

## Discussion

### Mouthpart Morphology and Function

An attempt was made throughout this investigation to distinguish between the cleft and emarginate conditions of the distal margin of the labrum. A cleft was defined as being usually narrow and slitlike, although its width did vary to such a degree that certain labra could not be distinguished as being strictly cleft or emarginate. The utility of such a distinction, either in viewing phylogeny or just in identifying specimens, is questionable. It is clear, however, that in some specimens there are distinct differences in the condition of the distal margin. The difference between *Cylindromyrmex striatus* (slightly emarginate) and the remaining cerapachyines (distinctly cleft) or between the Dorylini (neither emarginate nor cleft but smoothly rounded) and the Ecitonini (distinctly cleft) are of this magnitude and cannot be ignored. The labrum seems to be of potential taxonomic importance, and this potential has been little realized. The shape of the labrum is more or less a reflection of the condition of the distal margin, although it is also affected by the ratio of its width to its length and occasionally by the unusual development of the proximal lateral angles [e.g. in *Prenolepis imparis* (fig. 372)]. The labral tubercles which appear in the workers of the Dorylini, Ecitonini, and the genus *Acanthostichus* are of unknown function, although, since the males and queens of the dorylines do not possess such structures, it is assumed that their function is related to worker activities such as foraging (e.g., helping to hold active prey). To further complicate this situation, there may be at least 2 types of tubercles, one that is distinctly a lamina-like projection of the cuticle and another whose nature is not clear. This latter type does break from the labral surface easily and is usually peglike and blunted apically. Labral tubercles may function with the labrum in manipulating food materials or in a sensory capacity. This investigation indicated that the tubercles may be restricted to a relatively small group of species. Since setal patterns on the labrum have not been discussed in detail in the descriptions, the drawings should be consulted. What should be determined, for perhaps 1 or 2 species, is the constancy of setal placement, at least for the larger setae. Because this has not been done, it is difficult to comment comparatively on setal patterns. In some species [e.g. *Acropyga* sp. (fig. 357)], setal distribution departs radically from what is commonly found in other species. In general, the labrum is usually provided with several long setae that seem to be consistently placed within certain species groups. The distal margin always has numerous small setae. The hemocoel enters the labrum proximally as a wide cavity, and then commonly divides into 2 arms, which may or may not unite again behind the middle of the distal margin. In some castes (e.g., males and queens of Ecitonini), the hemocoel does not divide, and seems to fill the entire labrum except for a narrow band along the distal margin. The constancy of the hemocoel in terms of