a close resemblance to that of *Sphinctrella horrida*, O. Schmidt (*vide* p. 100), with which indeed the present species may prove identical. The presence of this spicule distinguishes the present species