

distinct; and also that in my opinion the admirable illustrations given by Danielssen and Koren<sup>1</sup> in their memoir on the Asteroidea of the Norwegian North Atlantic Expedition support this view, notwithstanding the fact that the learned authors referred to considered that all the forms belonged to one genus.

*Chorology of the Genus Crossaster.*]

a. *Geographical distribution* :—

ATLANTIC : Two species between the parallels of 40° N. and 82° N.

*Crossaster affinis*, in the North Atlantic between Norway, Spitzbergen, and Greenland; also in Bering Strait (*vide* Brandt).  
\**Crossaster papposus*, in the whole northern area of the Atlantic, extending up Smith Sound to Discovery Bay; from Assistance Bay, Newfoundland, Grand Manan, Massachusetts, Spitzbergen, Barent's Sea, Iceland, Nova Zembla, the Murman coast, the Scandinavian, British, and French coasts.

SOUTHERN OCEAN : One species between the parallels of 35° S. and 50° S.

\**Crossaster penicillatus*, from between Nightingale Island and Marion Island.

PACIFIC : One species between the parallels of 5° N. and 5° S.

*Crossaster neptuni*, from Ecuador.

β. *Bathymetrical range* : Shallow water to 640 fathoms.

Greatest range of one species: *Crossaster papposus*, shallow water to 640 fathoms.

*Crossaster affinis* is the only other species which extends into the Abyssal zone, its range being 70 to 634 fathoms.

γ. *Nature of the Sea-bottom* : *Crossaster papposus* is usually found on a hard bottom; also on Clay. *Crossaster affinis* frequents a Clay bottom, usually coarse and sandy, sometimes hard and stony. *Crossaster penicillatus* lives on Volcanic mud.

The species collected by the Challenger are indicated in the above list by an asterisk.

*Asterias alboverrucosa*, Brandt,<sup>2</sup> from Bering Strait, is probably a *Crossaster*, but as it appears to have been described from a drawing only, and as no subsequent author has referred to the type, I have not therefore felt justified in including it in the notice of the genus.

<sup>1</sup> Den Norske Nordhavs-Expedition, 1876-1878, Zoologi, xi. Asteroidea, 1884, tab. ix.

<sup>2</sup> Act. Acad. St. Pétersb. 1834, p. 271; Prodr. descr. anim. ab Mertensio obs., fasc. i. p. 71.