

1. *Pontaster tenuispinus*, Düben and Koren, sp.

Astropecten tenuispinus, Düben and Koren, 1846, Öfversigt af Skandinaviens Echinodermer: Kongl. Vetensk.-Akad. Handl., År 1844, p. 251, pl. viii. figs. 20-22.

Archaster tenuispinus, Sars, 1861, Oversigt af Norges Echinodermer, Christiania, 1861, p. 38, pl. iii. figs. 5-7.

(All succeeding writers have followed one or the other of these determinations.)

This species, as indicated above, was originally classed as an *Astropecten*, and afterwards as an *Archaster*. I have already briefly pointed out on a preceding page in my remarks on the genus *Pontaster* that the morphological characters of this form do not accord with those of either of the types to which it has previously been referred. The generic diagnosis will sufficiently indicate the great difference in structure of this form, and will at the same time bear evidence to the laxity of definition which has of late years been entertained with regard to the conception of the generic limits of *Archaster*.

This characteristic North-Atlantic Asterid has been well and unmistakably described by its discoverers Düben and Koren,¹ and subsequently by M. Sars,² Lütken,³ and Danielssen and Koren,⁴ each of whom has added successively to our knowledge of its anatomy and form. It is therefore unnecessary in the present place to recapitulate the diagnosis of the species. Unfortunately, the material at my disposal is not sufficient to enable me to indicate with satisfaction to myself either the range of the minor individual variations to which the type-form is subject, or the details of the characters of the young phases. This deficiency may, however, be supplied to a certain extent from other sources; and to this end I will limit myself to the remark that the descriptions given by Düben and Koren, and Sars, apply to young examples of the species; whilst that of Lütken is founded on specimens of larger growth, if indeed they do not actually belong to the variety indicated below. Of the probability of this being the case I have a very strong suspicion. It may, furthermore, be observed that the type is perhaps the strictly northern form, which is found on the Scandinavian and Greenland coasts; and that the variety frequents the more southern habitats, and is also perhaps the deep-water form.

Localities.—"Lightning" Expedition:

Station 6.⁵ In the Faerøe Channel. Lat. 60° 45' 0" N., long. 4° 49' 0" W. Depth 510 fathoms. Bottom temperature 0°·5 C.

"Porcupine" Expedition:

Station 76.⁵ In the Faerøe Channel. Lat. 60° 36' 0" N., long. 3° 58' 0" W. Depth 344 fathoms. Bottom temperature 1°·1 C.; surface temperature 10°·1 C.

¹ *K. Svensk. Vetensk.-Akad. Handl.*, År 1844 (1846), p. 251, pl. viii. figs. 20-22.

² *Oversigt af Norges Echinodermer*, Christiania, 1861, p. 38, pl. iii. figs. 5-7.

³ *Videnskab. Medd. naturh. Foren. i Kjøbenhavn*, 1871, p. 240.

⁴ *Nyt Mag. f. Naturvidensk.*, Bd. xxiii. 3die Hefte, 1877, p. 59, pl. iii. fig. 8; *Den Norske Nordhavs-Expedition*, 1876-1878, *Zoologi*. xi. *Asteroida*, Christiania, 1884, p. 85.

⁵ These occurrences are recorded in Sir Wyville Thomson's *Depths of the Sea*; but I have not seen the specimens.