

## **Food habits of *Aenictus* army ants and their effects on the ant community in a rain forest of Borneo**

### **Abstract**

In a rain forest at the foot of Mt. Kinabalu, Borneo, we observed the food habits of *Aenictus laeviceps* and *A. gracilis* and surveyed the effects of *A. laeviceps* on the general ant community. We collected totals of 2,360 and 6,268 prey units, respectively, from seven *A. laeviceps* and six *A. gracilis* colonies; ants constituted 99.9% of all prey units. Dominant prey genera were *Camponotus* (48.2% in wet weight), *Pseudolasius* (20.8%), and *Polyrhachis* (15.2%) in *A. laeviceps* and *Technomymex* (52.1%), *Paratrechina* (22.4%), and *Crematogaster* (11.9%) in *A. gracilis*. *A. laeviceps* primarily hunted larger ground ants with small- or medium-sized colonies; in contrast, *A. gracilis* frequently foraged on smaller arboreal ants with larger colonies. Of the total wet weight of prey ants, brood constituted 88.7% in *A. laeviceps* and only 68.7% in *A. gracilis*. This was probably because workers of *A. gracilis* were quicker in behavior and hunted adult workers more frequently than *A. laeviceps*. While 98.5% of the prey units were transported by single workers of *A. gracilis*, 71.5% were carried by up to 20 *A. laeviceps* workers. The numbers of ant colonies and species were significantly smaller in *laeviceps*-raided quadrats than in controls. This was mostly due to the escape of ants that nested under litter and had relatively larger colonies. Large colonies usually influence the foundation and establishment of incipient small colonies.