

phorini, Plagiolepidini, and Myrmelachistini), the oclusory tract is a prominent dome which surmounts the bulb. It is traversed by the same cruciform slit found in the euformicines. Anteriorly the slit is covered by dense chitinous hairs; this area is exactly comparable, if not homologous, to the filtered slits of the euformicine calyx and tract. Posteriorly the slit is devoid of hairs, and the tips of its arms broaden into canals which open into the bulb canals, again very much as in the euformicines. The proventriculus characterising Emery's section Heteroformicinae (Myrmecorhynchini and Myrmoteratini) appear from Emery's figures to be essentially similar to the alloformicine type, and there seems to be little justification for considering them other than aberrant alloformicines. The advanced dolichoderine type of proventriculus (Tapinomini) is the most complicated and difficult to understand, but in essential details it is still similar to the alloformicine type. There is an anterior filter area and posterior canals. Sepals, or sepal-like structures, are present and reflexed back over the bulb, with which they fuse. The chitinous septa produced by the fusion of the bulb and inverted sepals serve as the points of attachment of the bulb muscularis. The proventriculus of the myrmicine tribe Cephalotini has unquestionably evolved independently of that of the Dolichoderinae and Formicinae. Yet here again an oclusory tract abuts the crop and is the principal feature. The filtering slits are irregularly branched; they open into a rather simplified muscular portion which is little different from the primitive proventriculus of other myrmicines.

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#### REFERENCES CITED

EMERY, C.

1888. Ueber den sogenannten Kaumagen einiger Ameisen. *Z. Wiss. Zool.*, 46:378-412, pls. 27-29.
1912. Formicidae, subf. Dolichoderinae. *Wytsman's Genera Insectorum*, fasc. 137:1-50.
1925. Formicidae, subf. Formicinae. *Ibid.*, fasc.183:1-302.