

Colour in alcohol, a dark purplish brown on the abactinal surface. The numerous spinelet-tips are nearly white. The actinal surface is much lighter than the abactinal.

*Localities*.—Station 149B. Off Royal Sound, Kerguelen Island. January 17, 1874. Depth 25 fathoms. Volcanic mud. Surface temperature  $40^{\circ}5$  Fahr.

Station 151. Off Heard Island. February 7, 1874. Lat.  $52^{\circ}59'30''$  S., long.  $73^{\circ}33'30''$  E. Depth 75 fathoms. Volcanic mud. Surface temperature  $36^{\circ}2$  Fahr.

*Remarks*.—This species may be distinguished from *Perknaster densus* by the general form, by the colour, by the character of the spinulation, and by the armature of the adambulacral plates. In the last-mentioned particular *Perknaster fuscus* approaches the character of some of the Southern species of *Cribrella*, but the present form could not be mistaken for any of these.

The example dredged off Heard Island is somewhat longer in the rays than those from Kerguelen.

2. *Perknaster densus*, n. sp. (Pl. XCVII. figs. 1 and 2; Pl. XCVIII. figs. 11 and 12).

Rays five.  $R = 51$  mm.;  $r = 16$  mm.  $R > 3r$ . Breadth of a ray at the base, about 18 mm.; breadth about midway between the disk and the extremity, 7.5 mm.

Disk large and inflated. Rays subcylindrical, broad at the base, and tapering gradually up to the extremity, which is obtusely pointed. Interbrachial arcs distinctly angular. Slight depressions feebly defined are present in the median interradiial lines on the abactinal surface of the disk. The actinal surface of the disk is concave.

The whole abactinal and lateral surfaces, extending up to the adambulacral plates, are covered with small plates which bear small compact groups of short, obtusely rounded, equal spinelets; the whole resembling closely crowded paxillæ. Between the plates papulæ are interspersed, but are rarely visible superficially in consequence of the crowding of the spinulation. No order of arrangement whatever is discernible in the plates either on the abactinal or actinal areas, and no traces of the representatives of marginal plates can be detected.

The armature of the adambulacral plates consists of about three pairs of obliquely placed spinelets, the whole forming a transverse double series of spinelets. The innermost pair are larger than the others, and thickly skin-covered, which gives them a robust and often a subprismatic appearance. The outer spinelets are shorter and more cylindrical, and merge into the general spinulation of the actinal surface. The obliquity of the position of the pairs causes one of the spinelets of the innermost pair to be more prominent into the furrow than its companion. No small inner spinelet is present high up in the furrow, as in *Cribrella*.

The madreporiform body, which is rather large, is situated about midway between the centre of the disk and the margin, and its surface is marked with fine convoluted striations.