

without spinules; palp a cluster of 5 sensilla; galea a low knob bearing 2 sensilla. Labium short, broad, and rounded; palp a cluster of 5 sensilla.

Forelius brasiliensis Forel. (Fig. 6).—Body hairs few, simple, minute (about 0.005 mm long), widely scattered except on the ventral surface of the prothorax where they are moderately numerous. Head with rounded dorsal and ventral outlines and with ventrally converging cheeks. Head hairs minute (about 0.005 mm long), simple and very few. Antennae each with 3 sensilla, each of which bears a spinule. Mouth parts small. Labrum nearly 4 times as broad as long; bilobed owing to an impression of the ventral border; anterior surface with 2 sensilla each bearing a short spinule; ventral border with 2 sensilla and a few spinules; posterior surface with 6 sensilla on each half. Mandibles feebly sclerotized; subtriangular; as broad as long; apical sixth a narrow sharp-pointed tooth, basal five-sixths broad. Maxillae adnate; palp represented by a cluster of 5 sensilla (2 encapsulated and 3 with a spinule each); galea a low knob with 2 apical sensilla. Labium short, wide, and rounded; palp represented by a cluster of 5 sensilla (2 encapsulated and 3 with a spinule each); an isolated sensillum between each palp and the opening of the sericteries; the latter a transverse slit on the anterior surface between the tips of the maxillae. Hypopharynx densely spinulose, the spinules moderately long and in long rows, the rows grouped into 2 subtriangles which have their bases near the middle.

Material Studied.—1 damaged integument from Argentina, courtesy of Dr. N. Kusnezov.

Genus *Tapinoma* Förster

Adlerz 1886.—The larvae are stout and more or less cylindrical; they show movement only near the anterior end. When resting, the head is almost wholly withdrawn into the first body segment (p. 52). Internal anatomy, p. 58–64.

Tapinoma erraticum (Latreille).—Torossian 1960: The workers employ proctodale trophallaxis to a moderate extent in feeding the larvae.

Tapinoma luteum (Emery) (Fig. 7).—The immature larva (length through spiracles about 1.7 mm, straight length about 1.3 mm) is similar to *T. sessile* except in the following details: Body straight; head applied to the anteroventral surface; anus posterior; with a posterodorsal knob; about 5 distinct somites. Body hairs sparse, but more numerous on the prothorax and on the posterior somites. Head subtriangular. Head hairs scattered. Antennae larger and lower on the head. Labrum with the posterior surface sparsely spinulose, the spinules in a few arcuate rows. Maxillary and labial palps each represented by a cluster of 3 sensilla (1 large and 1 small encapsulated, 1 small bearing a spinule).

Material Studied.—2 larvae from Kenya, collected by Dr. N. L. H. Kraus.

Tapinoma melanocephalum (F.).—Stärcke (1933) stated that young larvae have large papillae on the

prothorax; in older larvae they are relatively much smaller. (We have not found such structures in other species.) He also described the posterodorsal knob and internal anatomy.

Tapinoma nigerrimum (Nylander).—Bernard 1951: Fig. 935A on p. 1018, larva in side view; Fig. 937B on p. 1020, internal anatomy (after Athias-Henriot).

Tapinoma simrothi Krausse.—Valentini 1951. Internal anatomy.

Genus *Technomyrmex* Mayr

We now believe that all our material (1951) is immature.

Technomyrmex albipes (F. Smith).—We now have numerous immature larvae from New South Wales (courtesy of the Reverend B. B. Lowery), which confirm our previous description (1951, p. 205).

Parasite.—In the sample of 114 larvae, 75 contain 1 or 2 dipterous larvae, which are similar to those found in *Dolichoderus* (*Acanthoclinea*) *doriae*. See Fig. 11 and 12.

Technomyrmex bicolor textor Forel.—Forel and Jacobson 1909, p. 252: "Wenn der *Technomyrmex* wirklich der Erbauer des von ihm bewohnten Nestes ist, so stellt er die vierte Ameisengattung dar, die ihre Larven zum Spinnen und Weben verwendet." (Referred to by Wheeler in a footnote, 1915, p. 333.)

CHARACTERS

In our study (1960) of the larvae of the subfamily Myrmicinae we discussed the importance of various characters in taxonomy and described our techniques for generalizing about them. Applying the same reasoning and techniques to the larvae of the Dolichoderinae,³ we find 3 types of generalized mature body profiles (tubercles omitted).

1. **Dolichoderiform.**—Plump, chunky and slightly curved; subelliptical, with both ends broadly rounded; anterior end formed by the enlarged dorsum of the prothorax; head ventral, near the anterior end; no neck. Segmentation indistinct. Genera: *Araucomyrmex*, *Azteca*, *Bothriomyrmex*, *Dolichoderus*, *Dorymyrmex*, *Froggattella*, *Iridomyrmex*, *Tapinoma*.

2. **Leptomyrmeform.**—Elongate, stout and slightly curved; diameter greatest at the third and fourth abdominal somites, decreasing rapidly toward either end. The 3 posterior somites small and directed ventrally. Prothorax sharply differentiated into 2 parts, the anterior part wedge-shaped (longer below) and abruptly depressed below the posterior portion. Head on the anterior end with the mouth parts directed anteriorly. Segmentation distinct. Genus: *Leptomyrme*.

3. **Engrammiform.**—Straight and subcylindrical; the posterior end slightly attenuated; anterior end formed by the dorsum of the prothorax; anterior portion of the prothorax forming a short stout neck, which is directed ventrally. Segmentation distinct. Genus: *Engramma*.

In the subfamilies Myrmicinae (1960) and Ponerinae (1964) we found mature body shape to the character which was most nearly constant throughout the

³ *Forelius* and *Technomyrmex* are not included because we have only immature specimens; *Liometopum* is omitted because our material is unsatisfactory.