

Locality.—Station 150. Between Kerguelen Island and Heard Island. February 2, 1874. Lat. $52^{\circ} 4' 0''$ S., long. $71^{\circ} 22' 0''$ E. Depth 150 fathoms. Coarse gravel. Bottom temperature $35^{\circ} \cdot 2$ Fahr.; surface temperature $37^{\circ} \cdot 5$ Fahr.

Remarks.—*Pteraster rugatus* may be readily recognised by its almost pentagonal form and by the rugose character of the abactinal (supradorsal) area. It also differs from the other members of the genus in structural details, which need not be recapitulated.

4. *Pteraster stellifer*, Sladen (Pl. LXXIV. figs. 1 and 2; Pl. LXXVII. figs. 1 and 2).

Pteraster stellifer, Sladen, 1882, Journ. Linn. Soc. Lond. (Zool.), vol. xvi. p. 193.

Marginal contour stellato-pentagonoid, interbrachial arcs slightly indented, the minor radial proportion being 67·6 per cent. $R = 34$ mm.; $r = 23$ mm.

Rays very broad at the base, and tapering to a fine extremity, which is slightly recurved, margins of the rays not curved outward. Abactinal surface depressed and flatly convex. Lateral fringe scarcely extending beyond the margin. Actinal surface flat.

The supradorsal membrane, which is rather thick, regularly papillose in appearance, and not reticulated, is composed of closely interlacing fibrous tissue. The paxillæ are numerous and closely placed, having crowns of usually six spinelets radiating round a central one; the expansion of the spinelets is slight, and all are uniformly protuberant. The tips of the spinelets elevate the membrane into little conical papillæ, which, in consequence of the regularity of the crowns of the paxillæ, have the appearance of forming six-rayed stars with a central papilla, raised slightly in relief above the general superficies. The crowns are closely placed, with the interspaces rather deep; and the "stars" often appear to overlap. A more or less distinct lineal arrangement of this ornamentation may be observed upon the rays, although here and there irregular paxilla-crowns, with fewer or more minute spinelets, as the case may be, are interspersed. The "stars" diminish in size as they proceed outward on the ray. The spiracula are small and rather widely spaced. The oscular orifice is small, and the spinelets of the valves are short and crowded.

The ambulacral furrows are narrow, straight, not petaloid, and converge gradually towards the extremity. The tube-feet are arranged in simple pairs. The borders formed by the transverse combs of spinelets on the adambulacral plates are rather broad. The armature of the adambulacral plates consists of a comb of five comparatively short spinelets, the innermost one diminutive, not half the length of the others, and placed aborally to them on the plate, the comb being thus curved round aborally at the margin of the furrow; the spine next to the outermost is usually the longest. The web, which is moderately thick and semitransparent, is rather deeply incurved between the spinelets, somewhat thickened round them, and slightly sacculate over their extremities; it is continued from the outermost spine of the comb far out upon the actino-lateral spines.

The segmental apertures are rather large and conspicuous for this genus. The aperture-