

present to arrive at a definite decision as to the true position of *Goniopecten*. The difficulty is further increased by Perrier himself remarking on the interesting link afforded by this form between *Astropecten* and the *Pentagonasteridæ* (*loc. cit.*, pp. 166, 250).

Whilst refraining from criticising in any carping spirit Studer's excellent description of *Luidiaster*,<sup>1</sup> which is stated by him to be an aproctuchous form with aborted supero-marginal plates, and ranked accordingly amongst the *Astropectinidæ*, I cannot escape from a strong suspicion, aroused by the consideration of the general characters of this interesting asterid, that when a further supply is available for study the genus *Luidiaster* may also find a place in the family *Archasteridæ*. The absence of the superambulacral plates ("epiambulacral" of Studer) is in direct support of this view. It would be interesting to know whether the papulæ are distributed over the abactinal surface or limited to special areas at the base of the rays. The general facies of the form leads me to infer that the latter will probably be the case, although this inference is purely conjectural, for I have no positive basis on which to make such a generalisation.

Subfamily PARARCHASTERINÆ, Sladen, 1886.

Genus *Pararchaster*, Sladen.

*Pararchaster*, Sladen in Narr. Chall. Exp., 1885, vol. i. p. 610.<sup>2</sup>

Disk small. Rays very long, tapering, and flexible.

Marginal plates suboval or triangular, elongate in the direction of the ray, confined to the margin of the ray, the two series alternating more or less. Each plate with a prominent boss. Supero-marginal plates with one long cylindro-conical spine, and sometimes a companion present. Infero-marginal plates with one or more similar spines. The general surface of the plates of both series is nominally naked, or only with minute isolated spiniform thornlets.

A large odd interradial plate is present in both marginal series, the superior one with a prominent boss and a very large spine at the summit of the interbrachial arc.

Abactinal area with squamiform plates covered with skin, bearing one to three or more spicules or minute spinelets. No true paxillæ. No definite order of arrangement. Papulæ confined to an area at the base of the ray.

Actinal interradial areas with very few intermediate (ventral) plates. In some cases these are apparently wanting altogether; and are generally absent in young forms.

Armature of adambulacral plates consisting of:—(1.) a semicircular furrow series of small uniform spines, radiating fan-like; and (2.) one or more large conical outer spines on the actinal surface.

Madreporiform body close to the odd interradial marginal plate.

Peculiar comb-like pedicellariæ frequently present.

<sup>1</sup> *Sitzungsber. naturf. Freunde Berlin*, 16. Oct. 1883, p. 131; *Anhang z. d. Abhandl. d. k. preuss. Akad. d. Wiss. Berlin*, vom Jahre 1884, p. 46, Taf. iv. figs. 7, a, b, c, d.

<sup>2</sup> The Notes published in the "Narrative" of the voyage were in type in July 1884.