

centrally one, or sometimes two, and rarely three, very small papilliform thornlets, of uniform character throughout, excepting a few on the disk which are slightly larger, but still quite inconspicuous and unnoticeable without close examination. Occasionally in some examples two or three pedicellarian apparatus may be present,—these are of the double comb or spiracle-like form; their structure is very simple, and the spinelets composing them are comparatively large, in fact, slightly larger than the small thornlets usually borne on the spicules.

The supero-marginal plates, twenty-three to twenty-five in number from the median interradial line to the extremity, are elongate and low. The length is about three times greater than the height, and the upper margin of the plate, though actually confined to the lateral wall of the ray, is very slightly bevelled upon the abactinal surface. Each plate bears centrally on this margin a rather prominent tubercle, upon which is articulated an elongate, tapering, sharply pointed spine, the third or fourth from the interradial line measuring about 4.5–5 mm. in length. There are generally one or two small thornlets near the base of the spine, otherwise the surface of the plate is simply covered with a very thin membranous tissue. In the median interradial line is a high, odd, supero-marginal plate, thick and tubercular abactinally, which bears an elongate, cylindrical, tapering spine, about 8 mm. in length, directed vertically. On the vertical wall of the plate which stands in the interbranchial arc are a number of minute, conical, sharply-pointed granules, usually along the median area; and the one or two neighbouring plates on each side are likewise similarly, but irregularly and more sparsely, granulated.

The infero-marginal plates are elongate and low like the supero-marginal series, to which they correspond. Each plate bears a straight, tapering, lateral spine articulated on a tubercle, and usually more delicate and often shorter than the spine on the accompanying supero-marginal plate. A second but much smaller spine is sometimes present on the inner side, usually in the larger examples, but it is often wanting altogether, and seldom appears on the inner part of the ray and towards the extremity. Occasionally one or two microscopic miliary thornlets are present on the plate, and the surface of the plate is covered with a delicate membranous tissue.

In the median interradial line there is a large, broad, odd infero-marginal plate, larger and broader than any of the others; it is placed immediately beneath the odd supero-marginal plate. It bears a small representative of the lateral spine, and in addition several delicate miliary spinelets and thornlets. The one or two next plates on each side are likewise frequently more spinulate than any of the others.

The adambulacral plates are large in proportion to the size of the star fish, their length slightly exceeds their breadth, and they present a prominent and rather abrupt convexity into the furrow. Their armature consists of:—(1.) a furrow series of five to seven small, short, cylindrical, obtusely tipped spinelets, subequal excepting the extremities of the series, which are rather shorter; all are closely placed and form compact isolated little combs.