

finely papillate character, the spinelets being uniformly distributed, whilst on the ovarial regions they are grouped. In some examples, plates here and there bear one longer spine (1.5 to 2 mm.) encased in a membranous sheath crowded with very small pedicellariæ, resembling the characteristic spines on *Freyella cchinata*; they are, however, wide apart and erratic in their occurrence, but are usually most numerous on the outer part of the ovarial region. Some specimens in the collection show no trace whatever of these spines. In those which have the spines the ovarial regions appear to be slightly more tumid and shorter; perhaps this may be a sexual character. Beyond the ovarial region the abactinal surface of the ray is covered with delicate, semitransparent membranous tissue, upon which broad saddle-like bands are borne, crowded with small pedicellariæ. The bands appear broader than usual, and are continuous over the keel.

The ambulacral furrow is wide, measuring 2 mm. at a part where the ray is 3.5 mm. The adambulacral plates are broader than long, and measure about 1.25 mm. at 45 mm. from the disk. The furrow-margin is slightly 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 spinelet is attached to the extreme aboral end of the furrow-margin of the plate, and is directed horizontally over the furrow at a right angle to the margin. It is about 1 mm. in length and is covered with a delicate membranous sheath, expanded at the tip, and bearing several small pedicellariæ. The actinal spine is about 5 mm. in length at 50 mm. from the disk, and is articulated on a prominent tubercle near the aboral extremity of the plate; it is covered with a very delicate membrane, developing a saccular prolongation at the tip, and bearing crowds of very small pedicellariæ. Towards the middle of the ray the spines increase somewhat in size, but often appear much larger in consequence of the greater prolongation of the sheath. The lateral spines, which are articulated on a rudimentary infero-marginal plate ankylosed to the adambulacral plate, are of great length in proportion to the length of the ray, and are of extreme delicacy. At about midway along the ray they measure 22 to 25 mm., and so great is the delicacy of the shaft and of the investing membrane that their appearance is more that of hair-like threads than anything else; they are also very numerous and close together in consequence of the comparative shortness of the ray-segments. There is a more or less extensive prolongation of the sheath at the tip, and a bulbous sacculus is developed. The pedicellariæ which are attached to the membrane are extremely small and are borne on long stalks. The delicacy of the lateral spines taken in conjunction with their length is greater than in the majority of species and is very striking, especially when compared with the apparent robustness of the investment of the actinal spines on the inner part of the ray.

The actinostome is about 12 mm. in diameter in a disk which measures 20 mm. The buccal membrane is rather thick, smooth, and strongly muscular at the actual mouth-