

Preference of the metallic blue ladybeetle *Curinus coeruleus* Mulsant for different nymphal instars of *Diaphorina citri* Kuwayama (Homoptera: Psyllidae)

ABSTRACT

The preference of the metallic blue ladybeetle, *Curinus coeruleus* Mulsant for Asian citrus psyllid, *Diaphorina citri* Kuwayama was investigated in the insectary. The aim was to determine whether there was any preference by *C. coeruleus* at different stages for different instars of the psyllid *D. citri*. The 1st and 2nd instar larvae exhibited preference for smaller-sized prey, while the 3rd and 4th instar larvae and adult mostly preferred the 4th and 5th instar nymphs. The highest preference value recorded for each stage of the predator, 1st to 4th instar larvae and adult, were 0.49, 0.29, 0.33, 0.33 and 0.34, respectively on the 1st, 2nd, 4th, 4th and 4th instar nymphs. The probability of capture indicated significant differences among prey instars captured by each stage of predator. The 1st and 2nd instar larvae captured significantly more 1st and 2nd instar nymphs than the other instar nymphs. In contrast, 3rd and 4th instar larvae and adult predator captured significantly more 4th and 5th instar nymphs. Hence, the results suggest that *C. coeruleus* exhibited body size preference for *D. citri* nymphs comparable to or slightly smaller than predator's size (stages). This preference was due to the probability of success in capturing the prey.

Keyword: Preference; *Curinus coeruleus*; *Diaphorina citri*