

than broad, but are relatively shorter than in many species of *Freyella* and *Brisinga*. They measure 1.5 mm. in length at about 70 mm. from the disk, and form a robust-looking margin to the furrow. They are narrower midway between their extremities, and the furrow-margin of the plate is the most incurved, though the concavity is by no means great. The adambulacral armature consists of:—(1.) a small inner spinelet directed over the furrow; (2.) a large perpendicular spine on the actinal surface; and (3.) a lateral spine, normally on alternate plates. The small inner spine is attached to the extreme aboral end of the furrow-margin of the plate, and is directed nearly horizontally over the furrow, and at a slight angle forwards; it is about 1 mm. in length, and is covered with a delicate and rather loose membranous sheath somewhat saccular at the extremity, and bearing a number of very small pedicellariæ near the distal extremity chiefly. The perpendicular spines are about 4 mm. in length at 35 mm. from the disk, and articulated on a prominent tubercle rather away from the centre of the actinal surface of the plate towards the aboral extremity; they are encased in a delicate semitransparent membranous sheath, covered with great numbers of very small pedicellariæ, but scarcely so crowded as in some species; the sheath is more or less prolonged at the extremity and a slight saccular expansion is present there. The lateral spine, like the foregoing, appears to be articulated on a prominent tubercle, but it is in reality a rudimentary infero-marginal plate ankylosed on the lateral surface of the adambulacral plate and nearer the aboral end than the middle. The spine is very delicate and needle-like, 11 mm. in length at about 50 mm. from the disk, and 13 mm. at 75 mm., and the longest, a little further outward, is less than 1 mm. more; it is encased in a delicate membranous sheath, on which are crowded very minute pedicellariæ, but scarcely so numerous as in other species; the extremity of the sheath is slightly prolonged and saccular. The character of the spinulation of the ray as a whole may be said to be comparatively short and delicate, and the spines appear to be much more numerous and more closely placed than in many others in consequence of the relative shortness of the ambulacral segments. Respecting these latter it may be here remarked that the part of the ambulacral plate which unites with the companion plate and forms the prominent keel along the median abactinal aspect of the ray is strikingly vertebra-like in form, the median portion being deeply incurved, with the adoral and aboral extremities of this surface higher and more prominent than usual in other species.

The actinostome occupies nearly the whole of the actinal area of the disk, its diameter being 13 mm. in a disk 19 to 20 mm. in diameter. The buccal membrane is thick and opaque, and remarkable for its surface being covered with papilliform villous appendages, rather widely spaced, nearly as long as the spinelets on the abactinal surface, and with slightly claviform extremities. They are of unequal size, however, and the largest are near the margin of the mouth. The mouth-plates are small and very insignificant. The united pair are subquadrate in form, the adoral margin being almost straight, the lateral margins straight and slightly converging, causing the adoral margin to be a little less