

Chorological Synopsis of the Species.

	Ocean.	Range in Fathoms.	Nature of the Sea-bottom.
<i>Mimaster tizardi</i>	Atlantic.	516 to 555	Mud.
<i>Mimaster cognatus</i>	Pacific.	245 to 1325	Blue mud.

1. *Mimaster tizardi*, Sladen.

Mimaster Tizardi, Sladen, 1882, Proc. Roy. Soc. Edin., vol. xi. p. 702; Trans. Roy. Soc. Edin., vol. xxx., part ii., p. 580, pl. xxxiv.

Rays five. $R = 120$ mm.; $r = 54$ mm. $R = 2.2 r$. The minor radius is thus in the proportion of 45 per cent. Breadth of a ray at the base, 58 mm.

General form large and robust. Marginal contour stellato-pentagonal. Rays short and triangular, tapering continuously from the base to the extremity, the breadth at the base of a ray greater than the minor radius of the disk, the interbranchial arc being subacute.

The abactinal surface is high and inflated over the disk, very gibbous at the base of the rays, but flattening towards the extremities. A deep furrow is formed along the median interradial line in consequence of the gibbosity, but disappears before reaching the centre of the disk. The actinal surface is more or less convex, but to a comparatively slight degree, although the feature is probably largely emphasized by the upward turning of the extremities of the rays in consequence of their posture at the time of death. Consequent on the curvature of the actinal and abactinal surfaces, the margins are very thin and of small dimensions, and are occupied entirely by the double series of small marginal plates. The thickness or perpendicular height of the two series of marginal plates together is only 4 mm.

The abactinal surface is covered with a great number of small uniform paxillæ, closely and equidistantly placed, and with a well-defined space between each, which present no definite order of arrangement, excepting in the immediate neighbourhood of the arm-angle, where a certain amount of obliquely transverse lineal disposition may be observed. The whole of the calcareous portion of the abactinal skeleton is composed entirely of paxillæ, as in the *Astropectinidæ*. The paxillæ consist of a cylindrical pedicle, about twice as high as broad, expanding slightly at the base, and with the distal extremity rounded and clavate, and surmounted by a crown of fifteen to twenty spinelets, which radiate apart very slightly and produce a compact form of paxillæ. The spinelets are short, delicate, and slightly taper, about equal in length to the pedicle, and sometimes less, probably owing to a certain extent to abrasion. The base of the paxillæ is quite small and thin