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LIFE-PATTERN STUDIES ON AN AUSTRALIAN *SPHINCTOMYRMEX* (FORMICIDAE: PONERINAE; CERAPACHYINI): FUNCTIONAL POLYGYNY, BROOD PERIODICITY AND RAIDING BEHAVIOR.

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Introduction

The ponerine tribe Cerapachyini comprises a considerable number of species (Brown, 1975), the life histories of which, however, are as yet poorly known (Hölldobler, 1982). All species so far investigated feed exclusively on other ants (Wilson, 1958, Brown, 1975), and several *Cerapachys* and *Sphinctomyrmex* species have been seen to conduct raids against colonies of a variety of ant genera and species. Hölldobler (1982) analyzed the organization of such raids in *Cerapachys* cf. *turneri* from North Queensland, and Wilson (1958) described a raid of *Spinctomyrmex steinheili* from Victoria. In the same paper, a few laboratory observations on *S. caledonicus* from New Caledonia were reported. According to Briese (1984) *Sphinctomyrmex sp.* in southwestern New South Wales raided nests of *Chelaner sp.*, which evacuated their brood to temporary nest sites, but later reoccupied the original nests.

A remarkable feature of the Cerapachyini is the morphological diversity of their female reproductives, which range from ordinary winged to "ergatoid". In *Sphinctomyrmex,* according to Brown (1975), ergatoidy "has begun to converge towards the dichthadiiform condition of army ant queens". In the same genus, as in other cerapachyines the occurrence of multiple "ergatoid" females has been recorded, but it has been unclear whether or not all of them are functional queens (Brown, 1975).

Finally, a marked tendency towards brood periodicity and developmentally synchronized broods have been found in some *Cerapachys* and *Sphinctomyrmex* species (Wilson, 1958; Hölldobler, 1982).

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