and pinnate at their extremity. There are generally two upon each of the smaller anterior lobes and a greater number upon the posterior lobe; in a specimen of *Serolis cornuta* (*cf.* Pl. I. figs. 9, 10) this pair of maxillæ, like the mandibles, was asymmetrical on one side; each of the two smaller lobes had two long hairs upon its free extremity; on the side one of the smaller lobes was markedly larger than the other, and furnished with four hairs instead of two.

In *Serolis convexa* the second pair of maxillæ differ in that all the three lobes are approximately of equal size, and all bear a considerable number of hairs (Pl. VI. fig. 14).

The *maxillipedes* are of considerable size and entirely conceal the subjacent maxillæ; they are closely approximated in the middle line; each consists of a squarish basal portion and a palp; the basal portion is divided by a transverse suture into two, and each of these is again divided by a longitudinal suture; the proximal half or cardo articulates with both the median (sphenoidal plate) and the lateral portion of the sternum. The outer half of the distal half or "stipes," which is generally, though not always, completely separated from the inner "lamina" by a suture, is thin and flat; the lamina is stout, and usually furnished on the inner margin with a row of fine hairs; the upper end invariably bears two thick spines; the palp of the maxilla, which consists of three joints, the middle one the longest, is attached to the lamina about three-quarters of the way down; the second and third joints of the palp are furnished with long hairs on the inner side in all species; the other joints of the maxillipede are sometimes smooth, sometimes furnished with long hairs, according to the species.

The *second thoracic appendage* (*cf.* Pl. VI. fig. 10) is modified into a prehensile organ, the penultimate joint is large and swollen, and the terminal joint is recurved and lies along its inner margin like the blade of a penknife when closed; the inner margin of the penultimate joint has a number of peculiarly formed spines, unlike any that are found elsewhere on the body. Of these there are two kinds which regularly alternate; one set (Pl. VIII. fig. 15) consist of a central stem terminating above in a knob,[1] the margins are beset with a number of fine branches which are fused together on each side for the greater part of their length; the other kind of spines (Pl. VIII. fig. 14) which alternate with these, and are placed slightly more on the ventral side, are long and delicate, expanding above into two processes, one of which is frequently longer and somewhat spoon-shaped, between these the central axis of the spine terminates in an oval knob; the shape of these hairs varies much in the different species, and will be more fully described below under the several species.

The fourth joint of this appendage, which is sometimes (*Serolis tuberculata*) prolonged into a forwardly directed triangular process, is always furnished with two spines, and has in the males of *Serolis convexa* and *Serolis gaudichaudii* a tuft of sensory hairs (see p. 17).

The *third pair of thoracic appendages* in the male (see p. 16) is modified into a

[1] Owing to an error in the plate, this is represented as a forked process.