

**P120**

*Excluding ants reduces herbivory on male Adriana quadripartita plants*

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Here we report the results of an experiment in which ants were excluded from extra-floral nectaries (EFNs) of male and female plants of the dioecious species *Adriana quadripartita* (Euphorbiaceae). The study was conducted on Torrens Island, South Australia and the abundance of ants and herbivores as well as the level of foliar herbivore were assessed. The abundances of ants and invertebrate herbivores were overall greater on male than on female plants. The exclusion of ants from branches resulted in an increase in herbivore abundance on male and female plants, however ant exclusion resulted in an increase in foliar damage only on male plants. While previous research on adrianas has shown that ants can decrease herbivore abundance, these results provide the first evidence that EFNs in adrianas can function to decrease foliar herbivory. More generally, our studies of *Adriana* taxa demonstrate the presence of extensive geographic variation in almost all aspects of the interaction between ants, plants and herbivores. This variation suggests that defensive associations between ants and adrianas are loose and facultative, and that the efficacy of ant defense in *Adriana* populations is likely to be contingent on the particular combination of abiotic conditions and ant and herbivore faunas that are present in a given population.