

defined longitudinal lines may be distinguished; their presence amongst the small and comparatively inconspicuous general paxillæ of the abactinal surface forms a striking feature in the species.

The supero-marginal plates, thirty-eight in number from the interradial line to the extremity, form a well-defined though rather narrow border to the rays. The breadth, height, and length are about subequal, the last dimension being slightly in excess, and the plates are slightly convex and subtubercular abactinally. Each plate bears a robust, conical, tapering spine, about 4 mm. in length midway along the ray, directed perpendicularly to the abactinal plane of the ray. These spines diminish a trifle in length as they approach the base of the ray, but increase in robustness; whilst they decrease both in length and robustness on the outer part of the ray. On the outer side of this spine is usually a smaller and more delicate spinelet directed outward at an angle of about 45°, and occasionally two may be present, and sometimes they are little more than elongate miliary spinelets. The rest of the plate is covered with numerous very short, delicate, pointed miliary thornlets.

The infero-marginal plates alternate with the superior series, and their dimensions are subequal. Each plate bears three robust, conical, tapering, pointed spines, similar to those on the supero-marginal plates. These spines form a series along the median transverse line of the plate; the outermost or lateral spine is the longest, and slightly greater than the supero-marginal spine; the innermost spine of the three is the smallest, and is about half the length of the lateral one. The longest lateral spine is the third or fourth from the interradial line, and measures about 5 mm., and the succeeding ones decrease slightly in length as they proceed outward. The rest of the plate bears a few widely spaced, small, miliary thornlets, some of which at the base of the large spines are more elongate than the others. There is a naked suture-line between each plate.

The adambulacral plates are slightly longer than broad, and with only a slightly convex margin towards the furrow. Their armature consists of:—(1.) A furrow series of six short, rather thick, cylindrical, obtusely pointed spinelets, the inner pair slightly longer, and the outer one at each extremity very much smaller, than the rest; their posture resembles that of the fingers of a hand held slightly concave. (2.) On the actinal surface of the plate are two robust, slightly tapering but obtusely pointed spinelets, one behind the other in the transverse median line. The innermost stands close behind the marginal series, the outermost is slightly larger and is subequal in size to the innermost of the three spines on the infero-marginal plate. Two or three minute miliary spinelets may be present on the outer margin of the plate, but the rest of the plate has a naked appearance, and is only covered with membrane.

The mouth-plates are powerful and slightly convex; each plate of the united pair bears on its free margin six mouth-spines, the innermost being the longest, most robust, and slightly compressed; the others decrease as they recede from the mouth and become