

crust, and at one side of this a cavity containing a papilla ; the surface of the joint is broken below this in two places by irregular interruptions in the crust, which appear to be lined by more delicate membrane. It is also somewhat roughened and thrown up in places in transverse ridges or elevations ; a few hairs also pass from round openings in the crust. The subterminal joint has very near the end a large opening through the external coat, and within this three large glandular bodies which bear papillæ. Other open spaces are to be seen along the joint, but no glands. The fourth and third joints have also irregular transverse interruptions in the crust, but no papilla-bearing glands.

The papilla-bearing bodies in the last two joints must certainly be organs of sense, though I have not been able to satisfactorily show their connection with nerves. A delicate thread, probably a nerve, can in some cases be seen running through the joints, but preparations from fresh specimens will be necessary to establish its character and connections. The delicate membranous coverings of the transverse irrorations in the crust seem also well adapted to receiving impressions, but their connection with nerves is still undetermined.

The labrum is a slender conical projection beyond the clypeus from which its separation is indistinctly marked, since it contains but little chitinous structure. It is channelled on the under side to near the tip, and from this channel the setæ forming the sucking tube pass in a regular curve into the channel of the labium.

The superior setæ (mandibulæ) spring from cones which originate with chitinous arcs each side of the opening of the œsophagus ; passing forward, they unite immediately in front of the hypopharynx and within the paraglossæ. The inferior setæ (maxillæ) arise from similar cones which lie beneath based upon chitinous structure lying at the superior posterior portion of paraglossal bases. They unite with each other and with the superior setæ at the union of the latter, and pass with these between and in the channel of the paraglossæ, and thence into the groove of the labrum. The paraglossæ are short and setaceous, arising from an inferior lamina which rests upon the base of the labium. The labium is *4-jointed* and reaches nearly to the end of the body in the larva, but only beyond the first pair of legs in the adult ; the tip is surrounded by numerous hairs and a row of bristles extends each side of the groove. Immediately in front of the œsophageal opening appears a denser portion, the epi- and hypo-pharynx, extending to the union of the setæ, and within