

When comparing the bathymetrical range of the different genera with their geographical distribution, it is easily remarked that it is the genera most widely spread over the bottom of the sea which are capable of existing at the greatest variety of depth. This is, for instance, the case with *Nymphon*, *Colossendeis*, and *Phoxichilidium*. Some species of *Nymphon* are found at low-water mark, others inhabiting shallow water in the immediate neighbourhood of the coast are dredged at a depth of under 100 fathoms; others again are never found at a depth exceeding 800 fathoms, and finally, there are some which are true deep-sea species. Some species of *Colossendeis* were dredged at a depth of under 100 fathoms, other species inhabit the ocean at a depth not exceeding 800 fathoms, and others were dredged at depths varying from 800 to 2800 fathoms. The genus *Phoxichilidium* shows almost the same bathymetrical range as *Nymphon*. Now the geographical range of these three genera is, as far as I could ascertain from the facts at my disposal, nearly the same; this distribution is mundane. With the exception of the Pacific Ocean, from which as yet not a single species of Pycnogonid has been obtained, representatives of these three genera are found almost in every sea.

Of the genus *Ascorhynchus* only five species are known as yet. They were collected at depths varying from 38 to 1539 fathoms, and at widely distant places, viz., in the Greenland Sea, between the Cape of Good Hope and Kerguelen Islands, off Australia, to the north of New Guinea, and off Japan; and as the different species of this genus form a very natural group, it is, I think, very probable, that later investigations will show also for interjacent places the occurrence of forms belonging to this same group. *Oorhynchus* is as yet the only genus which seems to inhabit depths exceeding 800 fathoms exclusively; but as only a single specimen of the one species known of this genus has been collected, I do not think it expedient to pay much attention to this fact.

Hence, with regard to the bathymetrical range, a close study of the material brought home by the Challenger, added to what was previously known on the subject, has shown:—

(1) That those genera which range most widely geographically are also those which range most widely in depth; and (2), that there does not seem to exist a single true deep-sea genus of Pycnogonids.<sup>1</sup>

As for the influence of the increasing depth on the form and the structure of our animals, this is by no means easily traced. As far as the structure of the integument and of the eyes is concerned, I will treat the question at some length when speaking of their structure. As a rule the true deep-sea species are more slender, the legs very long and brittle, and the surface of the body smooth, whereas the true shore-inhabitants are much more concentrated, have shorter legs, and are often densely covered with

<sup>1</sup> From the study of deep-sea forms in general, Mr Moseley and others came to the conclusion that these animals have a world-wide range. Of this the Pycnogonids give a fair instance, I believe (Moseley in *Nature*, April 8, 1880 p. 546).