

*muscles* (fig. 2) pass forwards from the posterior part of the upper surface, and are attached to the labial disk. The *labial disk* is of oval form, about 2 cm. long (fig. 2, *a*, 3, *a*); each of the two halves of which it is composed measures about 7 mm. in diameter; it is whitish in colour; the inner edge is irregularly wrinkled; the mouth is a perpendicular slit, with bluish-black walls.—The upper commissure of the mouth having been divided in the middle line as far as the mandibles (fig. 6), the length of that portion of the bulbus lying in front of the mandibles was 2 cm. It was lined by a very thick (4.5 mm.) cuticle (fig. 6, *b*), which presented the usual finely striated and stratified structure, and was blackish in colour at the outside and at its somewhat attenuated fore-end passed into reddish-brown on the inside. The cuticle is firmly fixed along a part of the anterior end of the mandibles, over which it passes, to become continuous with the cuticle lining the deeper part of the buccal cavity, where it is again firmly fixed to the mandibles in the region corresponding to the insertion on the foreside (fig. 6). These mandibles appear with their free part, yellow-green in colour, at the bottom of the above-mentioned anterior part of the buccal cavity; the right mandible overlaps the left, a small portion only of which was therefore visible (fig. 4). On removing the cuticle from the strong muscular mass, the inner surface of the latter was visible, traversed by a series of longitudinal folds (which correspond to furrows on the cuticle). The muscular mass increases in thickness posteriorly; the flattened, concave, whitish, hinder extremity resting on the foreside of the mandibles; the diameter of this part was 13–14 mm. The mass is made up of an external circular and an internal longitudinal layer.—The *mandibles* are very large, about 4.4 cm. long by 2.8 cm. broad and 1.4 cm. high. The greater part is concealed within the bulbus, and is of an opaque, milky-yellow appearance, whitish in front and more yellow behind. The free portion is yellowish-green, darker on the backside, and covered with very fine radial striæ. In shape the mandibles are oval (figs. 4, 5), with an angle at the middle of the internal margin; the thickness (at the middle) is about 3 mm., gradually thinning towards the margins, and eventually being only .4–.3 mm. in thickness. The upper and lower ends are rounded; the external margin is convex and thin, the internal straighter and rather thicker; about the middle it gives off a rounded tooth (fig. 5); the surfaces are smooth and finely striated concentrically and radially. On the lower part of each mandible is a thickened portion, forming a tubercle on both sides (fig. 5). The mandibles are not united by a hinge, although there exists a rudiment of this in the shape of a thickening on the upper part of the internal margin, but by the cuticle already mentioned which passes from one mandible to the other (fig. 4). Both sides of the enclosed portion of the mandibles are covered by a thick epithelium of thin cylindrical cells measuring .08 mm. When the epithelium is removed, the colour of the mandibles is seen to be a fine canary-yellow, contrasting with the greenish colour of the free portion (of a breadth amounting to 10–12 mm.). The masticatory edge was worn, but did not appear ever to have possessed denticulations.—