

THE SKIN.

In the abdominal region the cuticle is transversely striated, an appearance which Csokor attributes to segmentation. In the head the cuticle is not so closely applied to the underlying parts as in the rest of the body—a clear margin resulting, to which Megnin has applied the term epistome. In the thoracic region the cuticle is locally thickened along certain ridges which thus form a chitinous framework. The mesial element of this is the sternum, which gives off laterally four pairs of epimera, and projects also beyond the origin of the last pair of epimera almost as far as the anus. The first pair of epimera run obliquely forwards and form the boundary between the head and thorax. The basal joints of the four pairs of appendages are movably articulated to the outer thirds of the corresponding epimera.

The appendages of the head are three pairs, viz.: 1 pair of mandibles, 1 pair of maxillae, 1 pair of pedipalpi, and an impair stylet-like structure between the maxillae (*lg*, Fig. 11), which, together with these, forms a piercing apparatus, while the mandibles and pedipalpi move chiefly from side to side, and are therefore masticatory. All of these appendages are attached to the cephalic segment (*cp*, Fig. 11). On the cephalic segment are also to be noticed two punctiform ocelli (*oc*, Fig. 11), and close beside the contour of the pharynx (*ph*, Fig. 11) are two openings (*dc*, Fig. 11) apparently belonging to glands in connection with the pharynx.

The development of the cephalic segment and its appendages is illustrated in Fig. 1–5. First a retraction of the granular contents is noticeable (Fig. 1), then a demarcation of the hyaline region as head (Fig. 2), in which an anterior notch containing a pyramidal outgrowth is bounded by two lateral curved processes; these are the future pedipalpi, while the pyramids by a division in the middle line (Fig. 3), and the subsequent longitudinal division of each half gives rise laterally to the mandibles, medially to the maxillae (Fig. 4–5).

The maxillae are curved rods 0.01 mm. in length. (*mx*, Fig. 11). Although chiefly piercing organs, they can also be moved from side to side.

The pedipalpi are three-jointed, the middle joint being soft, while the basal and terminal joints are provided with a chitinous frame