

terminates. The membrane is furnished with elongate saccular bands placed saddle-like upon the truncately arched abactinal surface of the ray with great regularity, one on each side of each pair of ossicles, limited, however, to the sides, and not united across the median line. The sacculi extend from the horizontal line of the ambulacral "vertebræ" to the margin of the ray, this dimension being about 2.5 mm., and the breadth of the band is about 0.75 to 1 mm. They have their surface crowded with very minute pedicellariæ, visible only under high magnification. These are similar to those already mentioned, but are smaller, their length being about 0.11 mm.

The section of the ray midway between the centre and the extremity gives an outline which may be described as subtriangular with the apex truncate, the greater portion of the base-line is occupied by the ambulacral furrow, the extremities of the line being represented by the adambulacral plates.

The angular margin of the ray is fringed by a continuous series of elongate lateral spines; these are attached to a rudimentary marginal plate ankylosed to the outer side of the adambulacral plates, and are directed horizontally and outward at an angle of less than 45° to the axis of the ray. They are usually borne on every other adambulacral plate, but occasionally they are present on two consecutive plates. Their presence is very irregular on the basal part of the ray (for about 25 mm.), and they are quite short and stunted (3.5 mm. in length) until the ovarial region is passed; they then increase in length, and continue to increase gradually to a slight degree, their greatest length being near the middle of the ray, where they measure about 12 mm., and then after some distance gradually diminish in length towards the extremity. The spines are delicate and cylindrical, about 0.26 to 0.3 mm. in thickness near the base, and taper throughout to an extremely fine, sharp point. The base forms a small condyle-like head, by which the spine is articulated to its plate. The spine is encased in a delicate membranous sheath, the surface of which is crowded with minute pedicellariæ, so small as to be quite invisible to the naked eye, and only giving the appearance of a delicate superficial asperity on the spinelet when examined with a hand-magnifier. The sheath is prolonged for a short distance beyond the extremity of the spine in the form of a slightly bulbous sac, which is usually turned a little to one side as if the spinelet maintained an attachment to one of the lateral walls of the sacculus rather than occupying a central position; furthermore, the membranous sheath does not taper in conformity with the tapering of the contained spine (see fig. 4). The pedicellariæ are of the same kind as those already noticed; they diminish a little in size as they approach the extremity of the spine, and the largest, which are situated near the base, measure about 0.1 to 0.116 of a millimetre in length.

The ambulacral furrow occupies nearly the whole of the actinal surface of the ray, being 2.5 mm. in width at a place where the whole ray is 5.75 mm. The adambulacral plates form the rest of the area, and have the appearance of constituting only a thin margin to the furrow; their shape as viewed from beneath is semicylindrical, with the furrow-