

with a few short rows of minute spinules near the base; an isolated sensillum between each palp and the opening of the sericteries.

Material Studied.—12 larvae from Michigan, courtesy of Dr. Mary Talbot.

Dolichoderus (Hypoclinea) quadripunctatus (Linnaeus).—Torossian 1959: Proctodeal trophallaxis is observable during larval development; if a colony consists only of workers, the exchanges are released by the presence of second and third larval stages. Proctodeal food, produced exclusively by the workers, is the principal food of the larvae.

Dolichoderus (Hypoclinea) taschenbergi (Mayr).—The very young larva (straight length about 0.35 mm) has an ovoidal body. Head nearly the diameter of the body and on the anterior end. Anus subterminal. Segmentation distinct. Spiracles not uniform in size; first abdominal the largest, eighth abdominal the smallest. Integument sparsely spinulose, the spinules usually isolated. No body hairs seen. Head with the lateral borders and dorsal corners broadly rounded; mouth parts small. Antennae indistinct, each with 3 sensilla, each of which bears a spinule. No head hairs seen; integument of the head with a few spinules. Labrum indistinct; short and thick, breadth 4 times the length; ventral border nearly straight; 8 sensilla on and near the ventral border and 5 or 6 on each half of the posterior surface near the middle. Mandibles very small and feebly sclerotized; subtriangular in anterior view; no denticles seen. Maxillae feebly developed, apparently adnate; integument of the medial surface with a few short rows of minute spinules; palp represented by 2 or 3 sensilla; galea represented by 2 sensilla. Labium short and broad; sparsely spinulose, the spinules minute and isolated or in very short rows; palp represented by 2 sensilla; an isolated sensillum between each palp and the opening of the sericteries; the latter a short transverse slit.

The young larva (length through spiracles about 1.2 mm, straight length about 1.1 mm) is plump, chunky and nearly straight, with the ends rounded and lateral longitudinal welts prominent. Head on the anterior end. Anus ventral. Segmentation distinct. Spiracles not uniform in size; first abdominal largest, eighth abdominal smallest. Integument spinulose, the spinules usually in short rows. Body hairs present but sparse on the thorax and first 6 abdominal somites, most numerous on the prothorax; minute (0.005–0.025 mm long); simple. Head subtriangular in anterior view; with small depressed dorsolateral areas; mouth parts small. Head hairs few, simple, irregularly scattered, short (about 0.02 mm long). Antennae small, each with 3 sensilla, each bearing a spinule. Mandibles feebly sclerotized, subtriangular in anterior view, with denticles on the medial surface of the basal half. Maxillae with a few short rows of spinules on the medial surface. Labrum, maxillary palp, galea, labium, and hypopharynx similar to those of the mature larva.

Material Studied.—Numerous larvae from North Dakota.

Dolichoderus (Monacis) bispinosus (Olivier) (Fig. 4).—The very young larva (length through spiracles about 1.1 mm, straight length about 0.8 mm) is plump and without distinct segmentation; head on the anteroventral surface and about half the diameter of the prothorax. Anus posteroventral. Labrum breadth 5 or 6 times the length. Maxillary palp represented by 5 sensilla. Otherwise very similar to the very young larva of *D. taschenbergi*.

Material Studied.—4 larvae from the Panama Canal Zone, G. C. Wheeler, no. 355.

Tribe LEPTOMYRMECINI Emery

Genus *Leptomyrmex* Mayr

Leptomyrmex pictus Wheeler.—Length through spiracles about 6.4 mm; straight length about 4.6 mm. Very similar to *L. erythrocephalus*, except in the following details: Wing vestiges present. With an irregularly folded area across the ventral surface in each intersegmental membrane; each ventrolateral surface with a row of integumentary structures on abdominal somites I–VIII. Cranium about as long as wide and with the sides parallel (in anterior view). Head hairs shorter (0.005–0.015 mm long). Mandibles with the apical third slender and jaggedly tapering to a sharp point; basal two-thirds with short rows of minute spinules, which are transverse on the anterior surface and oblique on the posterior surface. Maxillae adnate. Labium feebly bilobed.

The young larva (length through spiracles about 3.8 mm, straight length about 3.6 mm) is similar to the mature larva, except in the following details: Slender and arcuate. Body hairs very few on abdominal somites VII–X, where there are also isolated spinules. Mandibles with the apical third tapering to a slender point. See Fig. 8.

Material Studied.—Numerous larvae from New South Wales, courtesy of the Reverend B. B. Lowery.

Tribe TAPINOMINI Emery

Genus *Froggattella* Forel

Froggattella kirbyi (Lowne).—Sexual larva (length through spiracles about 5.7 mm, straight length about 3.9 mm) has bean-shaped body and is without the dorsal row of bosses; otherwise similar to the worker larva.

The young larva (length through spiracles about 1.5 mm, straight length about 1.3 mm) is very similar to the mature larva, except in the following details: Dorsal surface with only 5 bosses (on the methathorax and abdominal somites I–IV), which are hemispherical; body more slender. See Fig. 5.

Material Studied.—Numerous larvae from New South Wales, courtesy of Rev. B. B. Lowery.

Genus *Dorymyrmex* Mayr

Dorymyrmex emmaericaellus (Kusnezov).—Marcus (1953, p. 31) claimed that the sex could be recog-