Zoology Part LI: Report on the ASTEROIDEA. By W. Percy Sladen, Bound in Volume 30,1889.

rhomboid outline when seen from above, and inclined upward into the mouth cavity, with rather widely expanded lateral flanges, which are straight and square in front. Each plate bears two robust secondary spines, one on the middle of its surface, standing in the lateral angle of the rhomb, and another comparatively smaller and thinner placed nearer the adoral extremity. The mouth-spines proper are represented by three small tapering spinelets placed on the lateral margin of each plate.

The actino-lateral spines are robust and of moderate length, the seventh to the ninth from the mouth being longest. The spines of two adjacent rays do not quite meet in the median interradial line, a little narrow channel or wrinkle of the membrane being maintained between their tips. The spines diminish regularly in length after the angle is passed until they become microscopic at the end of the ray; they are pointed at their outward extremities, and the web being well indented between gives a serrate appearance to the margin.

Locality.—Station 157. In the Southern Ocean, near the meridian of 110° E. March 3, 1874. Lat. 53° 55′ 0″ S., long. 108° 35′ 0″ E. Depth 1950 fathoms. Diatom ooze. Bottom temperature 32°·1 Fahr.; surface temperature 37°·2 Fahr.

Remarks.—*Hymenaster latebrosus* may be distinguished by its general form, by the structure of the supradorsal membrane, and by the armature of the adambulacral plates. I know of no species for which it could be mistaken.

15. *Hymenaster porosissimus*, Sladen (Pl. LXXXII. figs. 3 and 4; Pl. LXXXIII. figs. 10–12).

Hymenaster porosissimus, Sladen, 1882, Journ. Linn. Soc. Lond. (Zool.), vol. xvi. p. 231.

Marginal contour subpentagonal. Interbrachial arcs scarcely indented, forming simply a slight curve inward. The minor radius is in the proportion of 75·5 per cent. R = 45 mm.; r = 34 mm. The rays do not taper beyond the extent of a true pentagon, and are slightly rounded at the extremity, which is somewhat feebly upturned.

The supradorsal membrane is very uniformly reticulated; the muscular fibres are so closely and regularly placed that their radiation from the spinelet-tips as centres is scarcely apparent; the meshes are very small and regularly placed, each with one small spiraculum.

The paxillæ-spinelets, which are three, four, or five in number, and evenly spaced, are rounded at the tips, very slightly prominent, and produce a uniformly papillate appearance on the abactinal area, no general pattern of arrangement being discernible. The crowns of a great number of the paxillæ form a more or less distinctly visible Maltese cross, in consequence of two prominent fibres joining the tips of the opposite spinelets. The oscular orifice is moderately large; the circumference at the base of the valves being very clearly marked out by prominent spinelets. The valves are triangular, five in number, and form

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