

that I was able to examine the inner edge of the mandibles is strongly toothed. Schiödte, in a memoir upon the structure of the mouth in the Isopoda,¹ has figured and described the mouth parts of *Serolis paradoxa*; the mandibles are distinguished from those of other Isopoda by their blunt edge, which renders them especially fitted for grinding and not for tearing, and Schiödte suggests that the food of *Serolis* probably consists of "such animals as have firm integuments;" in all the specimens that I have examined the stomach contained debris of other Crustacea, frequently recognisable fragments of their own species, besides Diatoms, morsels of the calcareous structure of Echinodermata, &c.; Schiödte is therefore quite right in his supposition regarding the food of *Serolis*, and is no doubt justified in distinguishing this genus from other Isopoda by the characters of its mouth appendages.

The mandibles of *Serolis*, however, possess additional cutting blades and spiniform processes which appear to have been overlooked or imperfectly described and figured by all previous writers with the exception of Schiödte. On Pl. II. figs. 2, 3 are figured the distal extremity of both mandibles right and left of *Serolis latifrons*; the left mandible has upon the upper surface a triangular chisel-like blade, and below this a long spine; the right mandible has the spine, but the cutting blade is smaller. The left mandible of other species is quite similar to that of *Serolis latifrons*, but as a general rule (*cf. e.g.*, fig. of *Serolis schythei*, Pl. II. figs. 12, 13) the cutting blade is not present on the right mandible, its place being occupied by a large spine-like structure. The presence of these structures appears to me to fit the mandibles for tearing as well as grinding.

The asymmetry of the mandibles is marked not only by the differences just mentioned but also by the general shape of the masticatory edge (*cf. e.g.*, Pl. II. figs. 12, 13) and by the fact that one mandible, generally the left, is smaller than the other. An asymmetry of the mandibles appears to be a fairly constant character of the Isopoda.

The *maxillæ* are small and delicate; the anterior pair consist of a narrow basal portion or "cardo," with which is articulated a long flat somewhat curved distal lobe; the free edge of this is furnished with a considerable number of strong spines dark yellow in colour. In some species (*e.g.*, *Serolis pallida*) the lobe of the maxilla is much more bent upon itself and proportionately shorter. In many species I have observed an additional lobe, which is situated below the large masticatory lamina articulating with the cardo (see Pl. V. fig. 14); the presence of this was noticed by Audouin and Milne-Edwards, but subsequently denied by Grube.²

The second pair of *maxillæ* are smaller and more delicate than the anterior pair, but like them consist of a basal portion or "cardo" and a distal portion, which is divided into two lobes, the upper of which is again subdivided; the two anterior are subequal and smaller than the posterior lobe, which is separated by a distinct suture; the free extremities of all bear a number of hairs more delicate than those on the first *maxillæ*,

¹ Krøyer, *Nat. Hist. Tidsskr.*, ser. 3, vol. iv. (1866); translated in *Ann. and Mag. Nat. Hist.*, ser. 4, vol. i. p. 1 *et seq.*

² *Archiv f. Naturgesch.*, Jahrg. xli. Bd. i. p. 214.