

terminates at about 45 mm. from the disk, thus occupying less than the proximal fifth of the length. Beyond the ovarian region the ray is subtriangular, with a broadly truncate median carination, and tapers gradually throughout to the extremity. The interbrachial arcs are sharply angular clefts.

The disk is small, with the abactinal surface subplane and higher than the abactinal surface of the rays, the margin sloping rapidly and rather abruptly to the basal part of the rays. The abactinal surface of the disk and of the rays, as far as the ovarian region extends, is covered with imbricating subhexagonal plates overlaid with membranous tissue. The plates are of considerable thickness as compared with other species, and form a much more rigid and firm encasement to the ray than that found in the other forms here described. Upon the disk each plate bears from one to three small stumpy spinelets about 0.45 to 0.57 mm. in length, covered with thin membrane, rather wide apart, and more or less equidistantly spaced, which gives them a rather isolated appearance. On the ovarian regions the plates are often large and irregular in shape, and may bear more spines, the position of which frequently shows a decided tendency to form lineal series on the plates, transverse to the axis of the ray, especially on the lateral parts. Furthermore, these spinelets are in a large measure confined to the median part of the plates, by which means a distinctly marked character of isolated groups is produced. Small, isolated, sessile pedicellariæ are present here and there upon the plates. Beyond the ovarian region the abactinal surface of the ray is covered with delicate, semitransparent membranous tissue, upon which rather broad, saddle-like saccular bands are borne; these bands are continuous across the median keel, and extend to the lateral margin of the ray; their breadth is usually greater than that of the interspace, and their surface is covered with crowded small pedicellariæ. Very delicate incipient plating may here and there be seen underlying the sacculi, either in single plates or two or three together.

The ambulacral furrow is very wide, measuring 3 mm. at a place where the breadth of the ray is 5 mm., and appears to occupy nearly the whole of the actinal surface of the ray. The adambulacral plates are a little longer than broad, and form a narrow cylindrical margin to the furrow. Their length is 1.25 to 1.5 mm. at about 80 mm. from the disk, and their furrow margin is gently concave. The adambulacral armature consists of:—(1.) a small inner spinelet, directed horizontally over the furrow; (2.) a larger and more robust spine, standing perpendicularly on the actinal surface of the plate; and (3.) a still longer lateral spine, borne on alternate plates only. The small inner spine is attached to the extreme aboral end of the furrow margin of the plate, and is directed horizontally over the furrow and at a right angle to the margin; it is about 1 mm. in length, or a trifle more, and is covered with a delicate membranous sheath, which is usually expanded bag-like on the side towards the furrow, resembling a "La Crosse" racquet, and the membrane bears numerous minute pedicellariæ. The corresponding spinelets on the opposite sides of the ray overlap slightly and thus form a straight partition which separates consecutive pairs of ambulacral