Citrus leafminer (CLM) is now established throughout California citrus growing regions. In certain citrus varieties in the San Joaquin Valley (SJV), citrus peelminer (PM) has become economic, as it has in the Coachella Valley. CLM is economic only on non-bearing citrus as the larvae mine the new flush, causing stunting and leaf drop. Conversely, PM is economic on bearing citrus as the larvae mine mature fruit, causing irreversible cosmetic damage.

Attempts to control PM chemically are ineffective, and endemic parasitoids in the SJV are not effectively suppressing it. Furthermore, molecular characterization by Stouthamer et al. suggests that SJV’s PM is not the same as Coachella Valley. PM populations characterized from the Phoenix area suggest they are also different. We are trying to confirm this and obtain other Cirrospilus spp from this region of Arizona to test against PM in the SJV.

The Citrus Agriculture Center, University of Arizona has located areas with consistent PM populations. Our first shipment of PM on grapefruit in October failed to yield PM. In the interim, we continue to rear and release *C. coachellae* against PM in the SJV.

*Cirrospilus coachellae* is a native parasitoid found in the Coachella Valley and lays several offspring per host. We obtained this parasitoid from Coachella Valley PM populations 2 years ago and are rearing it on CLM. After releasing only ca. 2,000 wasps over two months, last year we recovered immature wasps from all release sites (Ivanhoe to Strathmore). This year we released over 22,000 wasps in 2008 against PM. In November we began a program to evaluate these releases. We have established citrus sites that we will follow for the next 2 years and will concentrate the bulk of our releases in these blocks.

Male flight activity for the 2008 CLM population showed up late (July). Although we trapped higher numbers of moths in early 2008 (last year’s population) than in 2006 or 2007, in September the numbers of CLM males trapped were fewer than previous years.

The complex of parasitoids attacking CLM appears similar to those observed last year (Fig. 1). One species new this year is *Cirrospilus vitattus* found at our Riverside site. Initially, we thought it may be the species that we are colonizing, *C. coachellae*, but the difference is considerable (Fig. 2). We continue to collect material in Riverside, San Diego and Ventura counties. By spring 2009, all 2008 parasitoids should be identified.

*Citrostichus phyllocnistoides*, an exotic generalist parasitoid of CLM, was brought in from Spain and evaluated in the UC Riverside Quarantine facility under permit. Once we established the colony on CLM, Grafton-Cardwell’s lab at Kearney Agriculture station provided us with PM infested squash to test. The results of these tests were consistent with what we know about this exotic parasitoid; it is specific to CLM, and would not attack PM. We decided not to release this parasitoid due to the potential of this animal to disrupt other PM biological control.
Figure 1. Parasitoid complex by county.

Figure 2. C. coachellae versus C. vitattus (top).

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