L'analyse de Fagen-Goldman des fréquences des comportements montre que le répertoire observé était complet. Les tailles des répertoires étaient 5 comportements (reine), 14 comportements (grandes ouvrières), 28 comportements (petites ouvrières jeunes), et 31 comportements (petites ouvrières mûres). Ces tailles de répertoires sont comparables à celles d'autres espèces de fourmis.

Les grandes ouvrières, dont on trouve seulement moins de deux en moyenne par colonie, ne montrent pas de comportements de soins envers les larves. Elles ne montrent pas de comportements défensifs. Les ouvrières jeunes montrent les comportements envers la reine, les larves, et aussi le comportement de récolte.

Une comparaison de l'organisation sociale chez *Aneuretus simoni* avec celle d'autres espèces primitives montre que le comportement social est semblable à celui des dolichodérines.

INTRODUCTION

The recent collection of queenright colonies of *Aneuretus simoni* has made it possible to study social organization in this rare ant species for the first time since the initial studies of Wilson *et al.* (1956), 29 years ago. Our previous reports on the distribution, abundance and foraging behavior of *A. simoni* on Sri Lanka (Jayasuriya and Traniello, 1985 a), and on alarm and trail communication in this species (Traniello and Jayasuriya, 1981 a, b) have provided considerable information on the ecology and social biology of this elusive, primitive ant species, which is the sole living representative of the subfamily Aneuretinae.

To further contribute to the comparative sociobiology of primitive ant species and the study of the evolution of sociality in ants in general, we present in this paper the social ethogram of *A. simoni* and describe patterns of division of labor by physical caste and age.

METHODS

Twenty-six colonies of *A. simoni*, collected on Sri Lanka in July 1979, were housed in glass tubes that approximated the size and structure of their natural twig nests (10 cm in length, 0.5 cm in diameter) to facilitate observation. Each tube was fitted with a moist cotton plug which could be periodically dampened with water. These nests were placed in fluon-lined plastic containers (12.5 × 18 × 6 cm) small enough to be fitted onto the stage of a dissecting microscope. The nest container served as a foraging arena, in which termites (*Nasutitermes* spp.), and honey water were offered as food. With this observation technique the entire population of a colony could be monitored. A low intensity fiber optics cold light source was used to minimize disturbance. Observations were made at magnifications ranging up to 30x. The majority of observations were made on three vigorous queenright colonies that survived more than nine months in the laboratory. The paucity and fragility of *A. simoni* colonies have somewhat constrained the scope of our experimentation. Nest containers were covered and misted with water to maintain humidity, and room temperature ranged from 28° - 30°.