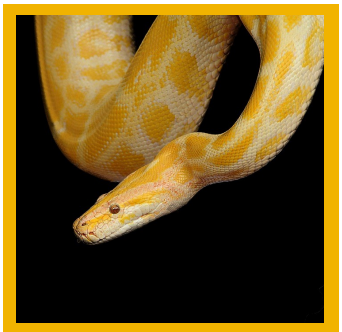
JUNE 6, 2025| VOL. 6 ISS. 4

EASTERN IDAHO

PEST ALERT

BANNOCK, BINGHAM, BONNEVILLE, CASSIA, FREMONT, JEFFERSON, MADISON, AND TETON COUNTIES

INSIDE THE ISSUE



Woolly Apple Aphid

Ron Patterson, Horticulture Educator
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Aphids are sucking plant pests and there are many species—small to large, green, yellow, red, black, brown. The most serious aphid for apple trees is the woolly apple aphid, *Eriosoma lanigerum*. These aphids not only attack leaves and branches but also form colonies on the roots. Photo credit Whitney Cranshaw, Colorado State University, Bugwood.org

In addition to apple trees, woolly apple aphids can also be found on pear, hawthorn, mountain ash, cotoneaster, and elm trees. Originally native to North America, its importance as a pest varies throughout apple growing regions.

Identification

One of the most distinctive features of the woolly apple aphid is the **white, wool-like, waxy material** that completely covers their bodies. This gives them a whitish, mealy appearance. On root-inhabiting aphids, these waxy fibers are much shorter. The adult aphid is reddish-brown to purple, though its color is usually hidden by the cotton-like substance. Shortly after birth, the nymph is salmon colored and lacks the woolly coating; this stage is known as the crawler.

Woolly apple aphids can infest **roots, trunks, limbs, shoots, and occasionally fruit** of apple trees. Aboveground colonies may develop around leaf axils on sprouts or new growth, particularly at abrasions or cuts. They are often found on the crowns of trees just above the roots and overwinter around old pruning scars. They may also develop on roots and underground parts of the trunk.

Damage Caused

Most aphids cause damage to the leaves, sometimes to small branches and fruits. With woolly apple aphid the most damaging injury is the **formation of gall-like swellings or enlargements** on roots and shoots. These galls increase in size each year as aphids continue feeding. On the roots, feeding leads to large, abnormal swellings. Continued feeding can kill roots and cause reduced growth or even death of young trees. The **underground forms are generally more damaging** than the aboveground forms. Infested trees often have many short fibrous roots. Young trees are easily uprooted when infested.

Leaves of infested trees may take on a **yellowish appearance**. High populations can also lead to the production of **honeydew**, which can result in **sooty mold** problems. Aphids may infest the calyx end of fruit, and in varieties with an open calyx, can infest the core. High aphid populations can also make harvest conditions sticky and unpleasant.

Woolly apple aphid galls are potential infection sites for the fungus that causes perennial canker, *Cryptosporiopsis perennans*. These galls are sensitive to cold temperatures and rupture around 0ºF or colder, providing entry for the fungus and perpetuating the canker.

Integrated Pest Management (IPM) Options
Managing woolly apple aphid often involves an integrated approach combining cultural, biological, and chemical controls.


Good Fruit Grower

- **Resistant Varieties/Rootstocks:** The **best control is genetic resistance**. Planting resistant rootstocks is highly recommended. The **Malling-Merton series** (e.g., MM.106, MM.111) and certain **Geneva series** rootstocks (e.g., G.41, G.213, G214, G.22, G.202, G.969, G.210, and G.890) were bred or developed specifically for resistance to woolly apple aphid.
- **Biological Control:** Natural enemies play a crucial role in controlling woolly apple aphid populations, particularly aerial colonies. The parasitoid wasp, ***Aphelinus mali***, is known to control aerial colonies. A complex of generalist predators, including **lady beetles, syrphid fly larvae, green lacewings, Deraeocoris brevis**, and the **European earwig**, are also important predators. It is important to note that certain pesticides, such as some carbamates and pyrethroids, can encourage woolly apple aphid outbreaks by killing these beneficial parasites and predators. Outbreaks are consistently associated with the use of certain codling moth control products like Rimon and Delegate.
- **Chemical Control:** Chemical treatments can be applied if necessary, often when natural enemies are disrupted. An application of a summer aphid treatment should control aboveground aphids. Delayed dormant applications or summer applications (late July to August) may be required. Foliage treatments may be needed for young trees with severe infestations. Some pesticides are listed for foliage spray, such as Spirotetramat and Buprofezin. It is crucial to always read and follow pesticide labels. Rotate chemicals with different modes of action to help prevent resistance. Currently, there are no control methods for underground aphids.

Monitoring: No specific monitoring procedures or treatment thresholds have been developed. Monitoring should generally begin in midsummer, or earlier if the winter was mild. Treatment may be needed if many colonies are in the fruiting zone of the tree.

By understanding the life cycle, identifying symptoms early, and implementing a combination of resistant varieties, conserving natural enemies, and using targeted chemical controls when necessary, growers can effectively manage woolly apple aphid populations in their orchards.

Additional information on woolly apple aphid:
https://treefruit.wsu.edu/crop-protection/opm/woolly-apple-aphid/

https://extension.psu.edu/tree-fruit-insect-pest-woolly-apple-aphid

Snakeflies

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I came across an interesting insect the other day on my mother-in-law's apple tree—a snakefly.

The snakefly is in the same order as the green and brown lacewing and is even more beneficial in that both the larvae and the adults are predatory.

The larvae live under flakey tree bark and feed on wood-boring insects and soft-bodied insects such as aphids, leafhoppers, spider mites and insect eggs.

The adult snakefly wings are clear with well-defined veins, which are held roof-like over the body, just like the green and brown lacewings with which we are more familiar. The thorax of snakeflies is long and allows it to hold its head up like a striking snake. Adults will sometimes feed on pollen when prey is not readily available.

Avoid general use of broad-spectrum insecticides to encourage these beneficials in your fruit trees.

Snakefly, Hortense, Washington State University

Fireblight

Most backyard growers will not need to apply an antibiotic if they are diligent. Fire blight symptoms begin to show up two weeks after full bloom. New infections can be pruned out on a dry day as soon as they show up. Pruning tools need to be disinfected between each pruning cut. Rubbing alcohol, 10% bleach solution or disinfectant wipes work. If you do still have open blossoms on your apples and pears you only need to worry about spraying just before or after a wetting event like rain or heavy dew.

Chemical Controls For Fire Blight

Brand Name	Chemical Name	Application Timing
Bonide	Fixed-copper	Pre-bloom
Drexel	Copper Sulfate	When wet weather coincides with flowering
Kocide	Copper Hydroxide	Note: copper can damage foliage and fruit
Miller	Lime Sulfur oil	Early bloom, Dormant
FireLine	Oxytetracycline	Early bloom to petal fall
	Kasugamycin	Early bloom to petal fall
Actigard	Acibenzolar-S-methyl	Early bloom to petal fall

Table and information from Cornell University Extension

Read and follow pesticide labels with any product

To manage fire blight, it is important to remove diseased wood during the dormant time (before buds form in spring). A general antimicrobial can be put on green tips to lessen chance of disease. Resistance inducers can be applied before bloom. Protectants can also be applied during blooming. Protectants should be applied with the onset of wetting events (heavy rain or moisture). Sometimes post-bloom applications to blossoms give continued protection to shoots.

For more information: https://blogs.cornell.edu/biocontrolbytes/2019/04/26/battling-fire-blight-with-biologicals/

Biological products for Fire Blight: Cornell University Extension

Product	**Active Ingredient**	**Mode of Action**
Firewall	Streptomycin	antibiotic – kills pathogen
Blossom Protect	*Aureobasidium pullulans* strains DSM14940 & 14941	competitive with pathogen
Bloomtime Biological	*Pantoea agglomerans* strain E325	competitive with pathogen
BlightBan	*Pseudomonas fluorescens* strain A506	competitive with pathogen
Serenade Optimum	*Bacillus amyloliquefaciens* strain QST713	antibiotic metabolites
Double Nickel	*Bacillus amyloliquefaciens* strain D747	antibiotic metabolites
Serifel	*Bacillus amyloliquefaciens* strain MBI600	antibiotic metabolites
Regalia	extract of *Reynoutria* (giant knotweed)	resistance inducer
LifeGard	*Bacillus mycoides* isolate J	resistance inducer

Codling Moth

Conventional production options

- *High fruit damage* in past years:

o Apply the first application for either Option A (insecticide) or Option B (oil) at the listed date.

o For Option A, repeat the insecticide spray 14 days later, for a total of 2 applications in the first generation.

o For Option B, apply the insecticide spray at the listed date once.

o When the "start date" for the 2nd generation is provided, spray every 10-18 days until Sept. 15.

o Pick a different product to use for each generation.

o *Low fruit damage* in past years:

o Apply the first application for either Option A (insecticide) or Option B (oil) at the listed date.

o For Option A, do not spray again.

o For Option B, apply insecticide at the listed date.

o Wait until the "start date" for the 2nd generation is provided, and spray on that date, and repeat 14 days later, for a total of 2 sprays.

o Do the same for the 3rd generation.

Pick a different product to use for each generation.

Organic production options (other than bagging)

- *High fruit damage* in past years:

o Apply the first application for either Option A (insecticide) or Option B (oil).

o For Option A, repeat twice, spaced 7-10 apart, for a total of 3 applications in the first generation.

o For Option B, apply insecticide at the listed date and re-apply 7-10 days later.

o When the "start date" for the 2nd generation is provided, spray every 7-10 days until Sept. 15.

o Pick a different product to use for each generation.

o *Low fruit damage* in past years:

o Apply the first application for either Option A (insecticide) or Option B (oil).

o When the "start date" for the 2nd generation is provided, spray every 10-14 days until Sept. 15.

o Pick a different product to use for each generation.

Codling moth spray schedule

Unusual weather patterns this year have given us odd egg hatch data. This table will provide spray dates for codling moths at the given region. Select the region that has similar climatic conditions to determine when to begin spraying. These tables will adjust as the actual weather conditions dictate as opposed to forecast weather.

1st Generation Spray Timing Table					
Location	Option A Apply First Spray	Option B		Greatest Period of Egg Hatch 1st Generation	End of 1st Generation
		Apply Oil	Apply First Insecticide		
Burley	May 31	May 30	June 10	June 9 – July 1	unknown
American Falls	June 6	June 5	June 17	June 15 – July 6	unknown
Preston	May 31	May 30	June 10	June 9 – June 29	unknown
McCammon	June 3	June 1	June 13	June 12 – July 1	unknown
Pocatello East & South Side	May 29	May 28	June 6	June 5 – June 24	July 7
Pocatello Airport/ Chubbuck	May 30	May 29	June 8	June 7 – June 29	unknown
Fort Hall	June 4	June 1	June 14	June 13 – July 5	unknown
Blackfoot	June 5	June 3	June 15	June 14 – July 3	unknown
South Idaho Falls, Ammon. Iona	June 2	May 31	June 13	June 12 – unknown	July 4
Idaho Falls Airport	June 5	June 4	June 16	June 15 – July 6	unknown
Ucon	unknown	unknown	unknown	unknown	unknown
Rigby	June 7	June 6	June 21	June 20 – unknown	unknown
Ririe	June 8	June 7	June 21	June 20 – unknown	unknown
Rexburg	June 9	June 8	June 19	June 18 – unknown	unknown
Sugar City	June 12	June 10	June 24	June 22 – unknown	unknown
St Anthony	unknown	unknown	unknown	unknown	unknown
Driggs	unknown	unknown	unknown	unknown	unknown

Codling Moth

Backyard: The table below provides some options for backyard trees. This table is not all-inclusive, but just provides some examples. The products listed are not an endorsement. For the product you decide to use, the "active ingredients" are listed in small print on the lower right or left of the front label. Sometimes there are several ingredients, sometimes, just one. Some materials last longer than others, and the time between sprays is not always listed on the label.

Product Name	Efficacy	Residual Length (days)	Comments
CONVENTIONAL			
Spectracide Triazicide (gamma-cyhalothrin)	Good to Excellent	14-17	wait 21 days to harvest
Monterey Bug Buster 11 (esfenvalerate)	Good to Excellent	14-17	wait 21 days to harvest
Bonide Fruit Tree & Plant Guard (lambda-cyhalothrin)	Good to Excellent	14-17	wait 21 days to harvest
Bonide Malathion; Hi Yield Malathion	Good	5-7	max 2 applications; some products are pears only
GardenTech Sevin (zeta-cypermethrin)	Good to Excellent	14-17	wait 14 days to harvest
ORGANIC			
AzaSol, EcoGarden (azadirachtin)	Good	7-10	
Cyd-X (codling moth virus)	Good (if populations are low)	7	works best when used at beginning of generation; expensive and purchase online
oil such as All Seasons Oil, EcoSmart, Neem oil	Good on eggs only	3	recommended for first application of the generation only
Ortho Fruit Spray; Fertilome Fruit Tree Spray; Safer End All; Bonide Orchard Spray (all contain pyrethrin)	Good	3-5	
Monterey / Fertilome Spinosad; Captain Jack's Deadbug Brew; Natural Guard (all contain spinosad)	Good	10	max 6 applications per season; if applying to peach or cherry, can re-apply after 7 days

EASTERN IDAHO

PEST ALERT

UPCOMING EVENTS

JUNE 10 IDAHO HOME GARDEN TIPS

GROWING GRAPES

BRACKEN HENDERSON, EXTENSION EDUCATOR

June 10| 7:00pm MT

https://uidaho.zoom.us/j/92616335377

JUNE 24 IDAHO HOME GARDEN TIPS

SUMMER FLOWERS

ANDY WEST EXTENSION EDUCATOR

June 24| 7:00pm MT

https://uidaho.zoom.us/j/92616335377

PLANT TALK Q&A

RON PATTERSON & REED FINDLAY

June 24| 7:30pm MT

JULY 8 IDAHO HOME GARDEN TIPS

VOLES

JULY 22 IDAHO HOME GARDEN TIPS

CHIP BUD GRAFTING FRUIT TREES

AUGUST 12 IDAHO HOME GARDEN TIPS

DEER PROOFING YOUR YARD

AUGUST 19 IDAHO HOME GARDEN TIPS

LATE SEASON FLOWERS

AUGUST 26 IDAHO HOME GARDEN TIPS

DEHYDRATING YOUR HARVEST

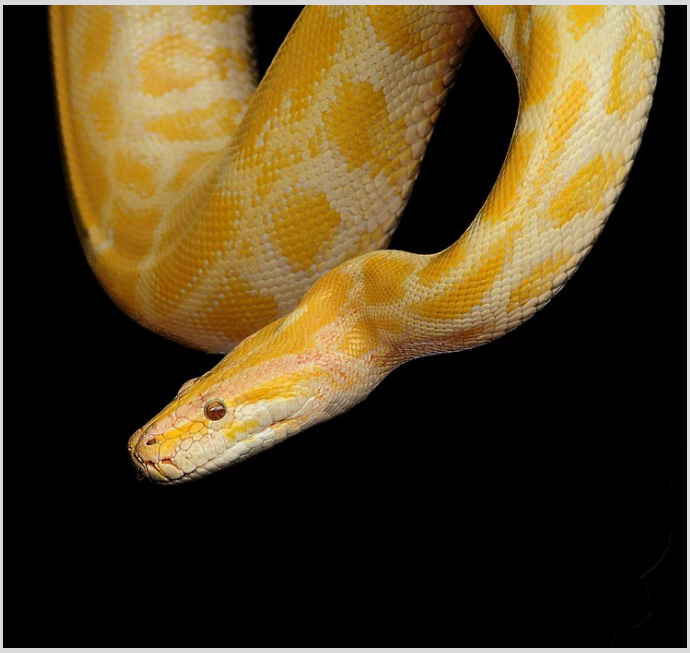

PHOTO OF THE WEEK: Photo credit: Denis Doukhan

PHOTO OF THE WEEK:

Speaking of snakeflies, our 4-H kids had a fun class on reptiles yesterday and today! This yellow reticulated python is very similar to one that came to visit and play with the kids! If your kids are interested in animals other than livestock, there are still many options in 4-H for them!

Thank you to Exotic Evolutions for teaching our kids!

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