

DETECTION OF THE DARK STRAWBERRY TORTRIX, AND OTHER JUST DESSERTS

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In 2012, a live larval tortricid specimen was submitted to entomologists by a citizen surveyor during a biological inventory (“Bioblitz”) of Forest Park, a large natural area in Portland, Oregon. Following pupation and emergence, the adult specimen was identified and confirmed as *Syricoris (Celypha) lacunana* Denis & Schiffermüller (Lepidoptera; Tortricidae), a new North American record. The species is native to Europe, where it feeds on wide range of herbaceous plants, ferns, shrubs and trees.

Sometimes referred to as the dark strawberry tortrix (DST), *S. lacunana* is an occasional pest of strawberry, blackberry, and raspberry. Due to concerns for this species to become plant pest, the USDA’s New Pest Advisory Group (NPAG) issued recommendations to conduct delimitation surveys in the area, to determine:

- 1) if a population of the species has established, and
- 2) the local distribution of that population.



In spring and summer of 2014, APHIS-PPQ conducted surveys in Forest Park for DST, working with Oregon Dept. of Agriculture, Washington Dept. of Agriculture (WSDA), Portland Parks and Recreation (PPnR), and the Forest Park Conservancy. Sampling for immature Lepidoptera produced a total of 167 larval specimens, collected from 29 species of host plants in three areas of Forest Park. Since no clear morphological characters were available to separate DST larvae from similar tortricid species in the region, all larval specimens were reared to adult life stage by feeding them the host plant species on which they were collected. A total of 66 larvae were reared to adult life stages. No *Syricoris lacunana* specimens were found during the 2014 larval survey.

Blacklight survey for adult DST occurred twice per month between June 2nd and August 27th, deploying four battery-powered blacklight bucket traps a targeted area of Forest Park. A total of 56 adult tortricid specimens were collected during larval and blacklight surveys. Only one additional specimen of *S. lacunana* was collected from a blacklight trap during the 2014 surveys.

In 2015, APHIS-PPQ will continue delimitation survey in Forest Park and surrounding neighborhoods. USDA’s Center for Plant Health Science and Technology (CPHST) is currently exploring new survey methods for *Syricoris lacunana*, including the development of a semiochemical lure for survey in 2015.

Non-target tortricid moth species collected from the 2014 DST survey were retained and identified (Table A). Of significance to local land managers, seven new tortricid species records were added to PPnR's Forest Park invertebrate inventory, including *Acleris variegana* (Denis & Schiffermüller, 1775), *Epinotia solandriana* (Linnaeus, 1758), *Epinotia subviridis* Heinrich, 1929, *Clepsis persicana* (Fitch, 1856), and a recent new arrival to Oregon *Pandemis cerasana* (Hübner, 1786).

TABLE A. Tortricid specimens collected during 2014 DST survey.

<u>Genus</u>	<u>Species</u>		<u>number of specimens</u>	<u>method</u>
<i>Acleris</i>	<i>variegana</i>	(Denis & Schiffermüller, 1775)	1	blacklight trap
<i>Archips</i>	<i>rosanus</i>	(Linnaeus, 1758)	4	blacklight trap
<i>Celypha</i>	<i>lacunana</i>	Denis & Schiffermüller	1	blacklight trap
<i>Choristoneura</i>	<i>rosaceana</i>	(Harris, 1841)	28	blacklight trap
<i>Choristoneura</i>	<i>freemani</i>	Freeman, 1967	1	blacklight trap
<i>Clepsis</i>	<i>peritana</i>	(Clemens, 1860)	4	blacklight trap
<i>Clepsis</i>	<i>persicana</i>	(Fitch, 1856)	2	larvae reared, host= <i>Oemlaria cerasiformes</i> and <i>Rubus bifrons</i>
<i>Ditula</i>	<i>angustiorana</i>	(Haworth, 1811)	1	larvae reared, host= <i>Rubus ursinus</i>
<i>Epinotia</i>	<i>radicana</i>	(Heinrich, 1923)	3	blacklight trap
<i>Endothenia</i>	<i>hebesana</i>	(Walker, 1863)	1	blacklight trap
<i>Epinotia</i>	<i>solandriana</i>	(Linnaeus, 1758)	2	blacklight trap
<i>Epinotia</i>	<i>subviridis</i>	Heinrich, 1929	1	blacklight trap
<i>Olethreutes</i>	<i>deprecatorius</i>	Heinrich, 1926	1	blacklight trap
<i>Pandemis</i>	<i>cerasana</i>	(Hübner, 1786)	1	blacklight trap
<i>Proteoteras</i>	<i>aescalana</i>	Riley, 1881	1	blacklight trap
<i>Olethreutes</i>	<i>sp.</i>		3	blacklight trap
<i>Rhopobota</i>	<i>naevana</i>	(Hübner, 1814)	1	blacklight trap
<i>Syricoris</i>	<i>lacunana</i>	Denis & Schiffermüller		
<i>unknown</i>	Archipini		3	blacklight trap
<i>Archips</i>	<i>rosanus</i>	(Linnaeus, 1758)	2	larvae reared, host= <i>Rubus ursinus</i>