

in diameter at the base, which is broken; the oscular tubes do not exceed 1 mm. in diameter.

*Habitat*.—Barbados; depth, 103 fathoms.

*Remarks*.—A small specimen nearly 3 mm. in diameter, presents in transverse section the cut ends of six longitudinal canals, bounded towards the interior and laterally by the desmose skeleton, and on the exterior by the layer of discs; no other distinct canals were seen. The longitudinal canals are seen below the discs when the ectosomal layer is viewed *en face*, they are crossed by velar diaphragms, and are evidently subdermal or ectosomal in the strictest sense. Although portions of the ectosome measuring altogether about 4 mm. square were prepared with a view to examining the pores, only one pore was found.

The appearance of the skeleton is very tetracladine, but the desmas are all strictly monocrepid.

## Family II. SCLERITODERMIDÆ.

### Genus 1. *Scleritoderma*, O. Schmidt.

#### *Scleritoderma packardi*, O. Schmidt.

*Scleritoderma paccardi*, O. Schmidt, Spong. Meerb. Mexico, p. 28, pl. ii. fig. 3, 1879.

*Sponge*.—A short wide cylinder with rounded edges, constricted above the flattened attached base, and depressed at the summit into a bowl-shaped cavity; in other words, a depressed bowl-shaped sponge with thick walls and an expanded base. Oscules regularly distributed over the interior of the cup, opening at the summits of small rounded tubercle-like elevations, surrounded by a thick sphincter of concentrically arranged myocytes, 0.1 to 0.15 mm. in diameter. Pores regularly distributed over the outer surface, simple; situated at the bottom of shallow circular depressions, about 0.13 mm. in diameter, closed by a sphincter of concentric myocytes. Surface smooth, in the neighbourhood of the pores very sparingly hispidated by an occasional oxea, which extends 0.5 mm. beyond the skin.

*Spicules*.—I. Megascleres. 1. *Desma*, cladi highly tuberculate, zygois close, dense, occurring along the sides as well as at the terminations of the cladi. 2. *Oxea*, cylindrical, slender, only slightly curved, 1.2 by 0.015 mm.

II. Microscleres. 3. *Microstrongyle*, irregularly fusiform, depressed, 0.17 by 0.013 mm. 4. *Sigmaaspire*, 0.014 mm. long.

The microstrongyles form a dense layer beneath the outer epithelium, lying tangentially, with their depressed surfaces parallel to the exterior; they also occur throughout