

forms, distinguishable externally from workers only by very subtle characters. This extreme ergatoid condition is rare among ants in general (Peeters and Crewe 1985, Hölldobler and Wilson 1990), and particularly rare in the Myrmicinae (Bolton 1986, Brandao 1987, Peeters 1991). Observations on these Malagasy *Terataner* contribute to our understanding of the evolutionary biology of the genus, as well as the biogeography and biodiversity of ants from Madagascar.

MATERIALS AND METHODS

In a forthcoming revision of Malagasy *Terataner* (Alpert, in prep.), species names are given to the forms designated *T. sp. a-d* in this study. Individual foragers of *T. sp. a* were first discovered by William L. and Doris E. Brown, in 1977, in a vanilla plantation near the town of Sambava on the northeast coast of Madagascar. Subsequent trips by the author to the coastal lowlands and foothills of the Masoala Peninsula in the northeast of Madagascar (February 1990 and 1991, July 1992) were successful in locating colonies of this species as well as three other species of *Terataner* (*alluaudi*, *foreli* and *sp. b*). In August of 1992, colonies of two additional species were studied, one from the Ankarana Reserve in the north (*sp. c*), and the other (*sp. d*) from the Lokobe Forest, Nosy Be in the northwest of Madagascar.

Complete *Terataner* colonies were collected into both 80% alcohol and Bouin's preservative. Field notes and photographs were taken of each nest site location. Field observations were made on foragers from each species, and representative colonies were brought back to the laboratory for further studies.

Colonies were located by following individual workers returning to their nests and by searching the ground for twig nests. Ants entering twigs in search of prey items were occasionally mistaken for returning foragers. Nests sites were confirmed only when *Terataner* ant brood was found associated with workers. After nest collection, the immediate area was examined for colony fragments, returning foragers and other ant nests.

Workers and ergatoid reproductives in a colony were dissected under a light microscope to determine their degree of reproductive development. The degree of ovarian development was measured,