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NOTES ON NECROPHORIC BEHAVIOR IN THE ARCHAIC ANT *MYRMECIA VINDEX* (FORMICIDAE: MYRMECIINAE)*

By Caryl P. Haskins and Edna F. Haskins
2100 M Street, N.W.
Washington, D.C.

Introduction

Ants of the Australian and New Caledonian genus *Myrmecia* apparently include the most archaic living Formicidae. Brown (1954) suggested that the genus may represent a relatively late evolutionary offshoot, specialized but fundamentally conservative, from a line of extremely generalized archaic forms represented as fossils by the genus *Prionomyrmex* of the Baltic amber and by the living Australian *Nothomyrmecia macrops,* of which only two workers have ever been found. Species of *Myrmecia,* therefore, may well illustrate the earliest patterns of Formicid social organization, and embody the most archaic patterns of Formicid social behavior, that we are likely to be able to study in detail in the laboratory or the field.

The bodily habitus of *Prionomyrmex* and *Nothomyrmecia* — not to mention of the far more archaic Mesozoic fossil genus *Sphecomyrma* first described by Wilson, Carpenter, and Brown (1967) which may well represent, as Wilson (1971) suggests, an antecedent of the Myrmecioid complex of ants — all suggest active, epigeically foraging insects: a characteristic virtually universal in contemporary species of *Myrmecia.* This, combined with the fairly large size of the communities of many species of *Myrmecia* — specific counts of 1586 workers and over 2000 in total colony personnel have been made from larger colonies of *M. gulosa* (Haskins and Haskins, 1950) — raise the interesting question of how far these archaic forms may have evolved any pheromone-mediated patterns of community-integrating behavior so conspicuous in many higher ants. This is an interesting and complex area of inquiry, the answers to which are far from obvious, as the recent investigations of Robertson suggest.

A prior question may be significant in this context. Do ants of the genus *Myrmecia* exhibit characteristic behavioral responses to particular chemical substances normally encountered in the external

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