

branches; angles between the protocladi, or between the deuterocladi, sometimes filled up by a marginal growth to form a plate. A strong ridge runs from the lower surface of each cladus down the sides of the rhabdome. The axial fibre in the rhabdome extends from the origin to the end, but in the cladi it usually ceases at a distance of about 0.13 to 0.026 mm. from the origin, beyond this it is represented by a series of granules scattered about the axial region.

3. *Strongyle* (Pl. XXIX. figs. 6-6*d*), cylindrical, slightly curved, with rounded ends one or both sometimes becoming tylote. The axial fibre is invariably enlarged at each end, usually into a somewhat tassel-shaped form, *i.e.*, first into a smaller rounded expansion, and then into a larger somewhat cylindrical rod. It is remarkable that in most cases this expansion of the axial fibre has no effect on the outward form of the spicule, the cylindrical rhabdome continuing unchanged in diameter up to its termination. Size, 0.59 by 0.011 mm. These spicules are collected together in fibres, which are chiefly distributed about the water canals, to the course of which they run parallel.

II. Microsclere. 4. *Microstrongyle* (Pl. XXIX. figs. 5-5*c*), cylindrical, with roughened surface and rounded ends, usually bent in the middle, sometimes straight, sometimes almost tricurvate, 0.0237 by 0.0039 mm. In its earliest observed stage it presents itself as a straight, curved, or tricurvate rod, smooth, and of hair-like fineness. These spicules are scattered through the collenchyma immediately beneath the epithelium, which invests the exterior, and lines the canals. About the pores they lie with their concavity concentric with the curved outline of the poral margin, which, however, they do not reach; the thin membrane immediately surrounding the lumen of the pore is free from spicules.

*Colour*.—Faint greyish-white.

*Habitat*.—Station 208, off Manila, January 17, 1875; lat. 11° 37' N., long. 123° 31' E.; depth, 18 fathoms; bottom, blue mud. Trawled.

Formosa, Gray.

*Remarks*.—A single complete specimen and a few fragments of this sponge were trawled. The complete specimen measures 143 mm. in height, by 28 mm. in width where narrowest, and 48 mm. where widest. The base is broken from its attachment, a cylindrical hollow cavity, 16 mm. in diameter, rises vertically upwards within it to a distance of about 25 mm., and then ends bluntly. The oscule is about 6 mm. in diameter, the cloaca into which it leads is about 13 mm. wide near the oscule, where it is widest, its length is 107 mm.; the layer of transparent, colourless collenchyma, which forms its wall, is as much as 6 mm. thick about its lower end, but becomes much thinner towards the oscule, so that in the upper region of the tube it is not more than 1.2 mm. thick.

*Ectodermal and Endodermal Epithelium*.—The presence of an epithelium which invests the exterior of the sponge and the free surface of all the canals can be readily