

papilla is comparatively large, and free on its aboral side only, forming a regular semi-circular lip, the remainder of the papilla being entirely hidden in membrane.

The mouth-plates are short, but widely expanded laterally, rising by a gradual slope into a high and angular median keel, which forms a prominent peak aborally. Each plate bears one moderately robust secondary or superficial spine placed rather nearer the anterior margin of the plate than the middle. These spines are shorter than the mouth-spines proper, and are covered with a thick investing-membrane slightly sacculate at the extremity. Five mouth-spines are situated on the horizontal margin of each plate, the innermost the longest, the next slightly smaller, and the outer three much smaller. Each of the spines is covered with a moderately thick subsacculate investing membrane; and no web is developed, except in a single abnormal instance, where a secondary spine is united with the inner or first mouth-spine proper.

The first or most adoral transverse combs of the adambulacral plates of two neighbouring rays touch one another at their bases behind the aboral peak of the mouth-plates, but are not joined together.

The actino-lateral spines are long, delicate, closely placed, and extend to the margin of the actinal surface; the web is faintly rounded over their extremities and slightly festooned between. The spines are horizontal in their disposition, forming a flat actinal surface to the disk; the fringe extends very slightly beyond the margin; and the spines diminish to quite microscopic proportions at the extremities of the ray.

Colour in alcohol, a general pinkish white on the abactinal area, verging on flesh colour. The actino-lateral spines, the spines of the adambulacral armature, the mouth-plates, and the mouth-spines, are all of a delicate rosy pink colour; and this, seen through the semitransparent light flesh-coloured investing tissue, gives an exquisitely beautiful appearance to the underside of the starfish.

Locality.—Station 311. Off the entrance to Smyth Channel. January 11, 1876. Lat. 52° 45' 30" S., long. 73° 46' 0" W. Depth 245 fathoms. Blue mud. Bottom temperature 46°·0 Fahr.; surface temperature 50°·0 Fahr.

Remarks.—This remarkably handsome species is distinguished from all other forms by the regular stellate character of the paxillæ-crowns, by the armature of the adambulacral plates, and by the general character of the actinal surface.

5. *Pteraster semireticulatus*, Sladen (Pl. LXXV. figs. 5 and 6; Pl. LXXVII. figs. 5 and 6).

Pteraster semireticulatus, Sladen, 1882, Journ. Linn. Soc. Lond. (Zool.), vol. xvi. p. 195.

Marginal contour substellate; interbrachial arcs well indented, the minor radial proportion being 57 per cent. $R = 14$ mm.; $r = 8$ mm. The sides of the rays slightly and gracefully curve outward, and the tips are naturally upturned and incised, bringing the extremity of the ambulacral furrow upon the abactinal area. Abactinal profile rather high