

### California Red Scale

**Predicted Events:**

Biofix: March 19 (South Valley and Foothill) and March 26 (Central Valley and Madera)

Lower developmental threshold: 53°F

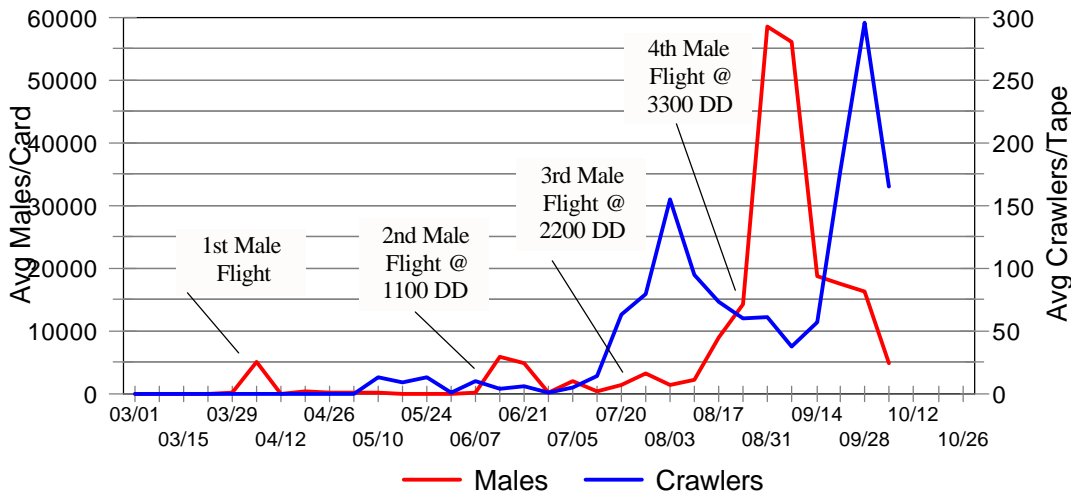
	1 <sup>st</sup> male flight	1 <sup>st</sup> crawlers	2 <sup>nd</sup> male flight	2 <sup>nd</sup> crawlers	3 <sup>rd</sup> male flight	3 <sup>rd</sup> crawlers	4 <sup>th</sup> male flight	4 <sup>th</sup> crawlers	5 <sup>th</sup> male flight
Degree Days from the 1 <sup>st</sup> male flight	biofix	550 DD	1100 DD	1650 DD	2200 DD	2750 DD	3300 DD	3850 DD	4400 DD

Table 1. Observed degree day units and estimated start of the 5<sup>th</sup> male flight

Region	Current DD Accumulated (as of Oct. 8, 2001)	Estimated Start of 5 <sup>th</sup> male flight
Kern	4260	Oct. 12-15
Foothills	4150	Oct 15-20
S. Tulare	3920	4 <sup>th</sup> week of October
N. Tulare	4020	4 <sup>th</sup> week of October
Fresno	3910	4 <sup>th</sup> week of October
Madera	3350	Not predicted

Table 1 shows our estimates of when the 5<sup>th</sup> flight is likely to occur in various regions of the San Joaquin Valley. If your intent is to trap just the 4<sup>th</sup> flight, pheromone cards should be removed or replaced just before these dates. We are already observing the 4<sup>th</sup> flight of males beginning to decline in a number of blocks in Kern County <http://www.uckac.edu/citrusent/kcipmcrs01.htm> and the foothill regions of Tulare County <http://www.uckac.edu/citrusent/tularecrs01.htm>. The figure below shows male flight and crawler data from a Lindcove Research and Extension Center block. There have been some reports of heavy crawler activity from the fourth generation. California red scale degree-days for all citrus growing regions of the San Joaquin Valley are updated weekly on our web site: <http://www.uckac.edu/citrusent>.

### California Red Scale 2001 Lindcove Citrus Field Station Block 22



## Citrus Peelminer

Citrus peelminer is continuing to plague San Joaquin Valley citrus. This year, it infested a number of cotton fields, grape vineyards (especially Red Globes), and miscellaneous other crops and weeds. As these crops began to dry out in late September, the populations in citrus suddenly began to increase. We are seeing new young mines in a number of citrus orchards that previously had only 1-2% infestation. Earlier in the season, grapefruit, pummelos and Fukomotos were the preferred varieties. Now, Atwoods and other navel varieties are experiencing fresh mining and the percentages are higher than last year. To see current information on pesticide trials and parasites releases see our web page

[http://www.uckac.edu/citrusent/citrus\\_peelminer.htm](http://www.uckac.edu/citrusent/citrus_peelminer.htm).

**Pesticide Trials:** A number of Pest Control Advisors, as well as my research team have conducted pesticide trials to see if we can stop the spread of this pest. The results have been very disappointing. One or more of us have tried Admire, Provado, Supracide, Lorsban, Sevin, Success, Oil, Danitol, Baythroid, Agri-Mek, as well as a number of unregistered insecticides with and without oil. Some of these insecticides killed larvae that were mining the fruit (Success, Provado, Lorsban) but they did not seem to prevent more eggs being laid and new mines appearing in additional fruit 2-3 weeks later. The only treatment that stopped new mines from appearing was Micromite (diflubenzuron) and the effect lasted only for 2 weeks. After 4 weeks Micromite stopped controlling the peelminer, probably because the fruit was growing rapidly and so provided untreated rind for the moths to deposit eggs in. Micromite is not currently registered for citrus in California, but Uniroyal Chemical Co. is working on getting a full registration by next spring. In general, insecticides have provided poor control of citrus peelminer and so they are not even a short-term solution to the problem.

**Parasite Releases:** Since June 2001 we have made releases of the parasite *Cirrospilus coachellae* (reared at the UC Riverside Entomology Department by Marta Guillen) in 40 citrus orchards in Kern and Tulare counties. We started with the pummelos and grapefruit because they were the most heavily infested with peelminer and we have expanded to releasing in navel orchards. We release small numbers of parasites (20-30 adults) in each orchard. This parasite should reproduce on its own and spread throughout the San Joaquin Valley during the next 1-2 years. Dave Headrick (Cal Poly San Luis Obispo) and his graduate students are evaluating these releases in a number of orchards in the San Joaquin Valley. This parasite was extremely helpful in the Coachella Valley and we are hoping that it will do a good job here as well.

The Citrus Entomology Lab is looking for a small ATC or ATV to use for mapping citrus blocks with a global positioning unit. If you know of one that might be donated or loaned for this purpose, please contact Greg Montez at 559 646 6597, or email to [gregm@uckac.edu](mailto:gregm@uckac.edu). Thank you very much.

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