

are more or less prominent, suggesting the character of the same structure in *Hymenaster pullatus*, the fibres, however, being much more delicate and less numerous. The spinelets which form the valves of the oscular orifice are rather robust.

The ambulacral furrows are narrow. The armature of the adambulacral plates consists of two long and needle-shaped spines, placed slightly oblique to the line of the furrow. The innermost aperture-papilla is very large and comb-formed, composed of radiating shafts. The adambulacral plates are elongate.

The mouth-plates have a prominent and rather angular keel along the line of juncture, and bear two short and moderately robust superficial or secondary mouth-spines, the anterior pair close to the adoral margin. Several (three or more) mouth-spines are present on the margin of the lateral expansions.

The actino-lateral spines are short, robust, and placed wide apart, the sixth or seventh from the mouth being longest; the character along the free portion of the ray is indeterminate. The actinal membrane is furnished with numerous fine muscular fibres.

*Locality*.—Station 244. In the Mid-North Pacific, between Yeddo and San Francisco, near the meridian of 170° E. June 28, 1875. Lat. 35° 22' 0" N., long. 169° 53' 0" E. Depth 2900 fathoms. Red clay. Bottom temperature 35°·3 Fahr.; surface temperature 70°·5 Fahr.

*Remarks*.—Unfortunately this delicate specimen has been so shattered and distorted that its present state of preservation will not admit of a satisfactory description. This difficulty of study is the more to be regretted as the form is one of the deepest dwelling Asterids obtained during the Expedition. The characters above enumerated are sufficient, however, to indicate that the species under notice is clearly distinct from any other in the group. The attenuation of the rays, the number and delicacy of the paxillæ-spinelets, and the characters of the actinal surface readily distinguish the form. On these grounds I have considered it advisable to establish the species, although loth to do so on such imperfect material.

11. *Hymenaster cælatus*, Sladen (Pl. LXXXV. figs. 4 and 5; Pl. LXXXVI. figs. 10-12).

*Hymenaster cælatus*, Sladen, 1882, Journ. Linn. Soc. Lond. (Zool.), vol. xvi. p. 225.

Marginal contour stellato-pentagonoid. Interbrachial arcs sharply indented, the minor radius being in the proportion of 63·3 per cent.  $R = 30$  mm.;  $r = 19$  mm. The abactinal area is concave, the rays being curved upward and their extremities recurved and quite turned over. Actinal area very convex. The radial areas are well marked out, the lateral margins converging gradually to the tip, which is not attenuated or produced. A secondary membrane extending beyond the actino-lateral spines forms a conspicuous fleshy fringe.

The supradorsal membrane is rather thick. The paxillæ are composed of four or five