

being about 100 mm. measured from the resting plane. Rays well produced, rather broad at the base and rather flat abactinally, tapering gradually to the extremity. The interbranchial arcs very wide and well rounded. Actinal area plane along the rays, concave within the disk.

The whole abactinal area is marked off by trabeculæ into large regular triangular papular areas, with a roundly conical tubercle at each angle. The tubercles fall into regular longitudinal lines, forming a median radial line and two parallel lines on each side. The tubercles or spinelets of the median line are not larger than the others, and all are subequal upon the disk, the primary radial ones being only the slightest shade larger than the others. The pentagon marked out by the primary radial tubercles is divided into smaller triangles with tubercles at their angles, which causes the tubercles to appear crowded there. From the base of the ray outward the tubercles diminish in size somewhat, and there is considerable irregularity in their distance apart. At the tip of the ray they become robust, crowded, and more conical. Along the ray the papular areas are apt to be irregular in form. There is a naked space devoid of tubercles and trabeculæ along the margin of the disk, and this is rounded and rather tumid, so that the supero-marginal tubercles are not normally visible along the margin of the disk and at the base of the rays when the starfish is viewed from above. The granulation consists of small granules with larger ones intermixed, the latter being more or less mammilliform, and often showing a tendency to form groups which simulate indistinct little rosettes. A few small elongate foraminal pedicellariæ are present in each area, but are not numerous. The trabeculæ are narrow, elevated, and well defined. The papulæ are numerous. The granulation mounts the bases of the tubercles, but never covers the tip, terminating with an abrupt line, which gives many of the tubercles rather an acorn-like appearance.

The supero-marginal plates, which are twenty-seven in number from the median interradial line to the extremity, are small and each bears a tubercle, which is rounded in the disk area, but becomes more conical on the outer half of the ray, while the plate which bears it is also more or less mammillated, the base of the tubercle spreading out widely and occupying nearly the whole plate.

The infero-marginal plates, which are twenty-nine or thirty in number, are confined entirely to the actinal surface, the supero-marginal plates forming the actual margin. Each plate bears a similar tubercle, which may frequently be doubled, and sometimes divided into three or four, all springing out of the one base. All the marginal tubercles have non-granulated tips like the tubercles on the abactinal surface. Elongate foraminal pedicellariæ are rather numerous on the infero-marginal plates, and are also present on the superior series. In the space between the supero-marginal and infero-marginal tubercles are a number of larger "granules," which bear a striking resemblance to paxillæ in consequence of having a circlet of smaller granules round their margin surrounding a central granule.