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Green Lacewings As Predators of Pecan Aphids in Southern Arizona

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SUMMARY:

A census of the population dynamics of pecan aphids and their predators on 'Wichita' pecans was conducted at Farmers Investment Company's orchard in Southern Arizona in 1997 and the beginning of 1998. The census revealed that two aphids species, the black margined pecan aphid, *Monelliacaryella* Fitch, and the black pecan aphid, *Monelliopsis caryaefolia* Davis were the only aphid species present, and that green lacewings were the most abundant aphid predators.

Chrysoperla comanche Banks was the most dominant species, hatching from 30-65% of the compound leaves bearing lacewing eggs, and was present the entire growing season. *Chrysopa nigricornis* Burmeister was found on a lower percentages of the leaves (less than 17%). However, there were more *C. nigricornis* eggs present on each compound leaf (15-35) because this species lays large clutches of eggs in contrast to *C. comanche*, which deposit eggs singly. Eggs of other lacewing species were found in a lower number.

An analysis of the relationship between the aphid density on compound leaves with and without green lacewing eggs present suggest that the female lacewings prefer to oviposit on leaves with higher aphid densities.

The field data presented suggests that species of green lacewings make an important contribution to the natural control of pecan aphids in Southern Arizona.