

of the plate. Sometimes one of these spinelets might almost be counted as belonging to the oblique series just mentioned, and sometimes one of them is wanting.

The occurrence of the pedicellariæ on the adambulacral plates in this species is very erratic, some examples being well provided, while others have very few. The pedicellariæ, which are large and highly developed, have been figured and described by Perrier.¹ A similar irregularity in the occurrence of the pedicellariæ has been noticed by De Loriol² in *Archaster angulatus*; and I have observed the same fact in specimens from Mauritius in my own collection.

Family PORCELLANASTERIDÆ, Sladen (1883), *emend.* 1886.

Rays usually narrow in relation to the size of the disk, more or less produced.

Marginal plates in superior and inferior series, thin, lamelliform, apparently naked, or covered only by an extremely thin epidermal tissue.

Abactinal area covered with membrane, beset with simple spiniferous spicules or pseudo-paxillæ, which occupy the whole or only a limited portion of the area. A central epiproctal prominence, more or less defined, frequently developed into an elongate tubular prolongation.

Actinal interradial areas more or less extensive, paved with thin squamiform intermediate or ventral plates, more or less regularly disposed and covered with delicate membrane.

Adambulacral plates elongate, simple, bearing spines (one to five in number) on the furrow margin only; or there may be one or more series of small papilliform granules on the actinal surface of the plate.

Cribriform organs along the vertical sutures of the marginal plates in the interbrachial arcs.

Ambulacral tube-feet in simple pairs, with conical pointed tips.

Madreporiform body usually placed close to the marginal plates.

Remarks.—In this family are included the genera *Porcellanaster*, *Styracaster*, *Hyphalaster*, and *Thoracaster*, which embrace a series of highly remarkable forms, nearly all of them exclusively from great depths, which were first brought to light during the cruise of the Challenger. I now associate with them the genus *Ctenodiscus*, whose structure indicates in many ways a community of descent, and shows a much nearer relationship to the present group than to the Astropectinidæ, with which it has been previously classed. In many respects, however, *Ctenodiscus* differs considerably from the other members of the Porcellanasteridæ; and its position in the family must, for the present, be regarded as

¹ Recherches sur les pédicellaires, &c., p. 95 (separate copy), pl. 2, figs. 12, 13 (*Ann. Sci. Nat.*, 1869, t. xii, p. 287).

² *Mém. Soc. phys. et hist. nat. Genève*, 1885, t. xxix, p. 79.