

Biological Control

Movement of the Leafroller Parasitoid *Colpoclypeus florus* Between Rose/Strawberry Gardens and Apple Orchards

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Abstract: We present information on new ways to mark the leafroller parasitoid *Colpoclypeus florus* emerging from rose/strawberry gardens and moving to apple orchards. Last year, we tried spraying the rose/strawberry gardens with an orchard handgun, but the complexity of the habitat made this impractical and time consuming. This year, we used netting (tulle) that we draped over a portion of the garden and applied soy flour to netting using a hand-held lawn fertilizer. The netting and the plants have large amounts of soy flour present and when the parasitoid emerges and crawls through the netting, it picks up some of the soy flour. We then use our ELISA assays that are specific for the soy protein to detect whether parasitoids were marked or not. We also developed a new trap to collect *C. florus*. Last year, we tried using yellow and white sticky cards alone, but had few parasitoids captured. This year, we took a small shoot, infested it with 4th instar larvae and inserted the shoot through a hole in the center of a 5 x 5 inch sticky card and into a floral vial filled with water. The sticky card used liquid tangle trap that gives a thin layer that does not wick up on the insect and inhibit the ELISA reaction. Using these methods, we trapped 181 *C. florus* in 3 weeks during late summer and were able to describe the distance/dispersal relationship. Unfortunately, we collected multiple individuals at the furthest trapping locations, suggesting that the scale of trapping was too small.