

larisæ on one tabulum; but towards the extremity of the ray very few are present at all. Rarely a pedicellaria may be composed of three valves, as in some *Pentagonasteridæ*, the valvate character of the organ being still maintained. Occasionally similar pedicellariæ may be found on the other paxillæ of the abactinal surface, but their occurrence there is rare.

The infero-marginal plates bear only one lateral spine, placed at the outer end of the plate, directed outward and often more or less appressed to the margin of the ray. This spine is short, not more than 2.75 mm. in length, compressed, though rather robust, tapering, pointed, and often subfusiform in outline. On the median keel of the plate is a series of small, subequal, squamiform spinelets, rather more than one-third the length of the lateral spine, compressed, tapering, sometimes pointed, but more frequently obtuse; more or less appressed to the plate and directed at an angle outward and towards the margin, over the aboral margin of the infero-marginal plate. Additional similar spinelets may be present on the inner side of this series and with the same direction, but this part of the plate is usually occupied by very much smaller spinelets, which are also often directed over the adoral margin, *i.e.*, at an angle adorally and towards the lateral margin. Occasionally the place of one of the larger spinelets is occupied by a two-jawed forciform pedicellaria, often near the base of the lateral spine. The margins of the ridge are fringed with numerous, delicate, equal, cilia-like spinelets; and the walls of the deep fasciolar furrow at the outer or upper part of the plates is densely covered with remarkably fine ciliary spinelets.

The armature of the adambulacral plates normally consists of three spines and one large two-jawed forciform pedicellaria. The three spines are arranged one behind the other, *i.e.*, in transverse series in relation to the axis of the ray. The innermost or furrow spine, which is the shortest, is delicate, compressed laterally, tapering, and slightly curved; the second spine is slightly longer, more robust, subtriangular in section, with an edge towards the furrow, sometimes slightly compressed laterally, tapering, pointed, and very faintly geniculate near the base. The outermost spine is subequal in length to the last noticed, but straight, tapering, and obtusely pointed. The pedicellaria stands at the adoral side of the outer spinelet, to which it is subequal in length; it is large and expanded at the base, with a large lunule, but tapering, attenuate, and pointed at the tips of the jaws. On the outer edge of the plate are usually two or three very delicate, short, cilia-like spinelets.

The infero-marginal plate is separated from the adambulacral plate throughout the ray by a small well-defined intermediate plate. This on the inner part of the ray may bear a comparatively large two-jawed forciform pedicellaria, similar to, but rather smaller than, that on the adambulacral plate, and two or three small cilia-like spinelets; but usually along the greater part of the ray, and always on the outer part, only a few small ciliary spinelets are present.

The mouth-plates are comparatively small. Each plate bears at its innermost point a large forciform pedicellaria, forming a pair directed horizontally over the actinostome;