Diet-induced aggression among colonies of the leafcutter ant Acromyrmex echinatior Forel (Hymenoptera Formicidae)

Six colonies of Acromyrmex echinatior, a common species of leafcutter ant from tropical Panama, were tested for their recognition of and aggression against non-nestmates with two different behavioural assays: 1) Single workers reared in colonies with different diets were introduced in an alien colony that had been fed on one of these diets. 2) Two groups of ten workers from different colonies, reared with different diets, were introduced in a common but unexplored foraging arena with a single food source. The different diets appeared to enhance aggressive interactions and fights in both experiments. We discuss these preliminary results in relation to previous studies on diet induced aggression and suggest that there may be additional effects on inter-colonial aggression due to social parasitism.

Key Words: Acromyrmex, nestmate recognition, aggressive behaviour, diet, parasitism.