

height of tubercle and spine about 0.38 mm; integument of spire with a few minute denticles. Anterior surface of the mandibles produced into a small medial blade which bears the subapical teeth.

Odontomachus haematoda clarus Roger.—Michener and Michener 1951, p. 143: A brief account of feeding.

Odontomachus haematoda insularis Guérin.—Length (through spiracles) about 8.3 mm. Similar to *O. haematoda*, except in the following details: Body with numerous (116) tubercles; prothorax, 12; abdominal somite IX, 10. Apical tooth of mandible longer and more slender than subapical teeth. Maxillae and labium with longer spinules. (Material studied: numerous larvae from Florida, courtesy of Dr. P. B. Kownowski.)

LITERATURE ON THE SUBFAMILY

Bernard 1951:—"Larves eucéphales, carnivores; se nourissant seules" (p. 1041). "Larves variables suivant les genres, mais habituellement primitives, à tête et pièces buccales très différenciées, poilue ou non. La trophallaxie paraît nulle ou rudimentaire: la larve dévore des fragments d'Insectes que les ouvrières ou la reine placent à sa proximité" (p. 1043).

Escherich 1906, p. 76 = 1917, p. 98:—"Manche Larven sind übrigens auch fähig, feste Nahrung zu verzehren. Bei den Ponerinen scheint dies sogar Regel zu sein, worauf schon die starke Entwicklung der Mundteile schliessen lässt. Nach den Beobachtungen Wheelers (1900) legen die Arbeiter dieser niederen Ameisen feste Nahrungsstücke, wie kleine tote Insekten oder Stücke von grösseren auf die flache, tellerförmige Bauchseite der Larven, von wo sie sich diese vermöge ihres langen, ventralwärts gebogenen Halses herholen, um sie zu verzehren."

Emery 1904, p. 114-5:—"Le larve "delle vere Ponerinae sono piriformi o claviformi, con l'addome fortemente rigonfiato, tanto in quelle che portano soltanto peli semplici, . . . quanto in quelle che sono fornite di tubercoli piligeri."

Gantes 1949, p. 76:—"Ponerine larvae compared with *Formica*: "La tête est plus grosse par rapport au corps: les pièces buccales très développées, les mandibules très grandes, les palpes sensoriels également."

Klots and Klots (1959, p. 281) have given a very brief account of feeding.

Michener and Michener 1951, p. 142:—"The colony-founding queen leaves her nest to forage for food for her first brood."

TRIBES

The following is a synopsis (based on Emery 1911 and Wheeler 1922) of the sections, tribes, and genera that we have studied. The only ponerine tribes not represented in our collection are *Cylindromyrmecini* and *Dorylozelini*.

Section Proponerinae

Myrmeciini—*Myrmecia*.

Amblyoponini—*Mystrium*, *Stigmatomma*, *Myopopone*, *Amblyopone*.

Paraponerini—*Paraponer*.

Platythyreini—*Platythyrea*.

Ectatommini²—*Paranomopone*, *Prionopelta*, *Typhlomyrmex*, *Acanthoponera*, *Rhytidoponera*, *Ectatomma*, *Gnamptogenys*.

Thaumatomyrmecini³—*Thaumatomyrmex*.

Proceratiini—*Proceratium*.

Section Euponerinae

Ponerini—*Centromyrmex*, *Odontoponera*, *Dinoponera*, *Diacamma*, *Megaponera*, *Neoponera*, *Pachycandyla*, *Bothroponera*, *Euponera*, *Belonopelta*, *Simopelta*, *Cryptopone*, *Ponera*, *Trapeziopelta*, *Psalidomyrmex*.

Onychomyrmecini—*Onychomyrmex*.

Leptogenyini—*Leptogenys*.

Odontomachini—*Anochetus*, *Odontomachus*.

CHARACTERS

In our study of the larvae of the subfamily Myrmicinae (1960) we discussed the importance of various characters in taxonomy and described our techniques for generalizing about certain characters. We have applied the same reasoning and techniques to the larvae of the ponerines.

In the subfamily Ponerinae—as in the Myrmecinae—body shape is the character which is most nearly constant throughout the genus. It is also the character which most closely correlates larval taxonomy with adult taxonomy. Therefore we have chosen body shape as the basic character for classifying the larvae of the Ponerinae. The next most useful character is mandible shape. There are more kinds of mandible shapes than body shapes. Mandible shape also shows more intrageneric and intraspecific variation. Third in utility is the presence or absence of tubercles and the shape of the tubercles when present.

Other characters are less useful in separating genera and may be considered as primarily specific characters: integumentary spinules (location, pattern, abundance); hairs (shape, size, distribution, abundance); head shape; teeth of mandibles (size and shape); spinules on mandibles; other mouth parts (shape, spinules, sensilla). The species of a genus usually differ in characters which are both variable and quantitative.

BODY SHAPE

In our study of body shapes we have used only the profiles (i.e., outlines in side view), since dorsal and ventral views rarely show anything distinctive.

Applying the technique referred to above, we find 8 generalized profiles for the Ponerinae (Fig. 17 and Appendix A). A simultaneous comparison of the 8

² "The larvae of the ectatommines are also relatively incompletely known, and before the pioneering work of the Wheelers on the ponerine larvae, . . . there was virtually nothing in print of any value for morphological or systematic purposes. The larval findings agree in most respects at the generic level with the new classification adopted here." (Brown 1958, p. 179.)

³ It is our opinion that names of subfamilies and tribes based on generic names terminating in *-myrmex* (from the Greek *myrmex*, *myrmekos*) should be spelled *-myrmecinae* and *-myrmecini* (not *-myrmicinae* and *-myrmicini*), Emery and W. M. Wheeler to the contrary notwithstanding. Perhaps such spellings have been established by analogy with Myrmicinae, but the latter is derived from the generic name *Myrmica*, not from *Myrmex*.