

the base of the ray a few additional plates similarly armed are present, but there do not appear to be more than four or five on each side of the median interradial line, and these form a short series parallel to the series already described. A few forcipiform pedicellariæ are present between the two series of spines.

The mouth-plates trend upward into the buccal cavity. The mouth-spines are similar in form and size to the spines on the adambulacral plates. The actinostome is rather small.

The madreporiform body is circular and occupies the centre of one of the basal plates. The striæ are coarse and arranged with great regularity, their general trend being centrifugal. The surface of the madreporiform body is slightly depressed and its margin is surrounded by a ring of granules.

The anal aperture is distinct and situated external to the dorso-central plate.

The ambulacral furrow is wide; and the tube-feet are closely crowded, forming four alternating rows until near the extremity—those on the outer fourth or fifth being in two simple rows. The tube-feet have a fleshy terminal disk with an invaginated centre.

The terminal plate is very small, and the granules upon it are elongate and papilliform in comparison to those on the adjacent plates.

Colour in alcohol, a bleached yellowish white.

*Young Phase.*—The smallest example amongst the series, which measures  $R = 13.5$  mm., presents all the characters of the adult, and could not possibly be mistaken. It is to be noted, however, that the central area of the disk is not yet depressed. It is occupied by the large dorso-central and basal plates which are contingent, the under-basals being extremely small.

*Localities.*—Station 73. West of Fayal, Azores. June 30, 1873. Lat.  $38^{\circ} 30' 0''$  N., long.  $31^{\circ} 14' 0''$  W. Depth 1000 fathoms. Pteropod ooze. Bottom temperature  $39^{\circ}.4$  Fahr.; surface temperature  $69^{\circ}.0$  Fahr.

Station 76. Between the Islands of San Miguel and Pico, Azores. July 3, 1873. Lat.  $38^{\circ} 11' 0''$  N., long.  $27^{\circ} 9' 0''$  W. Depth 900 fathoms. Pteropod ooze. Bottom temperature  $40^{\circ}.0$  Fahr.; surface temperature  $70^{\circ}.0$  Fahr.

#### Genus *Tarsaster*, n. gen.

Rays elongate and subcylindrical as viewed from above. Disk small, with the junction of the rays indicated.

Abactinal area of the disk covered with large, permanent, primary apical plates. The rays covered with plates arranged in longitudinal series. The median series large, subimbricating. All the plates bearing short, co-ordinated spines (one to three in number in the type form). Plates covered with membrane bearing small isolated forcipiform pedicellariæ.