

1. *Dytaster spinosus*, n. sp. (Pl. V. figs. 1 and 2; Pl. IV. figs. 11 and 12).

Rays five. $R = 160-164$ mm.; $r = 30$ mm. $R > 5r$. Breadth of a ray near the base (between the second and third supero-marginal plates), 22 mm.

Rays tolerably elongate, robust, and tapering, more or less depressed, with the lateral walls angularly rounded. Interbrachial arcs wide and openly rounded. Disk comparatively large and massive. Abactinal area of disk slightly inflated, especially opposite the base of the rays, the inflation being continued for a short distance along the abactinal surface of the ray, which is at first regularly convex, but becomes flat before half the length is attained, and continues so up to the extremity. Actinal surface of the disk prominent at the mouth-angles and sloping thence to the margin; that of the rays slightly convex, giving them more or less of a rounded appearance when viewed from below.

The abactinal surface of the disk and rays is covered with small closely crowded paxillæ, composed of short, cylindrical, papilliform, obtusely tipped, equal-sized spinelets, seven to ten in each. Paxillæ with fewer spinelets are interspersed amongst the large ones; and on the outer half of the ray seldom more than three to five spinelets occur, and these are reduced to mere papilliform granules. The spinelets in the paxillæ upon the disk and inner half of the rays stand nearly perpendicular, in little brush-like groups, but are so closely crowded in this region that it is often impossible to distinguish the individual paxillæ. No pedicellariæ are present.

The supero-marginal plates, forty-two to forty-four in number from the median interradial line to the extremity, are wholly visible when the starfish is viewed from above. They form a broad, sloping, or bevelled border to the abactinal surface, and even a portion of the infero-marginal plates is also visible; the latter forming exclusively the outline of the ray. The supero-marginal plates are rectangular, with the length greater than the height, excepting a few plates in the interbrachial arc, in which the dimensions are subequal. On the outer part of the ray the height is more than half the length. Each plate bears on its upper margin a short and comparatively delicate, straight, cylindrical, tapering, sharply pointed spine, the longest about 3.5 mm. in length, and they decrease very slightly as they proceed along the ray. The spines are directed upwards and at an angle of about 45° towards the extremity. Rarely some plates bear two spines, one generally smaller than the other. The surface of the plate is covered with small, uniform, papilliform granules, rather widely spaced on the middle of the plate, but becoming crowded and more elongate at the adoral and aboral margins.

The infero-marginal plates correspond to the superior series, their line of union being perfectly horizontal. These plates have their surface curved, so that a portion is visible when the starfish is viewed from above, and they form entirely the outer margin of the ray. Indeed, beyond the middle of the ray their extent upon the abactinal area is nearly as great as on the actinal, and the rounding is slightly angular. Each plate bears on the