Genus (?).

Pachastrella lithistina, O. Schmidt, Spong. Meerb. Mexico, p. 68, pl. ix. figs. 3, 4, 1880.

Sponge.—In plates 15 to 20 mm. thick, the upper surface produced into many flat humps, each bearing a single oscule, 0·5 mm. in diameter; the under surface with similar oscules or pores. These openings lead into a labyrinth below the outer layer of the cortex, penetrating the whole thickness of the plate.

Spicules.—I. Megasclere. 1. *Calthrops.*

II. Microscleres. 2. *Microstrongyle*, growing out in irregular processes, finely tuberculated, 0·008 mm. long. 3. *Asters*, 0·008 to 0·01 mm. in diameter.

Species originally described as Pachastrellidæ which are here referred to other Families.

Pachastrella intexta, Carter = *Triptolemus intextus* (see p. 102).
Pachastrella parasiticus, Carter = *Triptolemus parasiticus* (see p. 102).
Pachastrella amygdaloides, Carter = *Pœcillastra amygdaloides* (see p. 99).
Pachastrella connectens, var., O. Sch. = *Characella agassizi* (see p. 101).

Demus II. Euastrosa.

Astrophora in which euasters are always present, but never spirasters nor sterrasters. Triænes are present but not calthrops.

Family I. Stellettidæ.

Euastrosa in which the megascleres are oxeas, and orthotriænes, or plagiotriænes, or dichotriænes and frequently in addition anatriænes. The chamber system is aphodal and the mesoderm of the choanosome sarcenchymatous.

Subfamily 1. Homasterina.

Stellettidæ, which never possess more than one form of aster.

Genus 1. *Myriastra*, Sollas.

Sponge small; oscules distinct; pores in sieves, leading into subdermal cavities. Ectosome thin, collenchymatous, excavated by widely extending subdermal cavities. The single form of microsclere is a chiaster.