

Supplementary Studies on Ant Larvae: *Simopone* and *Turneria*¹

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Abstract: This study supplements our "Ant Larvae: Review and Synthesis" (1974). The larvae of *Simopone* n. sp. and *Turneria* sp. (near *dahli*) are described and figured and each genus is characterized. *Simopone* is definitely cerapachyine but quite distinct from the larvae of other known genera of the subfamily. *Turneria* is typically dolichoderine but readily distinguished from other genera of the subfamily by the tail and the shape and location of the dorsal bosses.

SUBFAMILY CERAPACHYINAE

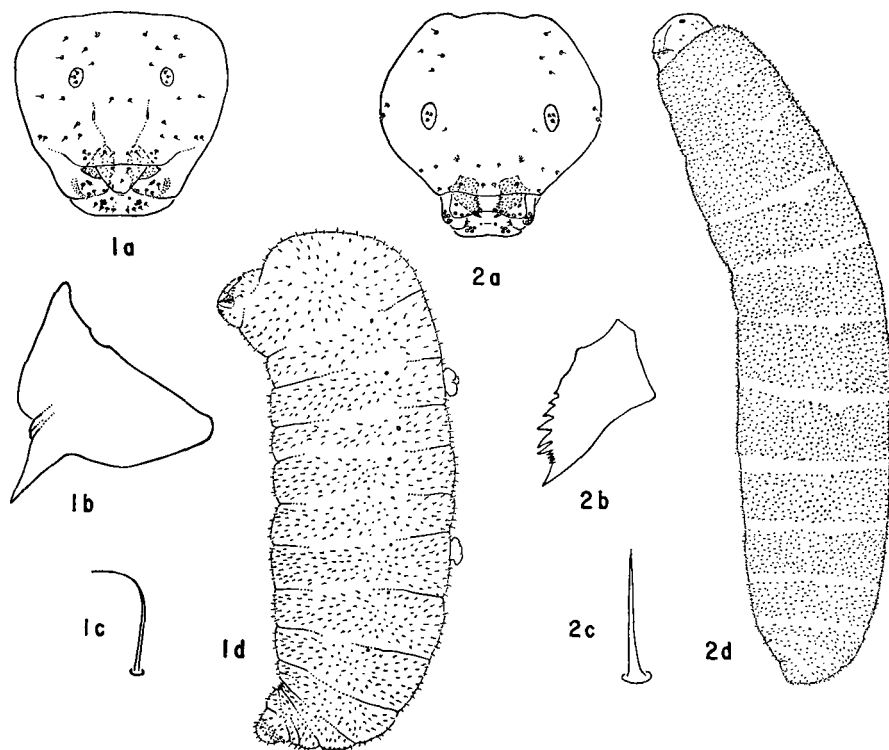
The larva of *Simopone* is definitely cerapachyine. Its profile is myrmecoid like that of the other four known genera (*Cerapachys*, *Eusphinctus*, *Lioponera*, and *Phyracaces*). The mandible is sui generis and we must establish for it a new monotypic rubric "*simoponoid*." The small size of the mouth parts is also distinctive for the genus. In our general key for ant larvae *Simopone* runs to 49b in company with *Cerapachys*, *Eusphinctus*, and *Phyracaces*; from these it can be distinguished by the shape of the mandibles. Its index of specialization (see our 1974) is 24; that of the subfamily is 22. [The most specialized ant larvae—Leptanillinae—have an index of 35, while the Ponerinae are less specialized with 17. The index for the family as a whole is 22.]

Genus *SIMOPONE* Forel

Body myrmecoid; head on anterior end; anus ventral. Body hairs sparse and minute. Head suboctagonal; antennae large; mouth parts small. Mandibles with about 8 teeth on medial border.

Simopone n. sp. (Fig. 2). Length (through spiracles) about 3 mm. Shape myrmecoid (i.e., elongate and rather slender; curved ventrally; without a differentiated neck; diameter decreasing only slightly from AV to anterior end); leg vestiges present as small papillae; anus ventral. Head on anterior end. Segmentation indistinct. Spiracles small; ten pairs. Entire integument spinulose, the spinules minute and in arcuate rows, rows forming a reticulate pattern on venter of T1; isolated and coarse, or minute and in short rows, elsewhere. Body hairs sparse and minute (0.013–0.025 mm. long); unbranched, smooth and slightly curved, most numerous on AX. Cranium suboctagonal; occipital border sinuate; mouth parts small. Antennae rather large, slightly raised ellipsoids with 3 sensilla, each of which bears a spinule. Head hairs few, minute (about 0.004 mm. long), unbranched, smooth, and slightly curved. Labrum bilobed, about 3 times as wide as long; each lobe with 4 minute sensilla on each ventrolateral surface; posterior surface of each lobe with about 7 sensilla near the middle in a longitudinal row. Mandibles small; subtriangular; without a blade; with the apex slightly curved medially and with about 8 minute to large teeth on distal $\frac{1}{2}$ of convex medial border. Maxillae apparently adnate; palp a slightly raised

¹Hymenoptera: Formicidae.



Text figure 1. *Turneria* sp. (near *dahli*). 1a. Head in anterior view, $\times 397$; 1b. Left mandible in anterior view, $\times 397$; 1c. Body hair, $\times 212$; 1d. Body in side view, $\times 28$. Text figure 2. *Simopone* n. sp. 2a. Head in anterior view, $\times 101$; 2b. Left mandible in anterior view, $\times 314$; 2c. Body hair, $\times 667$; 2d. Larva in side view, $\times 28$.

cluster of 5 sensilla; galea represented by 2 sensilla with a spinule each. Labium with a few short transverse rows of minute spinules on the anterior surface; palp represented by a cluster of 5 sensilla; an isolated sensillum between each palp and the opening of the sericteries; the latter a short transverse slit.

Material Studied: 4 larvae from Ghana: New Tafo (Akim), 29 XI 1970, B. Bolton; courtesy of Dr. W. L. Brown.

SUBFAMILY DOLICHODERINAE

The larva of *Turneria* is so typically dolichoderine that it does not disturb in the least the nearly perfect homogeneity of the subfamily. Nevertheless it is distinct from all other dolichoderine genera. In our key to all ant larvae (1794) it would run to "51a. Boss or bosses dorsal . . . *Forelius*, *Froggattella* and *Iridomyrmex*." It can be distinguished from those three genera by its tail and the shape and location of the bosses.

The index of specialization (see our 1974) for *Turneria* is 27, while that for the subfamily is 24. [For the most specialized ant larvae—the Leptanillinae—the index is 35, while the Ponerinae are less specialized with 17. The index for the family as a whole is 22.]

Genus *TURNERIA* Forel

Body dolichoderoid but with 2 middorsal doorknob-shaped tubercles (1 on T3 and 1 on AIV); AIX and AX narrowed and turned ventrally as a stout tail. Body hairs unbranched, smooth and spike-like. Labrum subtriangular, broadest dorsally. Mandibles dolichoderoid.

Turneria sp. (near **dahli**) (Fig. 1). Length (through spiracles) about 1.9 mm. Body dolichoderoid (i.e., short, stout, plump, and nearly straight, with both ends broadly rounded; anterior end formed by the enlarged dorsum of the prothorax; head ventral, near anterior end; no neck; segmentation indistinct); AIX and AX narrowed abruptly and bent ventrally as a small tail; on the dorsum of each T3 and AIV a middorsal doorknob-shaped boss. Anus on anterior surface of tail. Spiracles small; those on AI greatest in diameter, on AVIII vestigial. Entire integument spinulose, the spinules minute and in short transverse rows. Body hairs sparse, short (0.005–0.025 mm. long), unbranched, smooth and spike-like, longer and more numerous on the dorsal surface. Cranium subtrapezoidal with corners rounded; mouth parts small. Each antenna with 2 or 3 sensilla, each of which bears minute spinule. Head hairs few, minute (0.006–0.013 mm. long) and spike-like. Labrum subtriangular in anterior view; anterior surface with 2 minute sensilla; ventral border with 2 sensilla each on a slight elevation; posterior surface with 6 small sensilla medially and with a few arcuate rows of minute spinules laterally. Mandibles small, feebly sclerotized, dolichoderoid (i.e., basal portion inflated and narrowed abruptly to the distal portion, which is slender and sharp-pointed; no medial teeth); with a few short ridges at base of apical tooth. Maxillae small, apex rounded, appearing adnate; palp represented by a cluster of 5 (1 encapsulated and 4 with a spinule each) sensilla; galea a low knob with 2 sensilla, each with a minute spinule. Each labial palp represented by a cluster of 4 (1 encapsulated and 3 with a spinule each) sensilla; an isolated sensillum between each palp and the opening of the sericteries; the latter a short slit between the tips of the maxillae. Hypopharynx densely spinulose, spinules arranged in subtransverse rows, rows grouped in 2 subtriangles which have their bases near middle.

Material Studied: numerous larvae from Espiritu Santo, New Hebrides, E. O. Wilson, 7–13 Jan. 1954; courtesy Dr. W. L. Brown.

Literature Cited

- WHEELER, G. C. AND WHEELER, J. 1974. Ant larvae: review and synthesis. Mem. Entom. Soc. Washington (in press).