

papilliform along the transverse margins, thus emphasising the suture. No spines are borne on the supero-marginal plates.

The infero-marginal plates correspond to the superior series, and their breadth is greater than either the height or the length; their surface is covered with granules apparently similar to those above described and of equal size, but which have a tendency to become scutiform as they approach the end of the plate adjacent to the adambulacral plates. Their length and posture is such that they have quite the appearance of granules, and their squamous character is only made out after careful examination. Each infero-marginal plate bears normally a single small spinelet, which is short, tapering, slightly compressed, and appressed to the side of the ray. It is situated at the extreme margin of the ray, on the rounding which unites the actinal and lateral areas of the plate, and stands close to the aboral margin of the plate. On two or three of the plates in the interbrachial arc a second and similar spine may be present, placed midway between the lateral spine and the inner end of the plate; and in very rare instances there may be one or even two small spines above the lateral spine, between it and the abactinal end of the plate, these spines being always at the aboral margin of the plate.

The adambulacral plates are large, with a prominent angular margin towards the furrow. Their armature consists of an inner or furrow series of seven or eight short, delicate, cylindrical, equal spinelets, encased in membrane, but apparently without any saccular developments. On the actinal surface of the plate are one or two longitudinal series of three or four equal spines, slightly shorter than the inner series. There is frequently, however, irregularity in the disposition of these spinelets; and the whole armature usually forms a wedge-shaped group, the arrangement of which is difficult to formulate.

The mouth-plates are elongate and very narrow; their armature consists of a marginal series of sixteen to eighteen short, cylindrical, obtusely rounded or subclavate papillæ on each plate, which increase slightly in length as they approach the anterior end. The two innermost are longer and much more robust than the rest. On the actinal surface of the plate is a single uniserial row of low, broad, round-topped and slightly compressed papillæ, about sixteen or eighteen in each series. These stand vertical, and the marginal series are closely appressed to their sides.

The actinal intermediate plates, though confined to a very small area in the inter-radial region, extend far along the ray. Those near the adambulacral plates bear spinelets which are indistinguishable from the adambulacral armature, whilst those near the marginal plates, in the interradial area at least, become somewhat more papilliform, and though maintaining a strictly spinulate character, approach in a certain degree the squamulate form of the covering of the marginal plates. All these spinelets are covered with thin membrane, which has to some extent the peculiar fibrillar or matted character sometimes noticed in the Northern form, and many of the spinelets have the same agglomerated appearance suggestive of entangled foreign matter or tissue.