

THE ROLE OF *Acromyrmex subterraneus subterraneus* WORKERS IN BROOD DISCRIMINATION

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Cooperative brood rearing is one of the hallmarks of insect sociality, and even a casual glance into an ant colony reveals that much of the workers activity and attention is centered on the eggs, larvae and pupae. The aim of this investigation was to evaluate the capacity of live brood recognition by workers in the leaf-cutting ant *Acromyrmex subterraneus subterraneus*. Pick up and transportation of previously removed brood and again offered to workers were observed in both laboratory and field colonies. Six situations were explored: larvae or pupae from the same colony (homocolonial), larvae or pupae from a different colony (heterocolonial) and larvae or pupae from of a different species (heterospecific). All the workers that picked up the brood were marked and the acceptance (transportation to the nest) was quantified. Results of a first set of bioassays in laboratory have indicated that the workers promptly accepted homocolonial brood offered 10 cm from the nest entrance, but rejected alien brood. If offered 60 cm from the nest area or under field conditions, discrimination was lower. In the laboratory this lower acceptance was only temporary. Finer discrimination was processed inside the colony by the minor workers that rejected any alien brood a few minutes after foragers had transported them into the nest. It was concluded that workers' behavior and brood discrimination capacity varied according to the functional caste, being the foragers less selective.

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