

budding. Thus this process would be a highly probable and logical precursor of the colony multiplication as found in true army ants. The only additional requirement for the transition from polygyny with ergatoid females, which certainly mate within or close to the nest, to the monogynous army ant system would be that budding occurs soon after, or just before, the young females mate. The existence of probably monogynous *Sphinctomyrmex* species with "subdichthadiiform queens" (Brown, 1975) suggests that this transition may have already occurred within this genus. Therefore, it will be highly interesting in future investigations of cerapachyine species to assess their strategy of colony reproduction.

#### SUMMARY

Three colonies ranged in size from approximately 80 to 400 adult workers and nine to 20 ergatoid females. Sixteen of 20 ergatoid females dissected contained sperm, while the workers lacked spermathecae. The presence of corpora lutea and developing oocytes showed that these sixteen ergatoids were fully functional reproductives. This species is therefore polygynous. Laboratory and field data indicate that eggs were laid more or less simultaneously in all three colonies.

Although the ants ate fragments of mealworm in addition to brood of the Australian ant species *Monomorium* cf. *rubriceps* and the European ants *Myrmica ruginodis*, *Leptothorax muscorum* and *Lasius niger*, successful reproduction seemed to require *Amblyopone australis*, a syntopic species, as prey.

Adult workers of all species except *Monomorium rubriceps* were raided readily, but the latter were avoided. The *Sphinctomyrmex* did not move nest to the site of prey items, even when they are prevented from bringing these from another experimental chamber to their own, although nest-moving occurred at other times. Raiding behavior did not appear to be inhibited by the presence of food in the nest, but rather to be elicited whenever a suitable prey colony was encountered. Indirect evidence indicates that recruitment efficiency is similar to that seen in *Cerapachys* species.

This *Sphinctomyrmex* species thus exhibits various rudiments of army-ant life history, as noted previously by Wilson (1958) and Brown (1975).