

The actino-lateral spines, although long, do not meet in the interradium; indeed the abactinal and actinal membranes coalesce, apparently normally, in the outer portion of the median interradiial line, thereby forming a partition in the interradiial chamber. The spines which come near the interbrachial margin are much thickened and knobbed at their extremity; indeed all of them are more or less so except the most outward of all. There are about thirty-two to thirty-six actino-lateral spines, the fifteenth to seventeenth from the mouth being longest; beyond this they diminish very rapidly in size.

Colour in alcohol, white.

*Locality*.—Station I. South-west of Cape Finisterre. December 30, 1872. Lat.  $41^{\circ} 58' 0''$  N., long.  $9^{\circ} 42' 0''$  W. Depth 1125 fathoms. Blue mud.

*Remarks*.—*Hymenaster membranaceus* bears some superficial resemblance to *Hymenaster pullatus*, but the forms may be readily distinguished by the character of the supradorsal membrane, by the form and armature of the mouth-plates, by the shape of the aperture-papillæ, and by the structure of the web of the abactinal floor.

20. *Hymenaster coccinatus*, Sladen (Pl. XC. figs. 3 and 4; Pl. XCI. figs. 10–12).

*Hymenaster coccinatus*, Sladen, 1882, Journ. Linn. Soc. Lond. (Zool.), vol. xvi. p. 238.

Marginal contour stellato-pentagonoid. Interbrachial arcs well rounded. Rays tapering to a fine point, with their lateral margins almost straight. Minor radial proportion 55.5 per cent.  $R = 18$  mm.;  $r = 10$  mm. Form very depressed, slightly convex and rising in the centre. No definite marginal fringe present.

The supradorsal membrane is very fine; the muscular fibres are thin, filiform, and well defined, forming a rather wide and rectangular reticulation resembling to a large degree the venation of certain leaves more than the characteristic intercrossing of fibres radiating from the neighbouring spinelets which is generally noticeable throughout the genus. This peculiarity arises from the frequent bifurcations, bendings, and sudden terminations to which the fibres are subject, which, together with the presence of small secondary fibres, modify the normal arrangement of radiation from tip to tip, this being after all the principle of the disposition of this structure even in the species under notice. The meshes are filled in with an almost hyaline tissue, punctured with two, three, or even more small spiracula, each surrounded with a definite white ring. The spinelets of the paxillæ are not numerous, and are but slightly protuberant, the tips being covered with a little cap of membrane, which gives them a rather knobby appearance. The oscular orifice is moderately large, its outer circumference at the base of the valves being well defined by a pentagonal outline formed of thickened or fibrous tissue. The five valves are regular and triangular, with about eight spines in each; the whole series are webbed together, and form a very slightly elevated pyramid when closed.

The ambulacral furrows, which are wide and open, are very slightly petaloid opposite the commencement of the outer third, and rather rapidly constricted towards the tip.