

4. *Hyphalaster planus*, Sladen (Pl. XXV. figs. 1-3; Pl. XXVIII. figs. 9-12).

Hyphalaster planus, Sladen, 1883, Journ. Linn. Soc. Lond. (Zool.), vol. xvii. p. 242.

Rays five. $R = 35$ mm.; $r = 15$ mm. $R < 2.5 r$.

Marginal contour stellato-pentagonoid. The rays are of moderate length, and comparatively slender from the disk outwards. The disk is depressed and not higher than the supero-marginal plates, although apparently capable of a slight inflation. The minor radius is in the proportion of 42 per cent. The interbrachial arcs are very wide and more or less flattened, which gives a strongly marked pentagonal aspect to the large disk.

The abactinal area is covered with small closely crowded paxillæ, which are limited to the disk proper, and extend very slightly upon the area at the base of the rays; the median abactinal area of the ray being covered with membrane beset with small squamiform plates. The paxillæ are small, and composed of four to six short and comparatively robust spinelets, and are so closely placed as to almost give the appearance to the disk of being coarsely granulated, when seen without a magnifying glass. A prominent conical epiproctal protuberance is present in the centre of the disk.

The marginal plates constitute the entire thickness of the animal, and form a well-rounded margin to the disk. Along the rays the supero-marginal plates of the opposite sides do not meet, but are separated throughout the whole extent of the ray by a median radial membranous area, beset with squamæ. The rays are comparatively slender and well rounded, having a cylindrical appearance, and proceeding somewhat abruptly from the angles of the disk. The supero-marginal plates are ten or eleven in number, exclusive of the terminal ocular plate. They are rather longer than high, excepting in the one or two outermost plates, where the proportions may even be very slightly reversed.

The infero-marginal plates correspond to the superior series, the length exceeding the height throughout the ray. The height of the plates of the inferior series is greater in the interbrachial arc than that of the superior series, whilst along the ray it is much less; and it is less also than one-half the length of the plate. There is a gradual but very striking diminution in the size of the plates of both series as they pass from the disk along the ray. The marginal plates are smooth and covered with a very fine membrane; and all are devoid of spines excepting the terminal ocular plate. The terminal plate is not large or conspicuous, its size being in serial proportion to the neighbouring supero-marginal plates; it forms a blunt obtusely rounded extremity to the ray, and its actinal portion is slightly curved upwards. It bears three spinelets, or representatives of such appendages—one, which is short, robust, and conical, placed at the extremity in the median radial line and directed vertically; and a pair, one placed on each side, at a lower level, but quite in front of the abactinal spine. The lateral spines are probably aborted, being, at least in the specimen under notice, little more than tubercles.