

ray are separated from the corresponding series on the other side only by a single continuous series of small rectangular plates which occupies the median abactinal line and extends to the extremity. The breadth of the supero-marginal plates is greater than the length throughout the whole ray, all being remarkably short. In the innermost plates the breadth is greater than twice the length—approximately in the proportion of 5 : 2; the breadth increases up to the fourth plate, which is the largest and stands at the base of the ray; outward from this plate the breadth gradually diminishes until at the extremity its proportion to the length is not greater than 3 : 2, and may be less. The length diminishes very slightly and gradually as the plates proceed along the ray, being near the middle of the ray very little less than at the interradiial line; the twenty-eighth and twenty-ninth plates together measure the same length as the innermost plate. The surface of the plates presents no median tumidity, and it slopes gradually from the inner end until near the margin, where the curvature becomes more rapid, the outline in section being a depressed oval. The surface of the plates is covered with a minute uniform miliary granulation, rather widely spaced and disposed without definite order. Along the margins of the plate is a regular lineal series of uniform granules, rather larger than the rest, which have the appearance of being subprismatic and truncate, whilst the others are semiglobular. The plates are separated by a narrow but distinct furrow.

The infero-marginal plates correspond exactly to the superior series, all beyond the third are contiguous with the adambulacral plates, and, excepting those in the disk proper, their breadth is much less than that of the superior series. Their surface is covered with minute papilliform granules whose posture upon the plate is somewhat oblique and directed outward, and with a decided tendency to become squamiform; they are tolerably well spaced and without definite order of arrangement, except at the margins, where a lineal series is regularly maintained and arches over the furrow between adjacent plates. On five or six plates on each side of the median interradiial line there is a median series of four or five small, compressed, tapering, and sharply pointed spinelets, of equal size and at wide distances apart; still so small that they are undiscernible to the naked eye. One or rarely two of these may occasionally be traced upon a plate even beyond the middle of the ray.

The armature of the adambulacral plates is remarkable. Each plate has a prominent and more or less acute angle projecting into the furrow: on this margin are borne about seven spinelets, three on each facet and one at the apex; all are short, compressed, expanded at the tip, and roundly truncate. The central one, or occasionally two, is placed with the compression at right angles to the direction of the ray, whilst the others usually have their compression in the same plane as the line of the facet to which they are attached. These spinelets decrease a little in length as they recede from the apical one, and when expanded over the furrow radiate slightly apart; the arrangement of these spinelets *per se* might well be described as palmo-radiate, but that character as normally understood is modified considerably by the manner in which the other spinelets upon the plate are placed.