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Green Lacewing and Monarch Butterfly Ecology

Green lacewings (Neuroptera: Chrysopidae) are an advertised biological control agent for pest insects like aphids and moths, and may be purchased as an ecologically friendly pesticide alternative through many gardener supply companies. However, their generalist feeding behavior suggests they have little preference for specific prey. Here, potential for a common species of green lacewing, *Chrysoperla rufilabris* (Burmeister), to have non-target effects on populations of the publicly popular monarch butterfly, *Danus plexippus* (L.) (Lepidoptera: Nymphalidae), was examined. Trials with 3rd instar *C. rufilabris* larvae exposed to variable quantities of *D. plexippus* eggs suggest a Type II functional response. There also appears to be a connection between larval diet, larval mass, and successful completion of their lifecycle to adulthood. Overall, non-target effects of biological control agents are grossly understudied. Presently, there is no published data of non-target effects of green lacewings, an extraordinarily diverse family with about 1,300 species worldwide. Those studying the ecology of green lacewings or monarch butterflies, as well as citizen scientists and gardeners interested in the ecology of their backyards, may use this research to inform further studies and ecologically sustainable gardening habits.



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