

volute, their general disposition having the appearance of radiating from a central point. A number of the larger paxillæ surround the margin of the madreporite.

The papulæ are confined to an oval or pyriform area at the base of each ray; they are of small size, and probably from forty to fifty are contained in each papularium.

Colour in alcohol, a bleached yellowish ashy white, frequently with a pinkish shade on the abactinal paxillar area.

*Locality*.—Station 49. South of Halifax, Nova Scotia. May 20, 1873. Lat.  $43^{\circ} 3' 0''$  N., long.  $63^{\circ} 39' 0''$  W. Depth 85 fathoms. Gravel, stones. Bottom temperature  $35^{\circ} 0$  Fahr.; surface temperature  $40^{\circ} 5$  Fahr.

*Remarks*.—This species is nearly related to *Pontaster tenuispinus*, but presents a number of differences whose constancy and character appear to justify the recognition of the form as a distinct species rather than as a mere locational variety. When compared with *Pontaster tenuispinus*, *Pontaster hebitus* is distinguished by the comparatively small disk; by the rays being generally broader throughout and devoid of any rapid expansion at the base; by the greater breadth of the supero-marginal plates on the abactinal surface; by the robust but short and truncate spines on the marginal and adambulacral plates; by the character of the armature of the adambulacral plates, and by the total absence therefrom of the two-jawed pedicellariæ. The paxillæ of the disk-area are smaller than in examples of *Pontaster tenuispinus* of the same dimensions, and the general habit of *Pontaster hebitus* is larger and much more robust. Notwithstanding these differences, it is unquestionable that the species are very closely allied, and are most probably representative forms derived directly from a common ancestry.

4. *Pontaster limbatus*, n. sp. (Pl. VI. figs. 3 and 4; Pl. VII. figs. 1 and 2).

Rays five.  $R = 59$  mm.;  $r = 11.5$  mm.  $R > 5r$ . Breadth of a ray between the second and third supero-marginal plates, 10 mm. A larger example measures  $R = 73$  mm.;  $r = 13.25$  mm. Breadth at the same place, 12 mm.

Rays moderately elongate, tapering gradually and regularly from the base, which is broad, to a finely pointed and attenuate extremity. Disk small. Interbrachial arcs wide but rather angular. Lateral walls high and vertical. Marginal plates forming a broad and slightly raised border on the abactinal surface. Abactinal surface of disk and rays flat. Actinal surface slightly convex on the disk, and more so along the rays, which have the appearance of being well rounded at the margins.

The paxillæ of the abactinal surface are rather small and distinctly spaced, but do not diminish in size along the rays so much as in *Pontaster tenuispinus*, and consequently appear larger than in that form. The larger paxillæ on the disk are composed of very small, short, papilliform spinelets, which usually take the form of a more or less compact group, rather than of a circlet surrounding the tabulum. Very few of the paxillæ on the