

upwards to open freely into the cloaca; incurrent canals radiating from the general surface towards the cloaca.

Spicules.—I. Megascleres. 1. *Desma*, small; epirabd somewhat straight or tri-radiate, frequently straight and bifurcate at each end, bearing conical spines; cladus of a triradiate form, 0.1 by 0.019 mm.; crepidial axis short, from 0.01 to 0.0275 mm. in length; zygois general, but chiefly terminal. 2. *Tylostrongyle*, slender, cylindrical, 0.48 by 0.005 mm.

Colour.—Brown.

Habitat.—West Indian Islands; lat. 25° 23' N., long. 83° 31' W.; depth, 101 fathoms. Lat. 22° 9' 15" N., long. 82° 20' 80" W.; depth, 127 fathoms.

Remarks.—The water-canals are lined by a thick layer of collenchyma, in which desmas do not occur; microscleres if present would certainly be found here, and as they are not their absence has been positively ascertained. The collenchymatous walls resemble those of *Theonella* (Pl. XXX. figs. 9, 10) and other Lithistids.

The tylostrongyles occur in bundles throughout the sponge; near the surface they are directed at right angles to the epithelium, against which the tylote ends of the most external of them abut. They are never arranged tangentially to form an ectosomal layer.

The surface of attachment is covered by a smooth shining layer produced by modified desmas.

Genus 4. *Setidium*, O. Schmidt.

Diagnosis not given.

Setidium obtectum, O. Schmidt.

Setidium obtectum, O. Schmidt, Spong. Meerb. Mexico, p. 30, pl. i. fig. 9, pl. ii. fig. 14, 1879.

Sponge.—Cyathiform, with thick walls and rounded edges, attached by an expanded base. Inner and outer surfaces, but not the edge of the cup, bearing numerous, more or less regularly arranged, somewhat conical processes, each bearing a bundle of about sixteen to eighteen long oxeas. Each process covers the end of a canal, which is lined by a layer of similar oxeas.

Spicules.—I. Megascleres. 1. *Desmas*, densely tuberculated, forming a more than usually hard and stony skeleton. 2. *Oxea*, long.

Habitat.—Near Havanna; depth, 128 to 240 fathoms.

Remark.—I have not seen this sponge, so that I am unable to give an account of the skeleton.