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Prey preference of *Orius insidiosus* (Say) (Heteroptera: Anthocoridae) for species of *Frankliniella* flower thrips (Thysanoptera: Thripidae) in pepper flowers

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Laboratory studies were conducted to determine prey preference of *O. insidiosus* between *Frankliniella occidentalis* and *F. tritici*, and between adult and 2nd instar of *F. occidentalis* in pepper flowers. Corresponding studies were conducted to determine the distribution of these thrips in the absence of the predator. For each experiment, two densities of thrips (10 and 20 total thrips) and two time exposures (10 and 36 hours) were tested. Each experiment was replicated ten times. Experiments were conducted in growth chambers at 28°C, 60% RH, and a 4:10 h light:dark cycle.

Frankliniella tritici tended to disperse more than *F. occidentalis*. Despite differences in prey movement, *O. insidiosus* successfully preyed on all types of prey that were offered. However, *O. insidiosus* dealt differently with each type of prey. *Frankliniella tritici*, an inherently more mobile species, was more vulnerable to predation at low densities due to higher chance of encounter with the predator. At a high density, the less mobile *F. occidentalis* was more vulnerable to predation by *O. insidiosus*. In trials with adults and 2nd instar larvae of *F. occidentalis*, larvae were more vulnerable to predation due to low mobility. Predation of thrips was more likely to occur inside the flower.

This study showed that *O. insidiosus* is an efficient predator. Furthermore, it explains why *O. insidiosus* is an important regulator of thrips populations.

Species 1: Heteroptera Anthocoridae *Orius insidiosus* (Insidious flower bug)
Species 2: Thysanoptera Thripidae *Frankliniella occidentalis* (Western flower thrips)
Species 3: Thysanoptera Thripidae *Frankliniella tritici* (Eastern flower thrips)
Keywords: biological control, generalist predator

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