most plates of the ray their height is fully three times the length, and diminishes gradually and slowly up to the extremity, the height being the greatest dimension throughout. The surface of the plate is covered with short, comparatively large, uniform, flat-lying, squamiform papillæ, three to four vertical series occupying the whole length of the plate. Normally the supero-marginal plates are entirely devoid of true spinelets, but six or eight on each side of a ray may bear a very small upright thornlet, little larger than the squamules, standing upright on their abactinal margin ; most of these are on successive plates, the series usually terminating about midway between the extremities.

The infero-marginal plates correspond exactly to the superior series, their length is the same, and their height is perhaps a shade greater than that of the companion plate. Their surface is covered with precisely similar squamules ; indeed, so uniform is this covering that it is very difficult to make out superficially where the junction of the superior and inferior plates exactly is. The infero-marginal plates are destitute of any true spines. The infero-marginal plates are confined entirely to the lateral wall of the ray, and do not curve upon the actinal surface.

The adambulacral plates are large and pentagonal in shape, with a prominent angular margin towards the furrow. Their armature consists of a furrow or marginal series of five short, subequal, papilliform spinelets, which stand vertically, the median one being subtriangular in section, having two sides conformable with the facets of the plate which form the angular prominence above mentioned. At each end of the series stands another spinelet, which might at first sight be ranked as belonging to the furrow series, but they stand on the actinal surface of the plate. On the actinal surface of the plate, behind the furrow series, are two or three short, flattened, and almost squamule-like spinelets, forming a somewhat irregular line with the two spinelets just mentioned ; and these are often posed in such a manner as to close against the marginal series, and may thus form perhaps an incipient pedicellarian apparatus. External to this is a more or less regular longitudinal series of three or four similar papilliform spinelets. All these spinelets are in membranous sheaths, and are very stumpy, papilliform, and often compressed.

The mouth-plates are very elongate and narrow, and the united pair extend far over the actinostome. Their armature is very simple, and consists of a marginal series of ten or eleven small, subequal, compressed, obtuse, papilliform spinelets on each plate, standing vertically ; the series extending fully two-thirds the length of the plate. The innermost spinelet in each series is more than twice the size and length of the others, and these form a prominent parallel pair at the mouth-angle, directed at a slight angle over the actinostome. On the actinal surface of each plate is a single longitudinal series of about twelve or thirteen short, robust, and rounded papillæ, which become very low and almost granular at the outer end of the plate. These two series constitute the whole armature of the plate.

The actinal intermediate plates, though occupying a very limited area in the interradial region, extend very nearly to the extremity of the ray, being, however, on the outer part