

Their margin towards the furrow is straight, or very faintly convex. The armature consists of :—(1.) A furrow series of twelve short, cylindrical, papilliform spinelets, the median ones slightly longer than the others, slightly compressed laterally, but not square in section, standing parallel to one another, and forming a long but low, straight comb. The longest do not exceed 2 mm. in length. (2.) On the actinal surface of the plate, and close behind the marginal series, is a straight row of seven or eight short, subequal, papilliform spinelets, which are more widely spaced than the furrow series, and are also more robust, but not more than half their length. This series is closely pressed against the furrow series, and the spinelets in both are enveloped in membrane, those in the outer series being especially papilliform in their appearance. Along the outer margin of the plate is another lineal series of seven or eight small, equal, papilliform granules; and these in consequence of the narrowness of the plate are very near to the series above described, but separated by a well-defined though very narrow naked space. No other spines, granules, or pedicellariæ are present.

On the outer third of the ray there is a slightly enlarged spinelet on the actinal surface of the plate, usually situate in the first actinal series, which is longer than any of the other spinelets on the plate and more robust, and sometimes equal in size to the spines on the marginal plates. There is no trace whatever of its presence on the plates on the inner half of the ray.

The mouth-plates are large and conspicuous, the united pair being elongately oval, and prominently convex actinally. They protrude far over the actinostome, and as seen with their armature reflected perpendicularly, have a peculiar sagittiform outline. The armature consists of a marginal series of about fourteen short, compressed, papilliform spinelets on each plate, all standing parallel, and capable of being directed perpendicularly to the plane of the actinal surface; the inner spines forming a wedge-shaped group, and the outer seven appearing, to a certain extent, like an independent semicircular series. On the actinal surface of the plate are numerous, irregularly disposed, small, papilliform spinelets, appearing more or less clavate in consequence of their membranous investment, and nearly subequal in length, except two or three larger ones at the extreme inner end of the mouth-angle, placed close to the marginal series of true mouth-spines, and contributing with them to the formation of the wedge-shaped group above mentioned.

The actinal interradial areas, though small, are well developed, extend as far as the fifth adambulacral plate, and contain numerous intermediate plates disposed in regular series between the adambulacral and marginal plates. The plates bear groups of small papilliform spinelets, which are remarkable from the fact that each bears centrally a conspicuous pedicellarian apparatus, usually formed of four thickened and enlarged spinelets, the other spinelets of the plate or paxillæ being very much smaller, and forming a marginal surrounding series.

The anal aperture is subcentral, but indistinct.