

sented only by a small miliary spinelet, or may be entirely absent altogether. I have only found them well-developed in one case, and that not the largest specimen in the series. In one example I notice a tendency towards diminution in the number of spinelets in the furrow series on the adambulacral plates, and this is shown in the abortion or total absence of the outer spinelets at either extremity of the series; as a result of this reduction there may be only three, four, or five spinelets in place of six, which appears to be the normal number, and the central spinelets of the series appear comparatively long. The occasional presence of an additional spine on the actinal surface of the adambulacral plates has already been remarked upon.

*Young Phase.*—The smallest example in the collection (from Station 46) has a minor radial measurement of 3.5 mm., and the rays appear to be comparatively robust. This specimen presents in a most unequivocal manner all the characters of the type, and even though so young there need not be the slightest hesitation about referring the form to this species. So small indeed are the differences between the juvenile and the adult stages, that the mature form in this species may well be said to exhibit on a larger scale all the features of the embryonic phase.

In this juvenile example there are no actinal intermediate (ventral) plates. The disk and the base of the rays have a somewhat villous or subpapillose appearance, the spinelets on the abactinal plates being decidedly robust for the size of the animal, and rather thickly covered with membrane. The papulæ are well-developed and distinct; and there are three large spiracle-formed pedicellarian apparatus on the disk. The odd interradial plates and spines are very large, the latter being about 5 mm. long; and are strongly denticulate along the shaft, suggesting to a certain degree the miniature of a *Cidaris*-spine. The knob-like terminations of the tube-feet are large and button-shaped. The genital foramina are discernible on each side of the odd interradial plate, opposite the first supero-marginal plates and near their inner edge.

*Localities.*—Station 50. South of Halifax, Nova Scotia. May 21, 1873. Lat. 42° 8' 0" N., long. 63° 39' 0" W. Depth 1250 fathoms. Blue mud. Bottom temperature 38° 0 Fahr.; surface temperature 45° 0 Fahr.

Station 46. Off the coast of North America, east of New Jersey. May 6, 1873. Lat. 40° 17' 0" N., long. 66° 48' 0" W. Depth 1350 fathoms. Blue mud. Bottom temperature 37° 2 Fahr.; surface temperature 40° 0 Fahr.

Station off the coast of Portugal. January 1873. (Exact date and station not recorded.)

*Remarks.*—*Pararchaster armatus* is characterised by the presence of comb-formed pedicellariæ on the abactinal area and in the actinal interradial areas; and by their absence between the infero-marginal plates. The simplicity of the armature of the infero-marginal plates (one lateral spine and sometimes a small companion), and the comparatively large number of six or seven spines in the furrow series on the adambulacral plates, also serve to readily distinguish this interesting form.