

parallel to the median suture, which decrease in size as they proceed outward; and between this series and the outer margin stand two small secondary spines, or sometimes only one, accompanied by one or two miliary spines; the secondary spines are, however, so small that they are scarcely distinguishable from the rest of the spinulation.

The actinal intermediate (ventral) plates are very few in number, not more than six to twelve in each area. They are small and convex, and bear two or three small tapering thorn-like miliary spinelets on their midst. They do not separate more than the innermost three or four adambulacral plates from the infero-marginal plates.

The anal aperture is subcentral and often difficult to see, but its position is usually indicated by the crowded circlet of paxillæ around it, although these differ in no way from the rest.

The papularium at the base of each ray is small and compact, probably with not more than six to nine papulæ in each, and often, I believe, with a less number; but this is difficult to ascertain without dissection. The size of the papulæ varies considerably in one and the same papularium, one or two being often much larger than the others.

The madreporiform body, which is small, oval, and subtubercular, is situated about midway between the centre and the margin, but rather nearer the latter. Its surface is marked with deep, coarse, convoluted furrows, which usually have the appearance of traversing the plate rather than of radiating from the centre to the margin; and there is frequently a large paxilla on its adcentral side.

Colour in alcohol, a dirty yellowish ashy grey.

*Individual Variation.*—This species is on the whole very constant in character; the only variations of any moment, which I notice in a considerable number of examples all from one station, affect the relative size and robustness of the prominent or largest spinelets on the actinal surface of the adambulacral plates; and the degree of development of the small companion to the lateral spine on the infero-marginal plates. There is also sometimes a slight variation—diminution—in the size of the minute miliary thornlets or papillæ on the actinal intermediate and infero-marginal plates. It may also be remarked in some examples that there is a well-defined plate or paxilla much larger than any of the others midway between the centre of the disk and the margin in the median interradial line, and these are probably the representatives of the primary interradial (basal) plates.

*Young Phase.*—The smallest example of *Pontaster planeta* in the collection measures  $R = 15.5$  mm. and  $r = 4.5$  mm. It presents all the characters of the adult in an unmistakable way, and there would be no hesitation in referring it to the species even if intermediate stages of growth were wanting. The relative shortness of the radial dimension in proportion to the interradial may be noticed. There are sixteen supero-marginal plates between the terminal and the median interradial line. The terminal plate is large and broad, and deeply indented proximally in the median line.