

margin. The mouth-plates are small and inconspicuous, and each plate bears on its adoral margin two small mouth-spines. The inner pair are directed horizontally over the buccal membrane and are parallel to one another and the median interradiial line; the outer pair, which are at the outer extremity of the adoral margin of the plates, are likewise directed horizontally over the buccal membrane, but outward, forming an angle of about 45° to the inner mouth-spine. These marginal mouth-spines are less than 1 mm. in length, are covered with delicate membrane, and bear at the tip a number of small pedicellariæ. Each plate bears on its actinal surface a secondary or superficial mouth-spine, about 5 mm. in length, articulated on a prominent tubercle, and encased in a membranous sheath bearing large pedicellariæ.

The madreporiform body is small, convex, subtubercular, situated very near the abactinal margin of the disk; its surface is marked with but few, widely-spaced, striation-furrows. A distinct anal aperture is present, and its position is excentric.

Colour in alcohol, a bleached yellowish ashy grey, with a slight tendency to a light brownish shade, especially on the ovarian regions.

Locality.—Station 184. Off Torres Strait, Pacific side. August 29, 1874. Lat. $12^\circ 8' 0''$ S., long. $145^\circ 10' 0''$ E. Depth 1400 fathoms. Globigerina ooze. Bottom temperature $36^\circ 0$ Fahr.; surface temperature $77^\circ 5$ Fahr.

Remarks.—This species is nearly related to *Freyella echinata*, of which the echinulate forms might easily be considered at first sight as a variety. The general habit, however, of the two starfishes is different in many respects, notwithstanding their apparent nearness in several points of numerical formula, and when the unarmed forms are had in view there is very little in their superficial aspect that would recall *Freyella echinata*. In *Freyella dimorpha* the number of rays is twelve, and this appears to be fairly constant, whereas in *Freyella echinata* there are usually eleven. In *Freyella dimorpha* they are proportionately longer as well as more delicate and attenuate, whilst the ovarian regions are of less extent. The numerous small spinelets on the abactinal plated area are quite different from the armature of those plates in *Freyella echinata*. In *Freyella dimorpha* the lateral spines are considerably longer, although the species is relatively smaller, and their delicacy is exceptional. In this form the true or marginal mouth-spines are small, and their membranous investment as well as the grouping of the pedicellariæ thereon is different. The saddle-like sacculi upon the abactinal membrane of the ray beyond the ovarian region are broader and also maintain their breadth across the median abactinal keel.

Although these differences may appear small in description, they represent variations of character which I find to be fairly constant in species, and on these grounds I have considered the forms under notice as worthy of separate recognition. The dimorphous character of this species, some forms being echinulate and others not, is remarkable. The species also presents some resemblance, perhaps mimetic, to *Freyella fragilissima* and *Freyella bracteata*.