

intervals all the behaviors observed for the complete colony were recorded. The total number of kinds of behavioral acts was then estimated by the method of FAGEN and GOLDMAN (1977).

## RESULTS

### Field observations

*Myrmoteras toro*. The colony was collected at an elevation of about 900 meters in relatively open, secondary forest which extended in a narrow band between the cultivated valley and a wide expanse of primary forest farther in.

I discovered the ants by recognizing one individual just as it disappeared beneath a dead leaf in the litter. Overturning the leaf I found a group of about twelve *Myrmoteras* workers with brood. Apparently the ants had been tightly clustered where two leaves lay in contact. The leaves were slightly moist and were loose within the litter. A cluster of six ants (including one dealate queen) was then located on the exposed surface of a leaf fragment which had most likely fallen to the side when I lifted the first leaf. The ants appeared undisturbed by the exposed situation, but, once disturbed directly with a forceps, they proved excellent sprinters.

During the next four hours the leaf litter was carefully searched out to about four meters in every direction. Four individuals were collected during the first half hour, all within a meter of the original colony location. One of these workers carried a microlarvae. Altogether 22 workers were collected, as well as 1 queen, 7 pupae, and a number of larvae and eggs. This was apparently the entire colony.

*Myrmoteras barbouri*. The colony was found at an elevation of about 100 meters in disturbed primary forest. A worker was located in leaf litter. She was capable of startling bursts of speed, rushing to the underside of a leaf every time I moved my hand to within 20 cm. After capturing a springtail, the ant walked 30 cm from her original location to the nest. The nest was in a narrow, centimeter-deep crevice in the soil beneath the litter with a wide (1.0 × 0.3 cm) entrance. It contained a dealate queen, two alate gynes, workers, and brood. Altogether eight workers were collected, including two foragers taken during an hour of observations of the nest entrance. The surrounding ground was searched thoroughly for additional ants, but none were found within a five meter radius of the nest. My assumption is that this was the complete colony.

### Behavioral repertoires for *Myrmoteras barbouri*

Behavioral repertoires for *M. barbouri* are presented in *table I*. The actual number of behavioral categories was estimated as  $26 \pm 2$  acts for workers and  $16 \pm 6$  for gynes ( $\bar{x} \pm \text{s.e.}$ ). Individual behaviors of special interest are discussed elsewhere. Note the following, however :