

**APHIS Plant Protection and Quarantine
Emergency and Domestic Programs**

Duponchelia fovealis

*Summary report
April 2011*

On May 18, 2010, the Canadian Food Inspection Agency (CFIA) notified APHIS about an interception of *Duponchelia fovealis* larvae in a nursery shipment from San Diego County, California. In response, APHIS, the California Department of Food & Agriculture (CDFA), the San Diego County conducted intensive surveys in the area of concern.

On July 7, 2010, a presumptive positive was found in Vista, CA at a greenhouse and in the neighboring area with confirmation of the pest on July 16, 2010.

Since those detections, more than 7,640 moths have been detected and confirmed in 17 counties in California; primarily in the environment on a wide range of hosts. Trace-forward information provided by these affected nurseries resulted in the expansion of detection surveys in 26 counties within California.

Although survey data confirmed the presence of *Duponchelia fovealis* in 17 counties in California, APHIS did not receive any reports of damage caused by this pest until early November 2010. On November 3, 2010, the University of California at Riverside (UCR) reported that limited damage has been seen on poinsettias in San Diego County. There have been no other reports of damage.

During the months of September and October 2010, APHIS and State Departments of Agriculture confirmed the presence of *Duponchelia fovealis* in portions of fourteen additional states including: Alabama, Arizona, Colorado, Florida, Georgia, Maine, Mississippi, North Carolina, Oklahoma, Oregon, South Carolina, Tennessee, Texas, and Washington. Detections in these other states were found in the environment at or near wholesale, retail, big box nurseries, commercial landscape areas, in a residential area and at a research station.

While *Duponchelia fovealis* originated in southern Europe and North Africa and can be found in the environment, it is considered to be a greenhouse pest. The moth's dispersion is natural, and it is not very cold tolerant. *Duponchelia fovealis* has a wide range of host plants, including peppers, pomegranates, aquatic plants, bedding plants and nursery stock.

Western Region:



In response to the July 2010 detection of *Duponchelia fovealis*, trapping programs were implemented in 22 counties in California. In addition, sentinel trapping program was also put in place in the following states: AR, AZ, CO, HI, OK, OR, TX, UT, and WA. The Western Region selected the states based on the trace forward data from the original positive nursery in California. The table below provides the number of traps deployed and the cumulative number of moths captured in the western states.

State	Number of traps placed	<i>Duponchelia</i> caught
Arkansas	2	0
Arizona	140	259
California	400	7,460
Hawaii	50	0
Colorado	50	11
Oklahoma	51	138
Oregon	95	1
Utah	8	0
Texas	37	103
Washington	50	2

Arkansas: Arkansas was provided two traps from Oklahoma which were set at a retail nursery in Ft. Smith that received plants from an infested wholesale nursery in Oklahoma. These traps were in place for a month or so but no moths were caught.

Arizona: Arizona reported forty traps were installed primarily in nurseries within four high risk counties; Cochise, Maricopa, Pima and Yuma. The first two week servicing produced positive interceptions correlating with two trace forwards (Phoenix and Tucson). An additional 100 delimiting traps were placed in these areas. Positive interceptions were found in all four counties in increasing numbers as the survey continued. After approximately twelve weeks, all the trapping were removed and the survey results were with 140 traps PPQ captured 259 *Duponchelia fovealis* moths in all counties surveyed.

California: In California as a result of notification from Canada regarding the interception of *Duponchelia fovealis* larvae in a nursery shipment from San Diego County, a survey was initiated. The traps were placed beginning the week of June 28, and the first moths were

trapped on July 1. *D. fovealis* was detected throughout San Diego County. The San Diego County Agricultural Commissioner's office compiled a trace forward list from the nursery in question. From the trace forward list, the California Department of Food and Agriculture placed traps at the trace forward sites. Ultimately traps were placed in 26 counties and 17 of those counties were positive.

Colorado: Colorado PPQ placed fifty traps along the Front Range from Fort Collins to Colorado Springs. The sentinel trapping program resulted in 11 captures of *Duponchelia*.

Hawaii: PPQ-Hawaii set up 50 traps on 6 islands, as follows: 20 on the Hawaii (10 in Hilo and 10 in Kona), 10 each on Maui and Oahu, 6 on Kauai, and 2 each on Molokai and Lanai. Traps were set in locations (e.g., greenhouses, nurseries, farms) that grew host material. The breakdown of traps with moths was: 7 for Hilo, 6 for Lihue, and 2 each for Honolulu and Maui. None of these were identified as *Duponchelia fovealis*. This information has been inputted into NAPIS.

Oklahoma: PPQ Oklahoma received trace forward information of *Duponchelia fovealis* identified on several shipments of greenhouse stock from California destined to Oklahoma. A detection survey was implemented and traps were placed at the trace forward greenhouse with an expanded survey to other greenhouses determined to receive stock from the west coast. Information from the initial site indicated the plants in question were subsequently sold to eleven florist shops, two containing greenhouses and one greenhouse in Fort Smith, Arkansas. No detections were found at any of the locations with direct nexus to the original California shipment. However, positive finds started coming in from the other west coast suppliers at locations in Oklahoma City and Tulsa. One of the Oklahoma City nurseries yielded a trap with 95 moths which was caught in a one week period. The survey was expanded to two large home improvement chains located in central Oklahoma. Two chains were selected with traps placed at five stores each, all ten locations were positive. The final survey resulted in nine positive counties.

At the conclusion of the survey, permission was obtained from one of the positive nurseries in Oklahoma City to trap for an extended time. This greenhouse is only heated at night and no artificial lighting is used. The primary intent is to test the life of the lure with a secondary intent of determining how long the moth can survive winters in Oklahoma in a protected environment. Moths were captured at the rate of one moth per week and thus far have extended into December with outside temperatures into the teens.

Oregon: In Oregon a detection survey was conducted for *Duponchelia fovealis* after Oregon was notified of the expanding populations in California. Oregon PPQ and Oregon Department of Agriculture focused survey sites on nurseries as the likely pathway for introduction. High-risk nursery sites were defined as those frequently receiving nursery stocks from California. Initially, 88 traps were placed, one at each site, in fourteen counties in western Oregon. Traps were serviced every 2 weeks from August 26th to November 1st. A single *Duponchelia* moth was found trapped on October 1 at a retail nursery in north Portland. After the identification of

the moth was confirmed, 6 additional traps were placed around the site, totaling 95 traps set in Oregon in 2010. No additional moths were found during the fall season.

Texas: In Texas, the Houston PPQ office placed seven traps in the Houston metropolitan area. There were a total of 24 moths caught in two traps. Texas AgriLife Extension placed and monitored 30 traps at plant nursery locations in 13 counties during September-November for a total of 1,302 trap days. Capture of *D. fovealis* was confirmed in the following 7 counties: Harris, Ft. Bend, Waller, Smith, Vans Zandt, Dallas and Denton Counties, all of which represent new county records for this species. The moth was not detected in traps monitored in Collin, Montgomery, Nueces, Kleberg, Travis and Williamson Counties.

Utah: Utah placed 8 traps within the state. Utah reported no captures of *Duponchelia*

Washington: In Washington 50 traps were placed in Western Washington along the I-5 corridor from Seattle to Vancouver (WA) in retail nurseries that receive significant amounts of nursery stock from California (e.g. Lowes, Home Depot etc.). Two moth were trapped, one at a Home Depot in Tumwater and one at a Lowes in Seattle.

Eastern Region:

The Eastern Region initial survey was a preliminary trace forward survey from a nursery in Vista California to four ER states: FL, MN, NJ, and TN. There were no detections at the trace forward locations. Cold temperature was a factor in not surveying in the environment in MN and NJ.

The survey was expanded to 50 traps per state in AL, FL, GA, MS, SC, TN, and NC with FL deploying 100 traps. Total trapping density of 400 traps deployed into mid November except FL which is still trapping until their supply of lure is exhausted. All 7 states reported *Duponchelia fovealis* in 44 counties as noted in the following spreadsheet.

State	Number of traps placed	<i>Duponchelia</i> caught
Alabama	50	200*
Florida	75	261
Georgia	30	7
Mississippi	50	49
North Carolina	49	37
South Carolina	30	56
Tennessee	34	58

*One trap in Baldwin County had 131 moths