

comparatively small; (2) that, as has already been pointed out, the deep-sea are in all cases distinct from the shallow-water species; (3) that the deep-sea species show certain peculiarities, notably in the structure of the eyes, which, as has already been described (p. 20 *et seq.*), are either entirely absent (*Serolis antarctica*) or, if present, show great evidence of functional degeneration; none of the deep-sea species possess well-developed eyes. To compensate for the want of eyes, there is a great development of sensory hairs on certain of the appendages; the males of *Serolis neæra*, *Serolis bromleyana*, and *Serolis gracilis* have, upon the third, fourth, and fifth joints of the third thoracic appendages, tufts of sensory hairs, which have already been described (pp. 55, 59, 62; Pl. IV. fig. 6; Pl. V. fig. 8). This structural feature is not, however, peculiar to the deep-sea species, inasmuch as it is also found in *Serolis paradoxa*; but since it occurs in three out of the four, and *Serolis paradoxa* is the only shallow-water species in which I have noticed it, it may be considered as characteristic. *Serolis antarctica* does not agree with the other deep-sea species in this respect, but the first pair of antennæ are furnished with a larger number of sensory filaments than is usual—two upon each joint of the filament; several shallow-water species, however, *Serolis pallida*, *e.g.*, and *Serolis convexa*, present the same character.

In two of the deep-sea species, *Serolis bromleyana* and *Serolis neæra*, the genus attains to its greatest size, and these are indeed among the largest of the Isopoda; as a general rule the deep-sea representatives of the Isopoda are not distinguishable from their shallow-water allies by their greater size; there are exceptions to this rule, notably in the case of *Bathynomus*, a deep-sea genus recently described by Milne-Edwards, which is no less than 9 inches long; and the Challenger collection contains a specimen of another Isopod belonging to the same family Cymothoadæ, which is also of considerable size. The elongated and spine-like epimera of *Serolis neæra* and *Serolis bromleyana*, and also, though to a less extent, of *Serolis gracilis*, are unlike anything that is met with in the representatives of the genus from shallow water, where the epimera are always moderately developed in comparison. In all the deep-sea species, without exception, the ambulatory limbs are furnished with comparatively few spines, which are generally soft and delicate. The strong sword-like and serrated spines so commonly found in the shallow-water members of the group are either completely or partially absent; a very general character, inasmuch as it is found in two out of the four deep-sea species (*Serolis neæra* and *Serolis gracilis*), is the presence, upon the ambulatory limbs, of plumose hairs similar to those which are found upon the abdominal appendages; in *Serolis neæra* especially are these plumose hairs developed in great abundance. They have been more particularly described above, on pp. 55, 56.

The maxillipedes in all the deep-sea species possess a short tubercle on the inner side of the middle joint of the palp, which may represent some kind of sense organ, though the hairs with which it is thickly covered are in no way different from the hairs