

and on shore. Sixteen examples of the family are described by Schmarda, while Kinberg gives a list of no less than fifty from the "Eugenie." Even in the Challenger series the majority come from water less than 100 fathoms in depth, only one appearing from a notable depth, viz., from 1525 fathoms. Yet their bathymetric range is great, even *Nereis pelagica* passing from tide-marks to considerable depths in holes made by other animals in telegraph-cables. In the "Porcupine" Ehlers found *Nereis longissima* descend to 1366 fathoms.

No specimen of the pelagic Heteronereides occurs, though some, like the *Nectonereis megalops* of Verrill,<sup>1</sup> swim actively at the surface. No further light has thus been thrown on the peculiar transformations of the group, some examples of which probably change from tube-dwellers to pelagic animals on attaining sexual maturity, and which further increase the complexity by appearing as hermaphrodites as well as atocous and epitocous forms. The marked changes which the feet and bristles undergo in these Annelids are well known. Claparède's observation in regard to the comparative size of the atocous and epitocous forms is noteworthy, for he states that the examples of the latter are generally much smaller than the former. Further researches are indeed indicated, for it is remarkable that, like the American paradoxical frog, the incomplete form is larger than the adult. The genus *Nereilepas* is likewise absent from the collection, and yet this was the only one found by Chamisso and Eysenhardt<sup>2</sup> in their voyage round the world.

Certain forms have a very wide geographical distribution. Thus *Nereis pelagica*, Linn., is circumpolar, and *Nereis virens*, Sars, ranges from Europe to the east coast of North America. Others again are littoral, such as the group containing *Nereis diversicolor*, O. F. Müller, which has no epitocous development, while a few are local, as, for example, *Nereis cultrifera*, Grube. The three well known forms, *Nereis pelagica*, *Nereis diversicolor*, and *Nereis dumerilii* are included in Marenzeller's Japanese Annelids.<sup>3</sup>

The representatives of the Platynereid group are most numerous, and this feature is of interest in regard to the wide distribution of the British species (*Nereis dumerilii*, Aud. and Ed.). In this group the anterior lobes of the feet are blunt, the posterior being pointed; and the paragnathi form rows of minute points. Though some of the species superficially resemble *Nereis dumerilii*, the minute examination of the characters just mentioned, and a glance at the structure of the falcate bristles, indicate the separation. They simply take the place of that form.

In diagnosing the species, the general form of the head and anterior region, the arrangement of the paragnathi, the structure of the feet, and the minute structure of the bristles, are mainly depended on. The method followed in describing the proboscis and its paragnathi is that of Kinberg,<sup>4</sup> for in the present instance it will suffice, without giving

<sup>1</sup> Report of U.S. Commissioner of Fish and Fisheries, 1874, p. 592, pl. xii. figs. 62, 63, &c.

<sup>2</sup> De Animalibus quibusdam e classe Verm., vol. ii. p. 349.

<sup>3</sup> Denkschr. d. k. Akad. d. Wiss. Wien, 1879, pp. 122, 123.

<sup>4</sup> Öfversigt k. Vetensk.-Akad. Förhandl., 1865, p. 167.