

from *Sphinctrella cribrifera*. A thin membrane forms the distal part of the cloacal tube, and through this in a layer but one spicule thick the fringing oxeas (chiefly form No. 2) proceed to the exterior. The membrane is further supported by a thin felt of the annulated microxeas, which are more abundant here than elsewhere. In the choanosome the smooth microxeas chiefly contribute to the felt, though the annulated forms are far from infrequent.

*Sphinctrella ornatus*, n. sp. (Pl. XLII. figs. 3, 4).

*Sponge*, incrusting, oscules large, circular, surrounded with a fringe of long oxeas, which lie prostrate over the oscule, completely concealing it; pores (?); surface covered with long prostrate oxeas.

*Spicules*.—I. Megascleres. 1. *Oxea*, stout, fusiform, usually curved, not sharply pointed, 3.2 by 0.08 mm.

2. *Oxea*, long, slender, cylindrical, sharply pointed; 4.3 mm. by 0.015 mm. This spicule is that which fringes the oscular margin.

3. *Calthrops* (?). It is doubtful whether this spicule is present; out of seven or eight preparations only one or two instances were met with, and these may have been accidentally introduced from specimens of *Sphinctrella gracilis*, which are preserved in the same bottle.

II. Microscleres. 4. *Microtriad* (Pl. XLII. fig. 3), the three actines usually make an angle of 120° with each other, but occasionally two of them are paired, as in the sagittal triradiate of the *Calcispongiae*. Sometimes an additional actine is present, and the spicule becomes a *microcalthrops*; more rarely an actine is suppressed and a diactinate form results, which may be a *microxea* or not. The most remarkable feature of this spicule is the presence of a ridge-like thickening of the actines, giving to their marginal outline a spined appearance. The ridge winds round the actine spirally or forms a series of transverse rings. It is minutely spined on the summit. In an average example the spire made one complete revolution in a distance of 0.01 mm. measured along the length of the actine, the diameter of the actine being 0.014 mm., and its total length 0.16 mm. In the smallest annulated triad the actines measured 0.06 mm., in the largest 0.2 mm. in length.

5. *Microcalthrops*, the actines are slender, roughened by minute granules and sharply pointed; occasionally a fifth actine is present; the actines measure 0.06 mm. in length.

6. *Spiraster* (Pl. XLII. fig. 4), the spire is concealed by the spines, which are long and numerous, total length 0.0276 mm., of a single spine 0.0118 mm.

7. *Metaster*; this is a very variable spicule, usually of comparatively large size; an amphiastral variety with only four spines at each end measured altogether 0.035 mm. in length; the spines 0.016 mm.; in a genuine metastral form with long slender spines,