

4. *Astropecten pectinatus*, Sladen (Pl. XXXIII. figs. 3 and 4 ; Pl. XXXVII. figs. 4-6).

Astropecten pectinatus, Sladen, 1883, Journ. Linn. Soc. Lond. (Zool.), vol. xvii. p. 251.

Rays five. $R = 48$ mm.; $r = 14$ mm. $R > 3.5 r$. Breadth of a ray at the base, 16.5 mm.

Rays broad at the base, tapering continuously to the extremity, which is finely pointed. Interbrachial arcs subacute or very slightly rounded.

The paxillæ of the abactinal area are large and uniform, and are arranged in regular transverse lines which extend up to the median line of the ray. The paxillæ have a large tabular surface on which are placed twelve to fifteen short papilliform spinelets, and the periphery is surrounded by about an equal number of similar spinelets. In the centre of the disk the paxillæ are smaller, and are very compactly placed. There is no trace of any anal puncture, and no protuberance occurs in the centre of the disk.

The supero-marginal plates, which are twenty-one in number from the median inter-radial line to the extremity, are higher than broad, the disparity being greatest in the interbrachial arc and diminishing towards the extremity. When seen abactinally the plates have the appearance of being slightly oblique in relation to the direction of the ray, and each, excepting the two innermost, is slightly convex or submammillate at the outer angle formed by the junction of the abactinal and lateral superficies of the plate, which falls in the marginal contour of the ray. On the summit of this convexity is borne a small conical spinelet; and although normally the series of spinelets is continuous throughout the ray, a plate occasionally occurs on which the spine is wanting. The two inner supero-marginal plates are narrower abactinally than the others, and the spinelets they bear are slightly longer and more robust.

The infero-marginal plates are broader than high, and do not extend laterally beyond the superior series. Each plate bears an oblique comb of four or five lateral spines, their line of base forming an angle of about 45° passing from the adoral side to the aboral side of the plate. The adoral spine is the smallest and the most outward, and the third from the margin the longest, the second is intermediate in size, and the fourth nearly as long as the third. A fifth and much smaller spine is situated on the aboral side of the plate a little distance from the comb or lateral series; and on the inner portion of the ray one or even two similar isolated spines may be present on the aboral side of the plate in lineal series. All these spines, as well as the lateral series, are elongate, delicate, cylindrical, and taper to a fine point; and the lateral spines are very slightly bent. The whole of the surface of the infero-marginal plates is compactly covered with small, flat, roundly tipped squamules, uniform and closely placed.

The armature of the adambulacral plates is arranged in three distinct series, with three spinelets in each. The spines of the inner series are of moderate length, the middle one being slightly longest, subcylindrical, and slightly tapering, whilst the companion spinelets are often slightly flattened. The second series consists of three equal spinelets,