

Colour in alcohol, yellowish or greyish white.

*Locality*.—Station 311. Off the entrance to Smyth Channel. January 11, 1876. Lat.  $52^{\circ} 45' 30''$  S., long.  $73^{\circ} 46' 0''$  W. Depth 245 fathoms. Blue mud. Bottom temperature  $46^{\circ} \cdot 0$  Fahr.; surface temperature  $50^{\circ} \cdot 0$  Fahr.

*Remarks*.—*Retaster gibber* is distinguished from all other species of the genus by the rounded margin, by the shortness and peculiar posture of the actino-lateral spines, and by the character of the network of the supradorsal membrane.

4. *Retaster insignis*, Sladen (Pl. LXXVI. figs. 3 and 4; Pl. LXXVII. figs. 11 and 12).

*Retaster insignis*, Sladen, 1882, Journ. Linn. Soc. Lond. (Zool.), vol. xvi. p. 200.

Marginal contour stellate, five-rayed. Interbrachial arcs well rounded. Minor radial proportion 44·4 per cent.  $R = 45$  mm.;  $r = 20$  mm. (In another example  $R : r$  as 70 : 31.) Rays very slightly tapering, obtusely rounded at the extremities. Abactinal surface moderately convex, rays uniformly rounded from the margin. Actinal surface flat or subconcave, somewhat impressed round the actinostome.

The supradorsal membrane is very conspicuously reticulated. The paxillæ-spinelets are prominent, arranged in regular lines, joined by fibres forming large uniform rhomboidal meshes, which are rendered still more distinct by the lines and the investment of the spinelets being of a dark purple or black colour, whilst the supradorsal membrane generally is ashy white. The meshes are filled in with a closely and regularly reticulate tissue, the interspaces of which are small, equally spaced, and each punctured with a minute spiraculum. The opposite angles of the rhomboidal areas are usually joined by fibres rather more robust than the rest, forming a right-angled cross in the centre, and marking off the reticulated area of the mesh into four more or less easily distinguishable sections. There are eighty to one hundred or more spiracula in each mesh. The spinelets which stand at the angles of the meshes protrude more than the others, and appear like well-developed thornlets springing from the general surface. The oscular orifice is small and constricted, the spinelets of the pseudo-valves are slightly prominent, their extremities being tipped with the same dark colour as the lines of reticulation above mentioned.

The ambulacral furrows are narrow, straight, and sunken, their apparent depth being further increased by the position of the prominent fringe of the actino-lateral spines, which stand vertically on each side of the furrow. The armature of the adambulacral plates consists of five spines, united together by a web, three standing on the margin of the plate parallel to the furrow, the next (more adoral) placed more outwards and away from the furrow, and the fifth more outward still. The innermost (i.e. most aboral) spine of the furrow series is very small, each succeeding one in the comb increasing in length; all are comparatively short, delicate, and tapering. The membrane which unites the spinelets is very fine, semi-transparent, and deeply festooned between the spinelets, and is continued from the outermost spine of the comb upon the adjacent actino-lateral spine. The small spines placed on the margin detract very slightly from the general transverse aspect of the comb, their smallness