Genus 7. Nethea, n. gen. (provisional).

. Theneidæ of no regular form; in the only species known, incrusting or burrowing. The megascleres are an oxea and a dichotriæne, with the rhabdome reduced to a tubercle.

Type—Nethea nana (Carter) (p. 103).

This species is regarded by Carter as a *Thenea*; as this is a view which cannot be maintained, we are led as in the case of the preceding species to institute a new genus for its reception.

Genus 8. Placinastrella, F. E. Schulze.

Placinastrella, Schulze, Zeitschr. f. wiss. Zool., Bd. xxxv. p. 449, 1880.

Theneidæ in which the megascleres are calthrops, triods, and oxeas; the calthrops when situated near the surface is orientated like a triæne which it then much resembles. The microscleres are of two orders of size, a larger consisting of tri- and di-actinose oxyasters, and a smaller, chiefly confined to the ectosome, and consisting of tetra-, tri-, and di-actinose oxyasters.

Type—Placinastrella copiosa, F. E. Schulze (p. 103).

This genus is referred to the Theneidæ with many misgivings. It reminds one very much of Pæcillastra in the arrangement of the microxeas (diactinose oxyasters), but differs from it and from other genera of the Theneid family in the absence of spirasters; indeed, by this deficiency it should, according to definition, be excluded from the family, and it may be necessary to restore it to the Placinidæ, in which family Schulze originally placed it. The mode of arrangement of the microxeas in the ectosome, which they traverse at right angles to the surface, is very characteristic, and reminds one of a similar arrangement in the Suberites.

Family II. PACHASTRELLIDÆ (Carter).

Pachastrellina, Carter, Ann. and Mag. Nat. Hist., ser. 4, vol. xvi. pp. 48, 68, 82, 1875. Pachastrellidæ, Sollas, emend., Sci. Proc. Roy. Dubl. Soc., vol. v. p. 177, 1886.

Definition.—Streptastrosa in which the chief megascleres are calthrops, triænes being absent. The microscleres may be spirasters, spherasters, or microrabds.

The choanosomal mesoderm is sarcenchymatous, and the chamber-system aphodal.

History.—The family "Pachastrellida," as founded by Carter, is the fourth of the order "Holoraphidota," Carter, and includes the two subfamilies—"groups" Carter—Pachastrellina and Lithistina (the latter equivalent to our order Lithistida); it is perhaps