

Protection from herbivores varies among ant genera for the myrmecophilic plant *Leea aculeata* in Malaysian Borneo

ABSTRACT

Some plants use food bodies to attract ants that then provide protection from herbivory. A brief report from 1898 describes the myrmecophilic plant *Leea aculeata* Bl. as bearing food bodies on its young shoots, which accumulate when they are not harvested by ants. However, ant efficacy in deterring herbivores and consequences for herbivory rates remain unknown. Here we investigate (1) which ant taxa patrol these plants and whether they remove significant numbers of food bodies, (2) if these ants attack herbivores, and (3) if any anti-herbivore activity correlates negatively with herbivory. We found that a diverse community of ants patrolled young *L. aculeata* shoots and removed food bodies (1.2 food body per cm² per 24 h), with food bodies accumulating when ants are experimentally excluded. Attack rates on surrogate herbivores (termite baits) differed among ant genera, with *Crematogaster* and *Lophomyrmex* being most active. Although herbivory did not differ among ant genera, herbivory was greater when ants took a longer time to detect herbivores and recruit fellow ants, providing evidence for the mutualism of *L. aculeata* with ants. However, the variation in protection among ant genera raises questions regarding the stability of this mutualism in the face of exploitation by ants.