2002 Entomology Project Report - WSDA PUB 083 (N/04/03)
Plant Protection Division, Pest Program
Washington State Department of Agriculture

April 15, 2003

2002 Pheromone-trap Detection Survey for Plum Fruit Moth, *Grapholita funebrana* (Treitschke, 1835) (Lepidoptera: Tortricidae), an Exotic Pest of *Prunus spp.*

Eric H. LaGasa[1], John Agnesani[2], Sahabra Tipton[2], and Denise Bowden[2]

Background

Native to Eurasia and North Africa, the plum fruit moth (PFM) is an important pest of plums, peaches, and the fruit of other *Prunus* varieties in its' native range (Figure 1). To date PFM has not been found in North America and, as an exotic pest threat to North American agriculture, is regulated by both the USDA and the Canadian Food Inspection Agency.

Figure 1. Plum Fruit Moth Life Stages and Damage

2002 Project Objective

Conduct pheromone-trap survey throughout populous western Washington to detect PFM.

- Place and monitor pheromone-traps in areas of commercial, home orchard, and feral *Prunus* culture.
- Screen and identify captured specimens, including non-target material when possible.

Project Methods and Materials

Three hundred and eighty-two pheromone-lure baited traps were placed in counties along the Interstate-5 corridor in western Washington, from the Canadian border south to Clark County on the Columbia River / Oregon border (Table 1). Traps were hung in roadside or residential yard trees, primarily in areas where home orchards could provide *Prunus spp.* hosts.

Trap placement began in June and most traps were removed by the end of August. Traps were checked and pheromone lures changed every two weeks as much as possible during the expected (probable) period of adult flight. Traps with specimens were processed at the Olympia Entomology Lab, where suspect target and non-target specimens present were identified and counted.

Table 1. Plum Fruit Moth Trap Placement

County	Number of Plum Fruit Moth Trap Sites
Whatcom	98
Snohomish	40
Skagit	11
King	75
Pierce	50
Thurston	43
Lewis	12
Cowlitz	18
Clark	35
Total Traps	382

Pherocon 2® type traps (a.k.a. "diamond" traps) were used in this survey, baited with pheromone-lures provided by the USDA APHIS Otis Methods Development Center. The PFM pheromone-lures consisted of gray rubber septa (West Co., Lionville, PA, cat. no. 1060-0275), each loaded with the following components:

0.1 mg of Z-8-12:AC
0.004 mg of E-8-12:AC
0.025 mg of Z-8-14:AC
0.005 mg of Z-10-14:AC
0.2 mg of 14:AC

Project Results

No plum fruit moth specimens were collected in this survey.

A complete list of non-target species captured in this survey (23 spp. / 7,274 specimens) is available from the author. *Funding for field and lab support staff for this survey was provided in part by a Cooperative Agricultural Pest Survey (CAPS) grant from the USDA APHIS Western Region (#02-8553-0249-CA)*

---

[1]Chief Entomologist - Washington State Dept. of Agriculture, PO Box 42560, Olympia, Washington 98504-2560 / Phone (360) 902-2063
[2]Entomology Aides (Project) - Washington State Dept. of Agriculture, Olympia, Washington 98504-2560