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MUTUALISMS IN THE TROPICAL FOREST

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Study Description

In ant–plant mutualism, plants offer a variety of potential benefits to ants, including housing and food supply, especially through production of extrafloral nectaries (EFNs). In return, ants act as biotic defense against pathogens and herbivores. The association between plants and ants is so widespread and successful that "ant" plants are often ecologically dominant. We presented a long-term study of ant-associating trees to explore variation in conspecific negative density dependence in a tropical forest plot. Our results showed that plants with EFNs exhibited higher relative growth rates and survival rates, suggesting that ants may buffer the Janzen–Connell effect in the forest under study.

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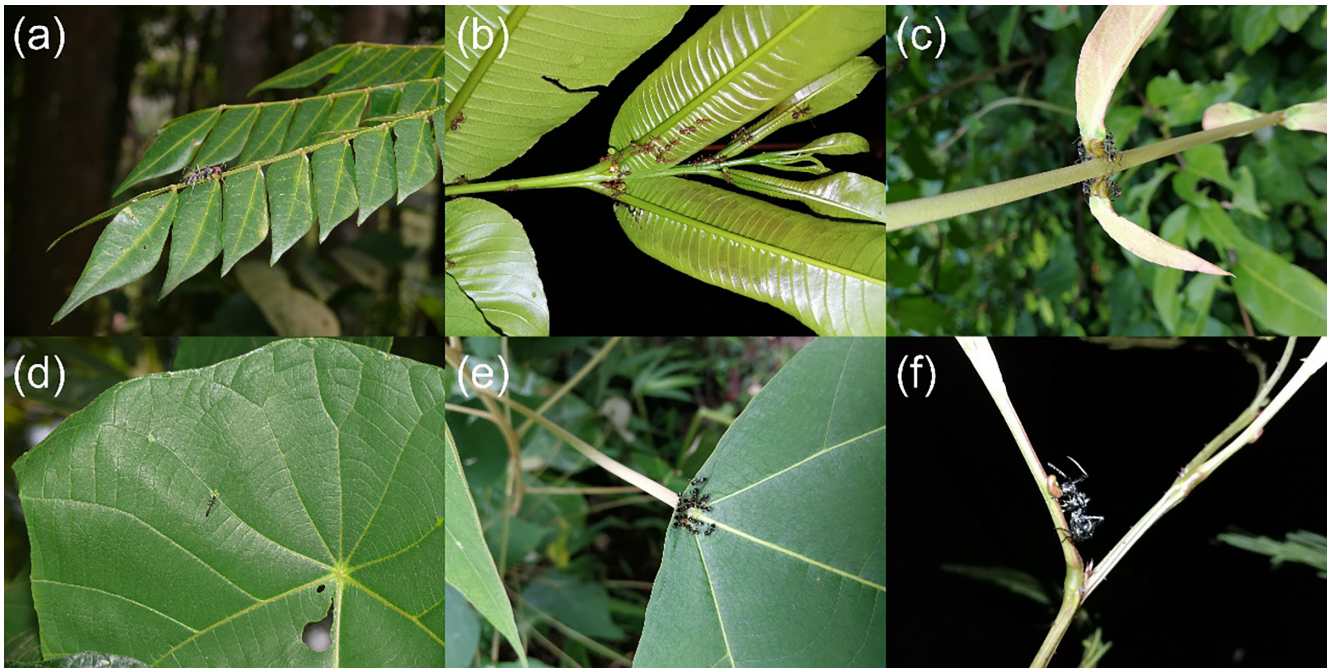


Photo 1. Ants taking the honeydew on plants. (a) *Formica truncorum* visiting *Archidendron clypearia*, (b) *Oecophylla smaragdina* visiting *Terminalia myriocarpa*, (c) *Polyrhachis dives* visiting *Hiptage benghalensis*, (d) *Tetraponera nigra* visiting *Macaranga indica*, (e) *Crematogaster ferrarii* visiting *Mallotus paniculatus*, and (f) *Polyrhachis* sp. visiting *Acacia* sp. These photos were taken in a 20-ha Xishuangbanna tropical seasonal rainforest dynamic plot (southwestChina). Photo credit: Jing-Xin Liu.

These photographs illustrate the article "Ants may buffer the Janzen–Connell effect in a tropical forest in Southwest China" by Gang Zhou, Jing-Xin Liu, Jikun Liu, Jie Yang, Xiujuan Qiao, Min Cao, and Mingxi Jiang published in *Ecology*. https://doi.org/10.1002/ecy.4380