

**RECOGNITION OF BROOD ODOR BY WORKERS OF
Acromyrmex subterraneus subterraneus (Hymenoptera,
Formicidae)**

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Despite their aggressiveness toward alien ants during the process of nestmate recognition, workers usually accept heterospecific brood. The attraction toward the brood suggests the existence of specific brood pheromones. This study investigated the capacity of *Acromyrmex subterraneus subterraneus* workers to recognize nestmate and non-nestmate brood odor. The different behavioral steps leading from discovery to transport into the colony of items encountered outside the nest were used to characterize the recognition by workers. Seven types of brood were placed simultaneously on a foraging arena of each of 3 colonies maintained under laboratory conditions. These treatments were: one live larva, one frozen, one larva previously washed in pentane, all homocolonial; one larva from a different nest (heterocolonial); one from another leaf-cutter species *Acromyrmex crassispinus*; one artificial paper larva impregnated with cuticular larval extract. Another artificial paper larva was used as the blank. Another set of seven treatments were conducted using pupae instead of larvae. Each treatment was replicated 10 times in each colony. The results have shown no significant difference among the homocolonial and heterocolonial material and the extract. However the workers were able to recognize and reject the heterospecific brood and the blank. The mechanism of this recognition seems to indicate the presence of a cuticular pheromone in both larvae and pupae of this leaf-cutting ant.

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