

Spicules.—I. Megascleres. 1. *Desma*, epirabd curved, semicircular, or straight or triradiate, rarely quadriradiate, bearing spined tubercles, in the curved forms on the convex side; zygosis general. A semicircular form measured 0.24 mm. along the diameter, and 0.038 mm. in thickness; a more or less straight form 0.38 mm. in length; crepidial axis 0.04 mm. in length. 2. *Rhabdus*, 0.0065 mm. in diameter, length and nature of termination not determined.

Colour.—In the dried state, greyish-white. Size, 18 mm. in diameter by 20 mm. in height.

Habitat.—Barbados; depth, 100 fathoms. Havanna; depth, 292 fathoms.

Genus 7. *Tremaulidium*, O. Schmidt.

Diagnosis included in the specific description.

Tremaulidium geminum, O. Schmidt.

Tremaulidium geminum, O. Schmidt, Spong. Meerb. Mexico, p. 31, pl. ii. figs. 1a-l, fig. 2; pl. iv. figs. 1, 2, 1879.

Sponge.—Irregular, with a flat base, incrusting, produced into vertical conical processes, with rounded or compressed chisel-like ends; traversed by numerous vertical tubes; surface covered with a very finely ridged outer layer (cuticula?).

Spicules.—*Desma* and *rhabdus*.

Habitat.—Lat. 25° 33' N., long. 83° 1' W.; depth, 131 fathoms.

Remarks.—This sponge, which I have not seen, is possibly nearly related to *Siphonidium ramosum*.

Genus 8. *Leiodermatium*, O. Schmidt.

Azoricidæ of vasiform shape, with comparatively large oscules situated on the outer surface; pores distributed over the inner surface.

Leiodermatium lynceus, O. Schmidt.

Leiodermatium lynceus, O. Schmidt, Spong. Atlant. Gebiet., p. 22, pl. iii. fig. 2, 1870.

„ „ Carter, Ann. and Mag. Nat. Hist., ser. 4, vol. xii. p. 439, 1873.

„ „ Zittel, Abhandl. d. k. baier. Akad. d. Wiss., pp. 103, 122, pl. i. fig. 5, 1878.

Sponge.—An irregularly curved plate or hollow cylinder, with deeply incised margin. Oscules circular, 0.5 to 0.75 mm. in diameter, opening on the summit of quite flat