

ones and the margin are precisely similar to those above described, excepting that they bear no large spine, their tabulum being occupied by nine or more small, equal, papilliform spinelets, which are well-spaced and radiate slightly apart as if the surface of the tabulum were slightly convex. The paxillæ of the outermost two rows are rather smaller than those of the next two rows; and those of the outermost series which represent the aborted supero-marginal plates are the smallest. The paxillæ of the median radial area are rather smaller than those of the longitudinal series; they are rotund, bear no central spine, but have six to eight papilliform spinelets on the tabulum precisely similar to those above described.

The infero-marginal plates bear along their median line a series of four to six uniform spines, placed one behind the other: the inner two are very small and delicate, scarcely worthy of being counted with the series; but the outer four are robust, tapering, and pointed, and increase in size slightly as they approach the margin, although the marginal or lateral spine is sometimes slightly smaller than its predecessor, the longest measuring about 4 mm. in length. The distance between the second and third spine from the margin is often rather greater than that between any of the others, and the space is occupied by two or three short, delicate, hair-like spinelets; one or two are also usually present between the other large spines. The margin of the keel is fringed on each side with rather large ciliary spinelets.

The adambulacral plates are broad but very short, as seen on the actinal surface, and are united by wide ligamentous bands. Their armature, which has the appearance of being borne on a narrow keel, consists of three spines, arranged one behind the other, in transverse series in relation to the axis of the ray. The innermost or furrow spine is the shortest, compressed laterally, slightly curved, slightly tapering, but more or less obtuse at the tip. The second spine is fully two-thirds longer, more robust, only very slightly compressed, very faintly bent near the base (indeed scarcely perceptibly), tapering, and rather obtusely pointed. The third spine is similar, but straight, and is usually rather more tapering and sometimes a shade shorter and more delicate than the second spine. External to this spine and close to its base is usually a three-jawed pedicellaria, wide at the base but with delicately tapering and pointed jaws, rather more than one-third the length of the spine. One or two delicate ciliary spinelets may also be present. Occasionally a second and similar pedicellaria stands between this and the spinelets of the infero-marginal plates, which is either borne on a small intermediate plate (present between the adambulacral and infero-marginal plates) or at the innermost extremity of the infero-marginal plate; or its position may be occupied by a small group of ciliary spinelets.

The mouth-plates are elongate and narrow, with a series of large actinal or superficial spines running parallel to the margin; which are normally much larger than the marginal series, and increase in size as they approach the mouth. The spines at the innermost extremity of the plates (two or four in number) are very long, and extend nearly to the centre of the actinostome.