finely pointed, and at the distal end produced into three cladi projecting chiefly forwards, only slightly outwards. Rhabdome 5·355 by 0·029 mm., cladi 0·08 to 0·11 mm. long, chord 0·095 mm., sagitta 0·064 mm.

5. *Anatriæne* (Pl. XX. figs. 15, 17), rhabdome long, slender, excessively finely pointed, cladi diverging more outwards than backwards. Rhabdome 4·641 by 0·0118 mm., cladi 0·08 mm., sagitta 0·048 mm., chord 0·125 mm. in length.

II. Microscleres. 6. *Sterraster* (Pl. XX. fig. 18), spherical, 0·0516 to 0·058 mm. in diameter.

7. *Somal chiaster*, centrum small, actines cylindrical, rod-like, strongylate or truncate, seldom conical and pointed; total diameter 0·01 mm. These microscleres form a layer beneath the outer epithelium, and are generally scattered through the sponge.

8. *Choanosomal oxyaster* (Pl. XX. fig. 19), centrum small; actines slender, conical, pointed, or rod-like, abruptly truncated; a single actine measures about 0·008 mm. in length, number of actines variable, usually from six to eight; total diameter from 0·016 to 0·0193 mm.

9. *Subcortical spheraster* (Pl. XX. fig. 20), centrum comparatively large, half the diameter of the spicule, actines cylindrical, truncate; total diameter 0·016 mm. These microscleres are confined to the inner fibrous layer of the cortex and its neighbourhood.

Colour.—Yellowish or brownish white.

Habitat.—Off Bahia, September 1873; depth, 7 to 25 fathoms.

Remarks.—This sponge, of which two specimens, each about 25 mm. in diameter, were obtained, is distinguished by the unique character of its cortex; no other Geodine sponge, so far as is known, incorporates foreign bodies within its substance. The nearest related Tetractinellid in which a similar feature occurs is the Stellettid *Psammastra murrayi*, in which the sand-grains are found not only in the outer but in the inner fibrous portion of the cortex; in *Cydonium glariosus* they are excluded from this layer by the presence of the sterrasters, which leave no room for them. It is of course a common occurrence amongst the Stellettids, as well as other Tetractinellids, for the sponge to attach foreign material to the exterior of the cortex, often by means of fibrous strands, but there as a rule the process stops: in *Cydonium glariosus* the grains of sand occupy the place which in *Cydonium eosaster* is taken by spherasters.

The sand-grains appear to be introduced into the cortex immediately from without and not from the choanosome, since foreign bodies are only very exceptionally present in it, much less frequently than is often the case in other sponges; and even if they were more largely present it would be difficult to understand how they could make their way through the sterrastral layer to the exterior. But for these serious objections one might have regarded the sand-grains as an accummulation of extruded foreign particles, which were first carried in by the water circulation to the canal system (as so often happens