

forming the actual lip of the segmental aperture as in *Pteraster*, the papilla being fixed close up to the spine, aboral to it, and slants rather obliquely in consequence.

The mouth-plates are small, short, narrow, both plates elevated prominently rather than forming a true keel at the junction; aboral extremity gently rounded, not prominent. Each plate bears two large, robust, conical secondary or superficial spinelets, which are longer than the plates themselves, taper to a fine point, and owing to the breadth of their bases occupy nearly the whole of the length of the short plate. These spines stand perpendicularly to the superficies of the plates, the aboral pair radiating rather wider apart and more outward than the adoral pair. The mouth-spines, which are two (or three?) in number, are delicate, pointed, rather wide apart, and placed on the lateral margin of the plates opening into the actinostomial circle.

The actino-lateral spines are comparatively robust and well spaced, sixteen or seventeen are present on each side of the ray, the fifth from the mouth being longest; they are slightly tapered at their extremity, and just protrude beyond the margin, which is feebly festooned between.

Colour in alcohol, greyish white, nearly transparent.

*Variation.*—In a specimen from Station 147, four seems to be the normal number of spinelets in the adambulacral armature, the adoral one being relatively smaller, and the transverse tendency of the series upon the plate being even more marked than in the specimen from which the above description is taken. In this specimen (from Station 147) an additional pair of superficial secondary mouth-spines is present, making three pairs, and the innermost pair of mouth-spines proper are nearly as large as the adoral pair of secondaries.

*Localities.*—Station 146. Between Marion Island and the Crozet Islands. December 29, 1873. Lat. 46° 46' 0" S., long. 45° 31' 0" E. Depth 1375 fathoms. Globigerina ooze. Bottom temperature 35°·6 Fahr.; surface temperature 43°·0 Fahr.

Station 147. West of the Crozet Islands. December 30, 1873. Lat. 46° 16' 0" S., long. 48° 27' 0" E. Depth 1600 fathoms. Diatom ooze. Bottom temperature 34°·2 Fahr.; surface temperature 41°·0 Fahr.

*Remarks.*—*Hymenaster præcoquis* differs so widely from all other species of *Hymenaster* in the character of the adambulacral armature and of the aperture-papillæ, that I have felt some doubt as to whether they do not require the separation of the form in a subgenus, or even a distinct genus. After carefully considering the importance attributable to these structures, I have decided to leave for the present the species as now classed. One of the examples of this species is exceedingly interesting from the fact that well-developed young are present in the nidamental chamber, and may be seen through the semitransparent membrane. A large rent occurs in the actinal floor in one interradius, and I am inclined to think that it was probably formed for their egress; but whether by the young starfishes themselves or by their mother, I am unable to offer an opinion.