

major workers showed no defensive specialization in any context. They did not consistently occupy what could be interpreted as guarding positions at the nest entrance. When individuals from a foreign *A. simoni* colony were placed in the arena of a given colony, the normally timid workers attempted to bite and sting the intruders and the pair sometimes remained locked in combat for hours, but majors were not recruited (Jayasuriya, 1980). Assaulting colonies with workers of sympatric ant species (*Pheidole hortensis*, *Tetramorium* sp.) was also ineffective in inducing the participation of majors in defense. In response to disturbance (prodding at the nest entrance with an applicator stick) minor workers responded aggressively whereas major retreated. Observations made during nest emigration indicate a high of major worker participation (brood and worker transport) during this process. Majors possess a well-developed sternal gland (Traniello and Jayasuriya, 1981 a) and therefore could contribute to the chemical organization of nest moving. If nest immigration plays a central role in the biology of *Aneuretus*, this could comprise a significant part of the major worker behavioral repertoire.

#### Division of labor by age

In addition to the major worker/minor worker subcaste distinction, callow minors (less than 8 days old), recognized by their pale coloration, were considered as a potential age caste and the behavioral distinctiveness of this age group was examined. We were unable to make any finer discrimination of worker age due to the lack of sufficient additional heterogeneity in color. To analyze age-based division of labor, the frequencies of task performance by callow and mature workers expected from their numerical frequencies in the colonies observed were calculated using the method of Altmann and Altmann (1977), applied to the analysis of age polyethism by Calabi *et al.* (1983):

$$E_{ij} = \frac{(B_i)(n_j)}{N}$$

where  $E_{ij}$  = expected frequency of behavior  $i$  by age class  $j$

$B_i$  = observed frequency of behavior  $i$  by all age classes

$n_j$  = number of ants in age class  $j$

$N$  = total number of ants in all age classes.

We analyzed the differences between callow and mature minor workers in their performance of behaviors frequently observed inside the nest related to queen attendance and brood care, and behaviors outside of the nest involving foraging, as well as nest maintenance.