do not possess the characters diagnosed by Dr Norman in the description of his *Astropecten acicularis*.[1] I have therefore referred them to the older type.

Sir Wyville Thomson[2] expresses very definitely his belief that *Astropecten acicularis* is merely a deep-water variety of *Astropecten irregularis*; and states that a magnificent series was procured by Mr Waller in 1869 during a dredging cruise off the south coast of Ireland, showing a gradual transition through all intermediate stages between the large and the small varieties.

10. *Astropecten pontoporæus*, Sladen (Pl. XXXV. figs. 1 and 2; Pl. XXXVIII. figs. 10–12).

Astropecten pontoporæus, Sladen, 1883, Journ. Linn. Soc. Lond. (Zool.), vol. xvii. p. 259.

Rays five. R = 53 mm; r = 15 mm. R = 3·5 r. Breadth of a ray at the base, 16·5 mm.

Rays rather broad throughout, and only slightly tapering until near the extremity, which, although pointed, is rather obtuse. Interbrachial arcs subacute, or with a faint tendency to rounding.

The paxillar area is wide and extensive, with numerous, rather small, compact paxillæ. The spinelets of which these are composed are short and uniform. The larger paxillæ have a circlet of twelve to fourteen spinelets surrounding seven or eight on the centre of the tabulum; and the smaller paxillæ present about half these numbers. Along the sides of the rays the paxillæ are arranged in regular transverse lines, about five or six in each. The paxillæ diminish greatly in size in the neighbourhood of the centre of the disk and towards the ends of the rays.

The supero-marginal plates, which are twenty-seven or twenty-eight in number from the median interradial line to the extremity, are broader than long; and their height is about equal to the breadth at mid-arm, but greater on the inner portion of the ray. The plates are well-rounded and tumid, which gives them a crested or subtubercular appearance, and clearly defines the separate plates. The plates are covered with small papilliform granules, which decrease in size towards the margins; and each plate normally bears an elongate granule or aborted spinelet, situated rather low down on the curve which unites the abactinal and lateral surfaces of the plate; but not unfrequently two or three may be present, and these stand in transverse line along the median line of breadth.

The infero-marginal plates are broad, rather sharply rounded towards the actinal surface, and do not protrude beyond the level of the superior series. Each bears four or five lateral spines standing in an oblique line, only slightly inclined to the axis of the ray, passing from the adoral to the aboral side of the plate. The spines are short, cylindrical, tapering, and pointed; the third or fourth from the adoral end of the line is the longest,

[1] *Ann. and Mag. Nat. Hist.* 1865, ser. 3, vol. xv. p. 116.

[2] The Depths of the Sea, 1873, p. 121.