

*Young Phase.*—I have referred a small example of *Solaster*, which measures  $R = 20$  mm., from the same locality to this species. It is figured on Pl. LXX. Although at first sight this juvenile appears to differ considerably from the adult, I feel little doubt that the differences are only due to age. The number of rays is the same. The paxillæ are relatively larger and more distinctly spaced than in the adult. In the armature of the adambulacral plates there are only three spinelets in the furrow series on the plates near the mouth, and only two along the ray; the transverse lineal series on the actinal surface of the plates consists of three robust spinelets. The infero-marginal paxillæ form a conspicuous border on the actinal surface, similar to what has been observed in the adult, and the actinal interradial areas have a similar spinose character. The armature of the mouth-plates consists of a marginal series of eight spinelets, the innermost one being remarkable for its size and the capacious membranous sac with which it is invested. On the actinal surface of each plate is one large robust spinelet, and further back on the plate two or three smaller ones.

*Remarks.*—This species is very closely related to *Solaster endeca*, but may be distinguished by the form and character of the paxillæ, by the large actinal interradial areas, by the broad band of infero-marginal paxillæ, and by the character of the armature of the adambulacral plates.

3. *Solaster regularis*, n. sp. (Pl. LXX. fig. 1; Pl. LXXII. figs. 5 and 6).

Rays eight.  $R = 90$  to  $100$  mm.;  $r = 20$  mm.  $R = 4.5$  to  $5 r$ . Breadth of a ray at the base  $14$  mm.

The disk is high and convex. The rays are long, tapering, and attenuate towards the extremity; in the present condition of the specimen all are curled over on the abactinal surface. Interbrachial arcs acute.

The abactinal surface is beset with very short, rather broad, stumpy paxillæ, the crown composed of six to ten very short tapering spinelets, bi- or tri-dentate at the extremity, and their bases imbedded in a membranous mass, which envelops the whole basal part of the paxilla. The paxillæ are widely spaced upon the disk, and numerous large papulæ occupy the interspaces. Along the rays the paxillæ become much smaller and more numerous. No definite order of arrangement is discernible, although a slight tendency to lineal disposition may be made out along the sides of the rays.

There is a single series of conspicuous marginal plates, on which a thin elevated keel is developed, surmounted by a flattened comb of short robust spinelets, about ten to twenty in each, resembling enlarged compressed paxillæ, the long axis being placed at right angles to the median line of the ray. The combs are widely spaced, and about forty-two are present between the median interradial line and the extremity. I believe these to be the infero-marginal plates; and what I take to be the representatives of the