

the interspace between these and the margin of the plate is one large robust conical spine similar to those on the adambulacral plates; there may also be two or three irregularly placed small conical thornlets on the outer part.

The actinal interradial areas, which are of small dimensions and very narrow, do not extend beyond the third infero-marginal plate. They are slightly sunken, especially between the mouth-plates and innermost marginal plates, which emphasises the convexity of the former and contributes to the ornate character of the actinal aspect of the disk. The areas are occupied by a small number of rather large intermediate plates, which bear upon their surface a few small, pointed, thorn-like spinelets. There are five or six pedicellariæ in each area, composed of four or five modified spines similar to those in *Pontaster forcipatus*.

The anal aperture is subcentral, large and distinct.

The papularia are small, compact, and very conspicuous, their area being a prominently convex oval. They are situated on the disk, with their outer extremity touching a line drawn across the base of the ray, and contain about a dozen papulæ in each, the calcareous divisions between them being narrow, and forming a net-like structure.

The madreporiform body is small, oval, slightly convex, and situated about, or rather more than, its own diameter distant from the inner edge of the marginal plates. The striation-furrows with which its surface is grooved are rather coarse, and are more or less irregular in their radiation. Several large paxillæ stand near the margin of the madreporite.

Colour in alcohol, an ashy white; almost a bleached white on the actinal surface.

Locality.—Station 191. In the Arafura Sea, north-west of the Arrou Islands. September 23, 1874. Lat. $5^{\circ} 41' 0''$ S., long. $134^{\circ} 4' 30''$ E. Depth 800 fathoms. Green mud. Bottom temperature $39^{\circ} \cdot 5$ Fahr.; surface temperature $82^{\circ} \cdot 2$ Fahr.

Remarks.—This species is remarkable for its close affinity to, and apparent mimicry of, *Pontaster forcipatus*. It is, however, distinguished from that form by the smaller disk, by the rounded character of the rays in the actinal aspect, by the different facies of the actinal surface and of the marginal plates, by the presence of the well-developed secondary spine on the infero-marginal plates, by the smallness and scarcity of the miliary granulation on the marginal plates generally, by the different habit of the paxillæ, by the general absence of pedicellariæ (excepting the few in the actinal interradial areas), by the greater prominence of the semicircular margin of the adambulacral plates, by the slightly different character of their armature, and also of that of the mouth-plates.

9. *Pontaster pristinus*, n. sp. (Pl. VI. figs. 5 and 6; Pl. VII. figs. 7 and 8).

There is a single small specimen, which, although in a young and immature stage of growth, presents characters which indicate that it does not belong to any of the species hitherto described. Under these circumstances I feel obliged to give it a new specific