

with delicate membrane bearing a number of small pedicellariæ; the position of the aboral spine is rather high in the furrow, over which it is directed at an angle of about  $45^\circ$ , and at a right angle to the margin. The two actinal spines are very unequal in size, the smaller one, situated close to the aboral end of the plate and a little on the furrow side of the median longitudinal line, is about twice the length of the small inner spine or even rather more, but very much more robust, especially at the base, which is thick, and the shaft tapers to a pointed extremity; it is articulated on a small tubercle and is covered with delicate membrane bearing small pedicellariæ. The adoral companion, which may be considered the true actinal spine, is large and robust, about 4 mm. in length, and is articulated on a tubercular eminence, midway between the extremities of the plate and a little on the outer side of its median longitudinal line. The shaft is thick, cylindrical, and in the eight or ten innermost spines flaring at the extremity, and with its surface marked with comparatively coarse striations, which have often a slightly twisted appearance, and is covered with delicate membrane crowded with pedicellariæ. The lateral spine is long, robust, and tapering, similar in character to the large actinal spine. It is articulated on a prominent tubercle-like rudimentary infero-marginal plate ankylosed on the lateral side of the adambulacral plate, and is covered with delicate membrane with crowded pedicellariæ. The lateral spines are quite remarkable for their robustness in relation to the small size of the disk.

The actinostome is wide, 7.5 mm. in diameter, that of the disk being 12 mm. The mouth-plates are small but powerful, and are remarkable for the number and size of the mouth-spines they bear. On the margin of each plate are three small cylindrical spinelets, two of them in front but away from the median suture, well spaced, radiating apart, and directed horizontally over the buccal membrane, whilst the third is further back and directed across the entrance of the furrow. Behind these are three long robust spines, placed close to the margin, which should in reality be counted as secondary spines, although when seen from above they have the appearance of being the marginal mouth-spines, and quite mask the small spines just mentioned. The innermost are the longest and reach to the centre of the actinostome, the pair being directed horizontally over the buccal membrane, parallel to one another. The other two spines are smaller and the outermost is the least, and they radiate outward from the foremost slightly and in increasing degree. The shafts of these large secondary mouth-spines are cylindrical, robust, tapering, coarsely striated, covered with delicate membrane crowded with pedicellariæ, which, though small, are larger than any of those before mentioned. The armature of the first pair of adambulacral plates succeeding the mouth-plates is so placed as to appear to belong to the mouth-plate armature; it consists of two small spines one behind the other placed quite in the furrow, then a larger actinal spine which appears to belong to the series of the large secondary mouth-spines, and still more inward on the plate a much larger and more robust actinal spine, this with its companion on the