

upon the plates is already clearly presented. The terminal knobs of the tube-feet are large and well-developed. I have not been able to detect an anal pore.

The smallest young one which has protruded itself sufficiently to be measured is about $R = 1.5$ mm. Larvæ of different stages of growth are still to be seen protruding in each interbrachial arc, as many as seven in one case, and from the appearance of the paxillæ several have probably dropped off since death.

I have succeeded in finding young forms beneath the paxillæ in other examples of *Leptoptychaster kerguelenensis* besides the one mentioned by Sir Wyville Thomson, but in no case so conspicuously as in this.

Localities.—Station 149E. Off Cape Maclear, on the south-east coast of Kerguelen. January 21, 1874. Lat. $49^{\circ} 37' 0''$ S.; long. $70^{\circ} 16' 0''$ E. Depth 30 fathoms.

Stations 149B and D Royal Sound, Kerguelen. Depth 25 and 28 fathoms.

Betsy Cove, Kerguelen. Depth 15 to 25 fathoms.

Other stations off Kerguelen in depths of 10 to 50 and 100 fathoms.

Off Marion Island. Depth 50 fathoms.

The bottom deposit at all the Stations in the neighbourhood of Kerguelen is a greenish volcanic mud.

Remarks.—This species is readily distinguished both from *Leptoptychaster arcticus* and *Leptoptychaster antarcticus* by the smaller disk and the longer rays, which are more sub-cylindrical in character, by the smaller actinal interradial areas, by the larger abactinal paxillæ, and by the peculiar arrangement of the adambulacral armature simulating that of *Cribrella*.

From the remark made by Sir Wyville Thomson, when first recording this species under the name of *Archaster excavatus*,¹ wherein he states that it is not far removed from *Archaster andromeda* (now named *Psilaster andromeda*) of the Northern Seas, it would appear probable that he was confounding along with the present species *Bathybiaster loripes* which was also taken, and in more considerable numbers than *Leptoptychaster kerguelenensis*, at Kerguelen. At first sight I was myself tempted to fall into the same error. On closer examination, however, the two forms are found to be widely different. *Bathybiaster* is readily distinguished by the well-developed supero-marginal plates, by the peculiar sacculate character of the whole actinal spinulation, by the incipient pedicellariæ, and by the totally different form and disposition of the adambulacral armature. The mouth-plate armature is different, and the general form of *Bathybiaster* is likewise different.

The figure given by Mr Edgar A. Smith² does not appear to me to be a particularly happy representation of the facies of this species; but his type was probably not in a good state of preservation.

¹ *Journ. Linn. Soc. Lond. (Zool.)* 1876, vol. xvii. p. 71.

² *Phil. Trans., Zool. Kerguelen Island*, 1879, vol. clxviii. pl. xvii. fig. 2.]