

periphery in straight lines of great regularity, the bending of the furrows being sharp and angular.

The ambulacral furrows are slightly lanceolate in form, contracting as they approach the actinostome, and again very gradually at the base of the ray as they proceed outward. The tube-feet have a well-developed sucker disk.

The terminal plate is squarely shield-shaped (pentagonal), its proximal extremity angular, its sides subparallel and straight, and the distal extremity straight and truncate, bearing two short robust conical spines directed horizontally in the direction of the prolongation of the ray. The breadth of the terminal plate is abruptly less than the breadth of the ray at its attachment, which gives it the appearance of a superadded aftergrowth.

Colour in alcohol, a bleached yellowish or ashy white.

Locality.—Station 204. Off Tablas Island, Philippine group. November 2, 1874. Lat. $12^{\circ} 43' 0''$ N., long. $122^{\circ} 9' 0''$ E. Depth 100 to 115 fathoms. Green mud. Surface temperature $84^{\circ} 0$ Fahr.

Subfamily MIMASTERINÆ, Sladen, 1888.

This subfamily includes only the single genus *Mimaster*, the morphological relations of which are interesting as well as important. If the mind be allowed to indulge in speculative deductions, the structure of *Mimaster* would appear to indicate a phylogenetic line of descent which passes from the Archasteridæ to the Pentagonasteridæ, and has branches to the Astropectinidæ and Solasteridæ, the lines of the series being indicated by such forms as *Leptoptychaster*, *Mimaster*, *Gnathaster*, and *Solaster*. In our ignorance of the developmental history of *Mimaster*, it is, however, premature to endeavour to construct its genealogical tree with any pretension to accuracy; and any such scheme as that above suggested can only claim to be regarded as an exercise of the imagination.

To confine our remarks to matters of fact, the mouth-plates, the actinal intermediate plates, and the general form of *Mimaster* indicate an alliance with the Pentagonasteridæ; whilst the more or less strongly marked representatives of the superambulacral plates, the fan or oar-shaped lower end of the ambulacral plates, and the structure of the abactinal plates, with their paxilliform developments, point to an affinity with the Astropectinidæ, *Leptoptychaster* being the connecting form so far as the actinal intermediate plates are concerned.

Genus *Mimaster*, Sladen.

Mimaster, Sladen, Proc. Roy. Soc. Edin., 1882, vol. xi. p. 702; Trans. Roy. Soc. Edin., vol. xxx., part ii., p. 579.

Marginal contour stellato-pentagonal. Abactinal area subject to inflation. Actinal area more or less convex. Abactinal floor composed entirely of independent paxillæ,