

hair. However, these rules admit of a great many exceptions. Thus the most common shallow-water species of the English, French, and Dutch coasts is *Nymphon gracile*, Leach, an exceedingly slender animal with very long legs, and moreover almost smooth. *Colossendeis proboscidea*, Sab., sp., is a blind species occurring only at a considerable depth; yet it has a highly concentrated body with short legs. Two species of *Phoxichilidium*, for which I have proposed the names *Phoxichilidium pilosum* and *Phoxichilidium mollissimum*, are true inhabitants of the depths of the ocean; yet they are not smooth at all, but covered by a very hairy integument. The case of *Phoxichilidium patagonicum* and its variety *elegans*, which I describe hereafter, must probably be considered as a trifling instance of the effect of depth on the slenderness of the body.

The scientific and trustworthy material at our disposal is by no means sufficient to enable us to discuss thoroughly the question of the geographical distribution of Pycnogonids. Judging from what is known of the European and North American coasts, it is most probable that on all coasts, and everywhere in shallow water in the neighbourhood of the shore, forms of Pycnogonids will be found occurring; and as I think it improbable that any true shore-inhabitant will be found which shows a very wide range, it is also highly probable that the number of littoral forms at present known is very small in comparison with the number really existing.

The distribution of those Pycnogonids which are not to be considered as shore-inhabitants, but which have never been dredged yet at depths exceeding 500 fathoms, is best known in the northern part of the Atlantic and the seas corresponding with it (North Sea, Greenland Sea, Barents Sea). The species of the genus *Nymphon*, which occur in the neighbourhood of the coast of New England, are found to the north and east as far as Greenland, Spitzbergen, and Novaja Semlja; but these Arctic Seas are, moreover, inhabited by some forms of the same genus occurring there only. As this point has been more fully discussed by me in another paper, it will suffice merely to mention it here.

Among the Pycnogonids of the Challenger Expedition, *Colossendeis megalonyx*, Hoek, is the only species, which, though found at a depth of from 55 to 120 fathoms, has a wide range; about the 58th south parallel it was dredged off Kerguelen Island, and also between Patagonia and the Falkland Isles.

With respect to the true deep-sea species the material is by no means sufficient for the study of their geographical range. Of the thirty-six species of Pycnogonids brought home by the Challenger, nineteen are true deep-sea species. Of these only three belong to the northern hemisphere, viz., *Colossendeis minuta*, Hoek, south of Halifax; *Phoxichilidium oscitans*, Hoek, west of the Azores; and *Phoxichilidium mollissimum*, Hoek, off Yeddo; they were only dredged once and were new to science. Of the remaining sixteen, which belong to the southern hemisphere, one was dredged at lat. 65° 42' S. (*Nymphon meridionale*, Hoek) and one almost under the equator (*Nymphon per-*