P145

Heterocolonial interactions in a neotropical ant

Matilde Sauvaget, Chantal Poteaux, Nicolas Châline, Gabriela Perez-Lachaud, Jean-Paul Lachaud

Social recognition in insects is performed by the comparison between a perceived chemical signature and a memorized template. This determines the acceptation of an individual as a nestmate or its aggression as a stranger and so, only nestmates are allowed to get into the nest. Nevertheless, parasits or cleptobionts (thieves) sometimes perform entrance into host nests. Such behavior is frequently observed in the ant Ectatomma ruidum: some workers are performing thieveries of food into neighboring nest (intraspecific cleptobiosis). Moreover, those thieves often gain entrance without any aggressive behavior of the workers from the target nest. Thus, this frequent phenomenon could be explained if a modulation of the nestmate recognition exists in this species. One hypothesis is the 'dear enemy effect' in which aggression of non-nestmates depends on the distance between the two nests: close neighbors are less aggressed than distant conspecifics. This effect can rely on different mechanisms such as proximity of colonial odors, related to environmental elements or genetic relations, or habituation by learning. To investigate these mechanisms, we tested the relations between close and distant nests with several methods. We explored the behavioral responses of workers by analyzing dyadic encounters, we measured the chemical distances and the relatedness between nests. These tests were carried out after field observations allowing us to know effective behavioral and cleptobiotic relations between neighboring colonies. All the results give a better insight of nestmate recognition and the impact of neighboring relations.