

out the Formicidae. Also on this surface are a series of small setae fixed in small cylindrical pits. These are located near the maxillary comb and were termed gustatory papillae by Forel (1874). Drawings of the galea are of the external surface (the surface exposed when the maxillo-labial apparatus is extended), but the maxillary comb has been added in each case as though the galea were transparent, which in fact it is on the microscope slide.

The lacinia is usually triangular and usually bears a row of setae along its free margin. These setae, the *lacinial comb*, can occur in a continuous or discontinuous array. The anterior triangular angle is the *gonia* and the posterior angle the *apex*. Few setae are found on the external or internal surfaces of the lacinia (figs. 7, 8, 12).

Inserted on the maxilla are 2 muscles, an adductor and an abductor. Several small muscles are located within the structure of the maxilla itself (Janet, 1905).

Labium, hypopharynx, epipharynx, and infrabuccal pocket

According to DuPorte (1967), the labium of insects consists of a postlabium which is adnate to the cranium and a prelabium which is free from the cranium. The postlabium is usually divided into a proximal submentum and a distal mentum; the prelabium includes the prementum, palpi, glossae, and paraglossae. Most entomologists have serially homologized the submentum of the labium with the cardines of the first maxillae, the mentum with the stipites, the glossa with the lacinia, and the paraglossae with the galea (Snodgrass, 1928). Some entomologists have considered the submentum and mentum to be derived from the sternum of the labial segment. Matsuda (1965) reported that the basal part of the maxillo-labial complex in the higher Hymenoptera does not develop in the same way as an independent appendage, and that the parts called the submentum, mentum, and prementum are not consecutive parts of a gnathal appendage. Snodgrass (1928) has reported that, like the cardines of the first maxillae, the submentum probably represents a secondary proximal subdivision of the second maxillae.

It is abundantly clear that the homologies and related terminology in the mouthparts of insects are far from being established and standardized. Earlier interpretations of the mouthparts of the higher Hymenoptera, including the ants, have called the large ventral sclerite of the labium the mentum and the small, proximal sclerite the submentum. This interpretation has been followed by Janet (1899, 1904, 1905, 1911), Kellogg (1902), Crampton (1923), Bugnion (1924, 1925, 1930), and Liu (1925). For *Iridomyrmex humilis*, Pavan and Ronchetti (1955) have called the large sclerite the postmentum and the smaller, proximal sclerite the prementum. Crampton (1928), for an unidentified ant, labeled the small sclerite the mentum but offered no explanation. He did not label the larger sclerite.