

Kugler, C. 1978b. Further studies of the myrmicine sting apparatus: *Eutetramorium*, *Oxyopomyrmex*, and *Terataner* (Hymenoptera, Formicidae). *Psyche* (Camb.) 85:255-263.

Kugler, C. 1980. The sting apparatus in the primitive ants *Nothomyrmecia* and *Myrmecia*. *J. Aust. Entomol. Soc.* 19:263-267.

Kugler, C. 1986. Stings of ants of the tribe Pheidoletini (Myrmicinae). *Insecta Mundi* 1(4):221-230.

Lattke, J. 1991a. Revision of the ant genus *Gnamptogenys* Roger in the New World. (Unpublished ms).

Lattke, J. 1991b. Phylogenetic Relationships and Classification in the Ectatommini (Hymenoptera; Formicidae). (Unpublished ms).

Wheeler, W. M. 1922. Ants of the American Museum Congo Expedition, a contribution to the myrmecology of Africa, VII Keys to the genera and subgenera of ants. *Bull. Am. Mus. Nat. Hist.* 45(1):631-710.

Appendix 1

Phylogenetic Analysis of *Gnamptogenys*: Characters and Transformation Assumptions

In the list below, the ancestral character state is assumed to be 0. Character state transformation assumptions follow the list of states for each character.

1. Spiracular plate shape: (0) square, with distinct anteroventral and posteroventral corners, (1) clearly longer than wide, with distinct anteroventral and posteroventral corners, (2) oval, with posteroventral corner reduced to broad curve (Irreversible).
2. Median lobe of oblong plate's dorsal arm: (0) not clearly present, (1) a straight shelf of variable length and width, (2) shelf-like, but curved ventrad at its proximal end (Dollo).
3. Oblong Plate: (0) postincision present and fulcral arm long, narrow, strongly angled, (1) postincision absent and fulcral arm short, subtriangular, erect, not overlapping posterior arm, (2) postincision absent and fulcral arm short, subtri-

angular, erect, and with narrow dorsal lobe that overlaps posterior arm (Dollo).

4. Gonostylus basal segment: (0) with 1 or 2 long setae, (1) without long setae (Irreversible).
5. Triangular plate ridge (0): absent, (1) present (Dollo).
6. Lancet apex: (0) gradually tapered, (1) abruptly spine-like (Dollo).
7. Lancet valves: (0) large, (1) small (Irreversible).
8. Sting apex: (0) not compressed dorsoventrally, (1) compressed dorsoventrally (Dollo).
9. Sting flanges: (0) absent, (1) present, but tiny and not visible in full ventral view, (2) present and clearly visible in full ventral view (Dollo).
10. Sting hemocoel: (0) limited to sting shaft (in side view), (1) extended anteriad over 25% of valve chamber, (2) extended anteriad over 25-50% of valve chamber, (3) extended anteriad over more than 50% of valve chamber (Dollo).
11. Basal notch of sting: (0) distinctly concave from articular process to sting base, (1) not distinctly concave throughout (Ordered).

	CHARACTERS										
	1	2	3	4	5	6	7	8	9	10	11
<i>G. triangularis</i>	0	1	0	1	0	1	1	1	0	3	1
<i>G. bispinosa</i>	0	1	0	1	0	1	1	1	0	3	1
<i>G. tortuosa</i>	1	1	1	0	1	0	1	0	1	1	1
<i>G. horni</i>	1	1	1	0	1	1	0	0	1	1	1
<i>G. tornata</i>	1	1	1	0	1	1	0	0	1	1	1
<i>G. sulcata</i>	1	1	2	0	1	1	0	0	1	1	0
<i>G. annulata</i>	1	1	1	0	1	1	0	0	1	1	0
<i>G. brunnea</i>	2	0	2	1	0	0	0	0	2	3	0
<i>G. nr strigata</i>	2	0	2	1	0	0	0	0	2	3	0
<i>G. porcata</i>	2	0	2	1	0	0	0	0	2	2	0
<i>G. moelleri</i>	2	0	2	1	0	0	0	0	2	2	0
<i>G. gracilis</i>	2	0	2	1	0	0	0	0	2	2	0
<i>G. continua</i>	2	2	2	0	0	0	0	0	2	0	0
<i>G. mordax</i>	2	2	2	0	0	0	0	0	2	0	0
<i>G. interrupta</i>	2	2	2	0	0	0	0	0	2	0	0

Table 1. *Gnamptogenys* phylogenetic analysis data matrix.

Appendix 2

Phylogenetic Analysis of Ectatommini: Characters and Transformation Assumptions

In the list below, the ancestral character state is assumed to be 0. Character state transformation