

In most other species the same conditions occur, and a comparison in detail of the posterior epimera, which differ more in length in the two sexes than the epimera of the anterior segments, will be found under the description of species.

Some few species do not show these differences; in *Serolis paradoxa*, for example, the males, on a superficial view, are indistinguishable from the females, and the difference in size between the two sexes is hardly if at all marked.

As a general rule the sterna of the three anterior abdominal segments serve to distinguish the sex of the individual; in the females the middle portion is commonly prolonged into a stout spine, while in the males this structure is not present, and the posterior margin of the segments is straight or slightly concave. In a great number of species, however, the two sexes do not differ at all in this way.

Another marked secondary sexual character, which is quite universal in the form of the third thoracic appendages; in the females this pair of appendages is entirely similar to the succeeding ambulatory limbs; in the males, on the contrary, the penultimate joint is swollen and furnished on the inner side with a number of peculiar modified spines, the terminal joint is recurved, and the appendage thus forms a prehensile organ very like the second thoracic appendage. Of *Serolis tuberculata* Grube states (*loc. cit.*, p. 230)—“Die Füße des 2^{ten} Fusspaares sind weniger ausgeprägte Greiffüße als bei andern Arten; zwar zeichnet sich das 3^{te} und 4^{te} Glied durch seine Kürze vor den entsprechenden der folgenden Beine aus, allein das Handglied ist weniger breit als sonst, sein Innenrand nicht längs der ganzen Schneide mit Zähnen besetzt, und die Klaue scheint nicht so zum einschlagen geeignet zu sein. Die Zähne sind ziemlich lang und stachel-förmig mit einer Andeutung von Nebenzacken.” The male specimen of this species which I have examined myself does indeed display such differences from the ordinary structure of these appendages in all other *Serolis* as Grube describes; both specimens are, however, evidently immature; the characters that he mentions exactly correspond to the appendages of immature males (see *infra*, p. 27).

These appendages are used by the male during copulation; the claw is firmly imbedded in the epimera of the female, so firmly that the individuals can hardly be separated without injury.¹

In all species of *Serolis*, as in many other Isopoda, the second pair of abdominal appendages bear a long penial filament; these are a continuation of the lower margin of the endopodite of the limb, and reach in some cases as far back as the end of the caudal shield; in other species they are not quite so long. The end of these filaments is blunt and rounded, and not furnished with any aperture; it seems possible for this reason that the two are approximated during copulation, and form a groove down which the spermatophores pass; the fact of the male generative apertures being placed so closely together seems to favour this supposition.

¹ Studer, Isopoden gesammelt während der Reise, &c., *loc. cit.*