

Argyresthia pruniella Screening Aid



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Argyresthia pruniella Clerck, called the Cherry Blossom Moth (CBM) in the United States or the Cherry Fruit Moth (CFM) in the United Kingdom, is a tiny (9-12 mm wingspan) member of the family Argyresthiidae (Yponomeutoidea). Native to Europe, Carter (1984) and other authorities have claimed it is present in North America, but have not provided collection or specimen details. The first confirmed North American records were collected in Vancouver, British Columbia, in 2007, although subsequent investigation discovered a small series from Nova Scotia collected in the 1960s (deWaard et al. 2009). Surveys in 2011-2013 detected populations of this moth in Whatcom and Island Counties, Washington, using pheromone lures (Z11-16:AC/Z11-16:OH). Identity of the Washington specimens was confirmed by John Brown (Systematic Entomology Lab), who noted that the SEL collection did not hold other specimens with wing patterns mistakable for *A. pruniella*.

This pest is a concern to cherry producers and exporters in Washington State, especially those trading with Japan. The distribution of *A. pruniella* in the United States is unknown; CAPS participants and other collectors should report new finds of this species to USDA-APHIS. The Washington State Department of Agriculture is also interested in new records, and can be contacted using the information provided.

This screening aid is based on characters in Agassiz (1996), but highlights only a few species. *Argyresthia* is poorly understood in North America and requires revision. New records should be confirmed with molecular data if possible. Rearing larvae to obtain host information is recommended, since this species is purportedly polyphagous.



Argyresthia pruniella larvae destroy developing cherry embryos during early season feeding. (Petals removed to show ovary damage).

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Argyresthia pruniella

Forewing: 4.5-6 mm long

- Narrow, with two distinct white patches along hind margin split by a dark brown band. Dark patches trend to a light metallic tan.
 - Long fringe along distal half of hind margin.
- Hindwing:**
- Characters are not diagnostic
 - Light gray, narrow and distinctly tapering.
 - Fringed along entire margin.



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Argyresthia conjugella –

Introduced from Europe in the 1890s, this species is found in eastern and western North America. They feed on *Sorbus* sp. and *Malus* sp.

Forewing: 4.5-6 mm long

- Narrow, with one large white patch along proximal hind margin, and a mottled white patch along the distal hind margin. Dark patches tend to be grayer than *A. pruniella*.

- Long fringe along distal half of hind margin.

Hindwing:

- Non-diagnostic; appearance is similar to *A. pruniella*



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Argyresthia goedartella – A

holarctic species widespread in N.A. Host plants are primarily alder and birch.

Forewing: 4.5-6 mm long

- Narrow, prominent gold maculae and a bright white ground color.

- Long fringe along distal half of hind margin.

Hindwing:

- Non-diagnostic; appearance is similar to *A. pruniella*

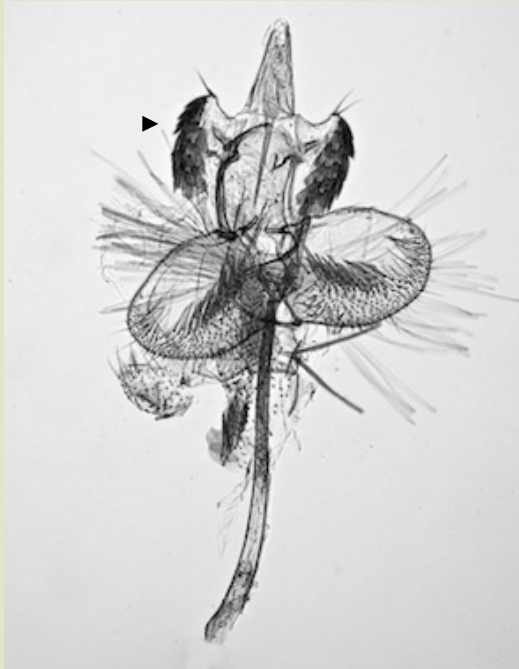


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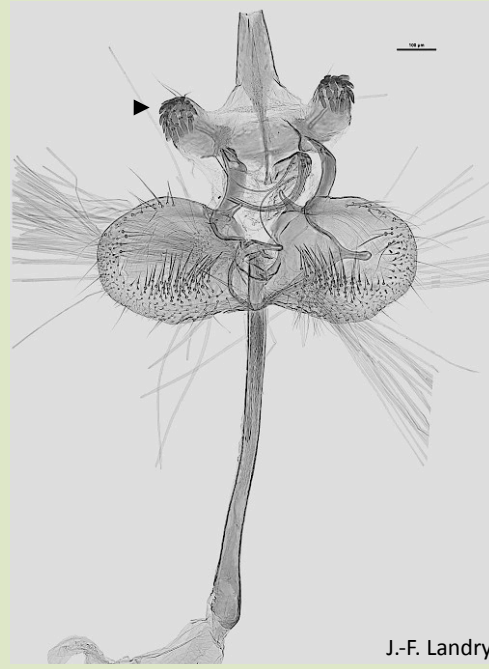


Select moths from the Pacific Northwest collected in sticky traps baited with *A. pruniella* lure. Clockwise, from top left: *A. pruniella*, *A. pruniella*, *Argyresthia* sp., *Scoparia* sp. (Pyralidae).

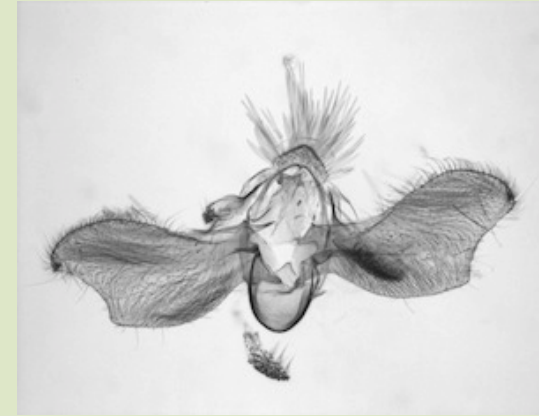
Argyresthia pruniella Screening Aid



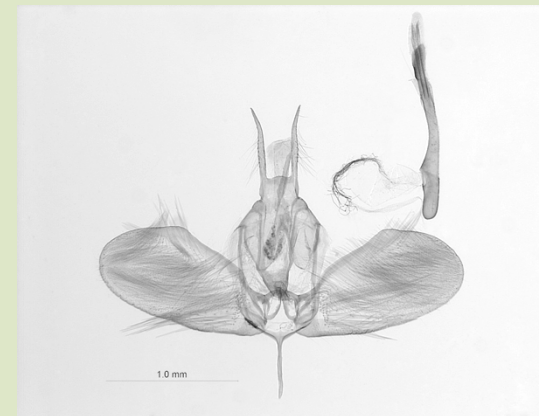
Argyresthia pruniella



Argyresthia conjugella



*Bedellia
sommulentella*



*Ypsolopha
canariella*



*Swammerdamia
Pyrella*

Argyresthia pruniella can usually be identified by wing pattern. Genitalic dissection can be difficult due to their small size, but is helpful for ruling out other families. The modified socii (arrow), set with distinctive fringed sensillae, is a character unique to the family. However, *Argyresthia* is a large genus and genitalia can be fairly homogenous, limiting the utility of genitalia for identifying species. Presented here are a few examples of western Yponomeutoid male genitalia.

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Further Reference:

Agassiz DJL (1996) Yponomeutidae. In *The Moths and Butterflies of Great Britain and Ireland*, cur. A.M. Emmet, 39-108. Colchester: Harley Books 3.

Alford DV (1978) Observations on the specificity of pheromone-baited traps for *Cydia funebrana* (Treitschke) (Lepidoptera: Tortricidae). *Bulletin of Entomological Research* 68: 97-103.

Alford DV (2007) *Pests of Fruit Crops, A Color Handbook*. Academic Press, Burlington, MA.

Carter DJ (1984) *Pest Lepidoptera of Europe with Special Reference to the British Isles*. Dr. W. Junk Publishers. Boston. 431 pp.

Cooperative Agricultural Pest Survey (2013) Pest Profile: Cherry Blossom Moth (*Argyresthia pruniella*) online at http://caps.ceris.purdue.edu/webfm_send/2153

DeWaard JR, Landry J-F, Schmidt BC, Derhousoff J, McLean JA, Humble LM (2009) In the dark in a large urban park: DNA barcodes illuminate cryptic and introduced moth species. *Biodiversity and Conservation* 18: 3825-3839.

Jaastad G (2007) Late dormant oil treatment against black cherry aphid and cherry fruit moth in sweet cherries. *Journal of Applied Entomology* 131: 284-288.

LaGasa E, Looney C (2013) *Argyresthia pruniella* (Clerk) 1759, a European pest of cherries recently found in northwest Washington State. *Research Reports, 72nd Annual Pacific Northwest Insect Management Conference*. online at http://www.ipmnet.org/PNWIMC/2013_PNWIMC_Conference_Proceedings.pdf#page=26

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