



## What's In Bloom

(Salt Lake City area)

Beautybush: first bloom  
 Blackhaw viburnum: full bloom  
 Black cherry: full bloom  
 Black and purple robe locust: first bloom  
 Bridalwreath spirea: bloom

Cotoneaster: bloom  
 Cranberrybush viburnum: begin bloom  
 Horsechestnut: full bloom  
 Privet: begin bloom  
 Pagoda dogwood: begin bloom  
 Sargent crabapple: end bloom

## Insect/Disease Information

### CONIFERS

#### Pine needle scale

**Hosts:** 3-needled pines (Austrian, mugo, Scotch)



Crawlers of pine needle scale are active now along the Wasatch Front. If this pest is infesting any of the above hosts, now is the time to treat.

Pine needle scale (not to be confused with black pineleaf scale) is an armored scale of Scotch, Austrian, and mugo pines. The scale body forms a white waxy covering, making it easy to identify.

Crawlers will move around for 3-4 weeks, leaving a long window for treatment. They develop a waxy covering and then settle on the needles for the rest of their lives.

There is a second generation later in the summer (when butterfly bush blooms) that may also need to be treated.

Two sprays of horticultural oil (1-2%), one week apart, is very effective on the crawlers. Another (more expensive) option is a soil injection of the systemic, Safari (dinotefuran). This material is very effective against both armored and soft scales.

#### **Treatment:**

residential: horticultural oil (1%), insecticidal soap, Sevin (carbaryl), Bayer Advanced insect spray (lambda-cyfluthrin)

commercial: carbaryl, cyfluthrin (Tempo), Dinotefuran (Safari) as a soil injection

#### Needle Burn Caused by Cold Temperatures

Over the last several weeks, there have been reports and inquiries of browning needles on spruce and pine in several areas of the state. In most cases, the cause is winter injury.

Although the needles are dead the buds and twigs are usually still alive. Wait until the new growth emerges before writing the tree off.



Injury occurs during one of two cases: desiccation of needles or direct kill from low temperatures. Both cases are common in Utah. Conifer needles still need to use water even in

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### DECIDUOUS TREES

#### Ash Leaf-Curl Aphid

Hosts: ash



winter, especially during drying winds, low humidity, or when the plant tissue warms up on sunny days. The loss of water kills the cells, and the foliage turns red or brown from the tip down often with dark bands where the desiccation stopped and started. The needle discoloration intensifies as the spring temperatures warm. In this type of winter injury, buds are usually not killed. New shoots will develop in May and June and the dead needles will be shed so that by summer these trees will look reasonably healthy.

Winter injury caused by cold temperatures may kill buds or twigs, especially on Colorado spruce. In January, temperatures dropped to the negative digits, and we had several frosts this spring that were preceded by warm days. These weather events may have been enough to kill needles and buds, resembling a mite infestation, a fungal needlecast, or root disease. Again, wait until the new growth emerges.

If there is any question about what may have caused the browning needle injury to spruce or pine, please submit a sample to the Utah Plant Pest Diagnostic Lab.

This week, we have heard many reports in Salt Lake, Utah, and Tooele counties of ash trees crawling with cottony bugs on the trunk and branches, and then moving to the foliage. This insect is an aphid known as ash leaf-curl aphid, leafcurl ash aphid, or woolly ash aphid. We believe that the species we are seeing in northern Utah is *Prociphilus fraxinifolii*.

This aphid has an interesting life cycle. It overwinters on the roots of the host ash tree, and in spring, it migrates up the trunk to feed on the foliage. When populations are high, winged aphids form and move to adjacent ash hosts. The aphids stay on the ash foliage until migrating back down the trunk to the roots in mid to late summer.

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Aphid feeding on the foliage causes severe twisting and cupping of the leaves, and in severe cases, galling of the leaf tissue. Even though the damage may look extreme and the population of aphids so high, the health of the tree is rarely affected.

### Treatment:

Because the aphid exudes a waxy coating that helps to protect it from predators, and they are hidden in foliage, contact sprays are not effective. One of the few options is a systemic application of imidacloprid.

## Oystershell Scale

**Hosts:** maple, ash, lilac, poplars, aspen, cottonwood, willow, dogwood, and other plants



Crawlers of oystershell scale are just starting to emerge in northern Utah. Where this insect is causing plants to decline in vigor, a treatment should be made, targeting the crawlers, in the next week.

Oystershell scale is an armored scale with two generations of crawlers. Dozens of deciduous plants can be attacked by oystershell scale. There is a second generation later in the season.

### Treatment:

residential: horticultural oil (1%), neem oil, permethrin (Hi Yield), insecticidal soap, Sevin (carbaryl), Bayer Advanced insect spray (lambda-cyfluthrin)

commercial: carbaryl, cyfluthrin (Tempo), Dinotefuran (Safari) as a soil injection; (imidacloprid is not effective); Distance (pyrifoxifen), Talus (buprofezin), or a pyrethroid can be used as a foliar treatment.

At least two applications will be necessary due to the long egg-hatch period of many armored scales.

## Bronze Birch Borer

**Hosts:** European and Asian species of birch

Bronze birch borer adults will begun emerging in the next week in most areas of the Wasatch Front. There are two



options for treatment: trunk sprays and systemic. If applied at the right timing, trunk sprays (as a preventive) are more effective.

The larvae feed on wood under the bark and after pupating, emerge from birches, leaving a distinctive, D-shaped exit hole.

The adults primarily attack trees under stress (drought, nutrient, wounding, etc.) so keeping birch trees as healthy as possible can help the tree resist attacks by the beetle. Birch trees do best in moist, organic soils.

Bronze birch borer is best prevented through bark sprays of insecticides to kill the adults as they lay eggs. But a soil injection of imidacloprid can kill the larvae as they feed. Treat birch trees with an insecticide containing permethrin as an active ingredient now and repeated three weeks later.

### Treatment:

residential (we recommend a commercial applicator that can reach all parts of a tall tree): permethrin (Hi Yield)

commercial: Imidacloprid can be used as a soil drench, but ideally should be applied in early spring as the tree needs time for uptake. Studies have shown, however, that soil applications applied in late spring will also kill a certain amount of larvae within the tree. Trunk sprays include permethrin, bifenthrin, or carbaryl.

## Fire Blight

**Hosts:** Ornamental hosts include Bradford, Callery pear, hawthorn, crabapple



Fire blight “strikes” will begin to show up on trees that were infected during bloom. They will show up as dead clusters of leaves scattered throughout the tree. The disease is common on ornamental pears and hawthorn, but does not kill these trees. (The disease is more of a problem on certain varieties of apple.)

Where leaf and flower clusters are killed, the bacteria has grown into the plant tissue and colonized the bark and phloem, causing small “cankers”. If left in the tree, each small canker harbors the bacteria for future infections. Sometimes entire limbs can be killed. Look for wilted leaves at blossom spurs.

**Treatment:**

Prune out the visible infection as soon as it becomes visible. Remove twice the length of the dead plant tissue, or 8-10” below, into healthy wood. Do not prune in wet weather and disinfect pruners between cuts with Lysol, 10% bleach, or rubbing alcohol.

**Powdery Mildew**

**Hosts:** Almost all plants, but especially rose, lilac, maple, honeysuckle, serviceberry, ornamental pears, some crabapples, and others



Powdery mildew is a fungal disease of many plants that is common in Utah because it thrives without water. Rather, it needs humidity to spread, and often, the amount of humidity generated within a tree or shrub canopy is just enough to promote infections. Just like there are many susceptible plants, there are also many species of fungi that cause powdery mildew. Most are host specific. For example, the powdery mildew on your lilacs is a different species from that on your maple.

Powdery mildew prevents leaves from photosynthesizing to their fullest ability, resulting in stunted or twisted leaf growth, leaf chlorosis or necrosis, and leaf drop. Some plants show very little effect to powdery mildew.

**Treatment:**

residential: avoid overhead irrigation, improve air circulation between and within plants, and rake fallen leaves in the fall. Fungicides include horticultural oil (0.5%), sulfur, potassium bicarbonate (Bicarb), Bayer Advanced Natria, or chlorothalonil. The fungicide must be applied as a preventive, to stop future infections.

commercial: There are many fungicides, including Banner Maxx, Bayleton, Heritage, Regalia, Tourney

**Lilac-Ash Borer**

**Hosts:** green and white ash, mountain-ash, lilac, and privet



Lilac-ash borer adults are flying now, which means that trunk sprays should begin for this pest. Approximately two trunk sprays may be required as egg-laying occurs over a period of about 6 weeks.

There are very few ash trees left in Utah that have not been attacked by at least a few lilac-ash borers. A heavy infestation can kill trees, while general feeding causes branch dieback and can leave trees susceptible to breakage in storms. Infested trees will have exit holes on the bark, sawdust-like frass, and rough, swollen, cracked bark mostly near branch crotches.

Healthy plants are able to withstand minor infestations, while stressed plants are more susceptible to attack and failure. Once larvae are feeding within the tree, there is little that can be done. The best option is to target adults with trunk sprays.

**Treatment:**

Small trees can be treated by the home gardener, but in order to get thorough coverage on large trees, treatments should be made by a licensed pesticide applicator.

residential: HiYield Permethrin, or labeled products containing bifenthrin or lambda-cyhalothrin

commercial: chlorantraniliprole (Acelepryn), permethrin (Astro, Covert, Waylay), or bifenthrin (Onyx)

## Flatheaded Borers

**Hosts:** many deciduous trees

Flatheaded appletree borers will begin flight and egg-laying starting May 30 in the Salt Lake City area. This beetle is particularly destructive to smaller trees.

The way to tell if borers in your tree are flat-headed borers is to look at an exit hole. It will be large and oblong.

**Treatment** is the same as for bronze birch borer.



## Pest Monitoring Timeline

### Upcoming Monitoring/Insect Activity (Salt Lake Area)

Pest	Host Plants	Insect Activity	Indicator Plant
Elm leaf beetle	elms, zelkova	Larvae hatching	weigela full bloom
Oystershell scale	many deciduous trees	1st generation crawlers are active	beautybush full bloom
Lilac root weevil	many deciduous shrubs	Adult feeding ("notching") leaves	---
Bronze birch borer	paper birch	Adults emerge and lay eggs	kousa dogwood full bloom
Cottonwood leaf beetle	<i>Populus</i> sp.	Larvae starting to hatch	kousa dogwood full bloom
Euonymus scale	<i>Euonymus</i> sp.	Crawlers becoming active	black locust full bloom

**Precautionary Statement:** Utah State University Extension and its employees are not responsible for the use, misuse, or damage caused by application or misapplication of products or information mentioned in this document. All pesticides are labeled with ingredients, instructions, and risks. The pesticide applicator is legally responsible for proper use. USU makes no endorsement of the products listed herein.

### Landscape IPM Advisory

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