

great number of small spiracula not quite so closely placed as those on the disk, and not arranged in lines.

The ambulacral furrows are rather widely petaloid, and rapidly constricted at the extremity. The armature of the adambulacral plates consists of three short spines, nearly uniform in length, pointed, and covered with a membrane expanded into a lanceolate shape, but with no terminal saccular prolongation. Each series of spines is placed diagonally upon its plate, or oblique to the line of the furrow. The aperture-papillæ are large and broadly subspatulate or even subrhomboid, expanded somewhat obliquely, the pedicle seeming to be attached rather on one side. The mouth-plates are rather broad, prominent aborally, and have five or six short mouth-spines attached to the lateral aliform extensions, and directed horizontally. Two short, robust, subconical secondary mouth-spines are borne on the superficies of each plate—one near the adoral extremity, and the other, which is thickest, placed midway between this spine and the aboral extremity of the mouth-plate.

The actino-lateral spines are long and well spaced, about forty on each side of a furrow, the eleventh or twelfth from the mouth being longest. The spines within the disk do not quite meet in the median interradial line, and those along the outer third of the ray diminish in length very rapidly; they are, however, rather irregular in their length throughout, which gives a ragged appearance to the fringe. The spines are pointed at their extremities, and the web is very slightly indented between.

Colour in alcohol, yellowish grey.

Locality.—Station 158. South of Australia, 1099 miles south-west of Cape Otway. March 7, 1874. Lat. $50^{\circ} 1' 0''$ S., long. $123^{\circ} 4' 0''$ E. Depth 1800 fathoms. Globigerina ooze. Bottom temperature $33^{\circ} \cdot 5$ Fahr.; surface temperature $45^{\circ} \cdot 0$ Fahr.

Remarks.—*Hymenaster crucifer* is distinguished, as its name implies, by the peculiar cross-like markings formed by the paxillæ-crowns. A further characteristic feature is furnished by the general structure of the supradorsal membrane and the lineal disposition of the spiracula.

13. *Hymenaster anomalus*, Sladen (Pl. LXXXIX. figs. 3 and 4; Pl. XCI. figs. 4–6).

Hymenaster anomalus, Sladen, 1882, Journ. Linn. Soc. Lond. (Zool.), vol. xvi. p. 228.

Marginal contour stellato-pentagonal. Interbrachial arcs wide and rather sharply and angularly indented, the minor radius being in the proportion of 63 to 65 per cent. $R = 15$ mm.; $r = 9 \cdot 5$ mm., approximately. Rays subtriangular in outline, and tapering to a fine extremity. Form very depressed, only slightly elevated in the centre of the disk. Marginal fringe quite inconspicuous when seen from above.

The supradorsal membrane is furnished with uniformly thick fibrous bands, closely reticulated, the network exhibiting a certain incipient regularity of construction. The