

of the thoracic segments undergo a retrograde development and almost disappear, and the animal does not appear to take any nourishment; in all the mature females that I have examined the young appear to be actually contained within the body of the mother, the alimentary canal is pressed up against the dorsal surface of the body, and its cavity is reduced to a minimum; a delicate chitinous membrane is all that remains of the thoracic sterna.

Secondary Sexual Characters.—The males of *Serolis* also differ from the females in a number of secondary sexual characters, which may be divided into two groups—(1) those which are common to all the species of the genus, (2) certain other characters which are confined to one or more species.

1. As a general rule the males of *Serolis* are somewhat larger than the females; this is certainly the case with *Serolis bromleyana* and *Serolis neæra*, in which species the males are not only longer but also broader, owing chiefly to the greater development of the spine-like epimera so characteristic of these two species. In *Serolis cornuta*, *Serolis schythei*, and *Serolis latifrons* the difference in length between the two sexes does not appear to be great, but the males are considerably broader than the females; especially is this so in *Serolis schythei*, where the proportion between length and breadth is almost reversed in the two sexes; in the male the breadth is greater than the length, in the female, on the contrary, the length is greater than the breadth, and the difference between these two dimensions is very near to being the same in both sexes. In *Serolis antarctica* and *Serolis gracilis* the males have a greater antero-posterior as well as transverse diameter than the females.

Among the Australian species, on the contrary, the females appear to be larger than the males, but since the number of specimens in each case was extremely small, it is impossible to speak with certainty. Of *Serolis australiensis* two out of the three specimens are males and smaller than the single female specimen; of *Serolis tuberculata* the Challenger obtained two specimens, one of each sex, and here again the male is the smaller; the male specimen also which has been described by Grube¹ is of about the same size as the male which I have examined; finally, in the only other Australian species, *Serolis pallida*, of which more than a single example was obtained by the Challenger, the female is larger than the male.

In the majority of species of *Serolis* there is a difference in the length of the epimera in the two sexes, and this difference is most strikingly shown in *Serolis gracilis*; in the males of this species the epimera gradually increase up to the sixth, the last thoracic epimera, which are enormously elongated and extend beyond the termination of the caudal shield for a considerable distance.

In the female the epimera are very much reduced in size; the sixth pair, instead of being prolonged beyond the caudal shield, do not reach as far as its extremity.

¹ *Loc. cit.*, p. 227.