



## What's In Bloom

(Salt Lake City area)

Butterfly bush: begin bloom  
 Catalpa: end bloom  
 Elderberry: end bloom  
 Goldenrain tree: full bloom  
 Gray dogwood: end bloom

Mimosa: begin bloom  
 Oakleaf hydrangea: bloom  
 PG hydrangea: bloom  
 Rose of Sharon: begin bloom  
 Shrub roses: end bloom  
 Smokebush: bloom  
 Smooth sumac: begin bloom  
 Trumpet vine: full bloom  
 Tulip-poplar: end bloom

## In the News

### Illegal Use of Pesticide Results in Temporary Ban of Dinotefuran in Oregon

On June 15, 2013, 55 blooming linden trees in a Target parking lot in Wilsonville, OR (just outside Portland) were sprayed with dinotefuran (Safari). Days later, customers noted dead bumble bees on the ground under the trees, and the Xerces Society and the Oregon Department of Agriculture were notified. ODA tested the bees and dinotefuran was found to be the cause. It was estimated that over 50,000 bees were killed, the largest known incident of bumble bee deaths in the U.S.

The Safari label includes language to protect pollinators, specifically directing applicators not to apply this product or allow it to drift to blooming crops or weeds if bees are present in the area, because the chemical is highly toxic to bees. By June 21, the city netted all the linden trees to prevent additional deaths.

The ODA responded to the incident by placing a 180-day ban on all commercial and homeowner use of dinotefuran on plants (soil-applied and foliar; variety of brands), to protect pollinators. The manufacturer of Safari, Valent, is working with the state, and has placed a hold on dinotefuran product shipments to Oregon. ODA will continue the investigation and will work



with OSU bee experts, the Xerces Society, Valent, and the EPA, to determine if additional regulatory action is needed.

Dinotefuran is in the class of pesticides called neonicotinoids. The pesticide acts on the nervous system of insects but poses low toxicity to mammals. Much controversy over neonicotinoids and their effects on honey bees has been raised over the years, and other regions of the world are taking action.

On April 29, 2013, the European Commission adopted a proposal to restrict the use of 3 neonicotinoid pesticides (clothianidin, imidacloprid, and thiamethoxam) in all member countries. The ban is for a period of 2 years, starting on December 1, 2013. The restriction includes seed treatments, and soil and foliar applications to bee-attractive crops and ornamentals.

More info on the bee kill and bee research can be found on [Xerces.org](http://Xerces.org), including an article with comments from bee experts in the nation urging the acceptance of minor pests such as aphids in exchange for protecting pollinators.

### Dinotefuran Ban, continued from previous page

This event indicates a need to remind users of pesticides about the absolute importance of reading and following the label, and to pay particular attention to warnings.

The USDA Office of Pest Management Policy urges that use of any pesticide in any way that is not consistent with label directions is illegal and dangerous. They recommend some basic steps in reducing pesticide risks:

- Choose the form of pesticide best suited to your target site and the pest you want to control:
  - Identify the problem correctly and then, choose the least-toxic pesticide.
  - When the words "broad-spectrum" appear on the label, this means the product is effective against a broad range of pests. If the label says "selective," the product is effective against one or a few pests.
  - Read the label before buying, mixing, storing, or disposing of the pesticide.

- Use only the recommended rate of application provided on the pesticide label.
- The signal word—Danger, Warning, or Caution—tells you how poisonous the product is to humans.
- To use the product safely and correctly:
  - Never apply pesticides outdoors on a windy day (winds higher than 10 mph).
  - Wear protective clothing, and don't smoke or eat.
  - Mix and apply only the amount needed.
  - Watch for negative effects on wildlife (birds, butterflies, and bees) in and near treated areas. If you see any unusual behavior, stop using that pesticide, and contact EPA's Pesticide Incident Response Officer.
- Store and dispose of pesticides properly:
  - Follow all storage instructions on the pesticide label.
  - Store pesticides in their original containers, complete with labels that list ingredients, directions for use, and first aid steps in case of accidental poisoning.

## Insect/Disease Information

### CONIFERS

#### Black Pineleaf Scale

**Hosts:** Austrian, mugo, Scotch pines



Crawlers of black pineleaf scale are peaking now along the Wasatch Front. If a treatment by foliar application (instead of soil-applied systemic) is necessary, it should be applied now. By early August, crawlers will have settled to immobility for the remainder of their lives.

The black pineleaf scale is an armored scale, concealing its body under a removable, waxy covering. This scale feeds on nutrients and contents of mesophyll cells, and unlike soft scales, does not produce honeydew.

Where it feeds, the foliage becomes yellowed with localized necrosis (death). Under heavy and prolonged infestations, needles that are normally retained for 5 years will drop in 1 to 2 years. New needles are sparse, stunted, and chlorotic. Branches die back and the tree may eventually be killed.

Starting in 2007-08, we noticed many pine trees were becoming infested with black pineleaf scale, often resulting in death. Over the last several years, trees have recovered somewhat due to the registration and use of Safari, a systemic insecticide, and the above-average rainfall from 2009-11.

If the trees you are managing look good, do not get complacent. The drought of 2012 and this season will again lead to stressful conditions for pine trees, leaving them susceptible to future or continued infestations. Monitor trees for signs of pineleaf scale activity. In light infestations, two sprays of horticultural oil (1-2%), one week apart, could be all that is needed.

## Insect/Disease Activity continued from previous page

### 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

### European Pine Shoot Moth

**Hosts:** Austrian and mugo pines



Adults from the overwintering larvae have emerged and are laying eggs now. Eggs hatch within 2 weeks and the larvae mine into the needles and terminal buds where they will feed for the rest of the summer, and then spend the winter.

The larvae of this moth feed on terminals of mostly mugo and Austrian pines. Larval feeding in shoots causes tip dieback. Symptoms of infestation include oozing pitch from buds and shoots, shoot wilting, and dead shoots.

Usually treatment is not necessary as a few dead shoots will not harm the pine, and they can be pruned out to reduce the pest population. If the infestation covers a majority of the plant, a treatment may be necessary. Apply two foliar sprays spaced 14 days apart now to target hatching larvae.

### Treatment options:

Sevin, Malathion, dimethoate (Ferti-Lome Ornamental and Evergreen Spray)

## DECIDUOUS TREES

### Verticillium Wilt

**Hosts:** maple, catalpa, sumac, redbud

If a tree has the disease known as verticillium wilt, symptoms will be showing up now in these hot, dry conditions. Maples are most commonly affected, but many other species are



susceptible including catalpa, redbud, cherry, elm, and Russian olive. The disease is caused by a soil-borne pathogen (either *V. albo-atrum* or *V. dahliae*) that enters through the root system through tiny wounds, and clogs the xylem (water-conducting tissue), thereby causing a wilt. Some trees can have an acute infection that kills the tree in one season, and some can have a chronic infection that causes a slow decline.

Chronic symptoms include small, yellow leaves, slow growth, and gradual dieback each year. Also, trees develop fall color early in the season and leaf out late. As the mycelium of the fungus grows in the wood, it causes a green to black staining that is sometimes visible on a freshly-cut stem.

If you suspect verticillium wilt, collect a branch with both healthy and wilting foliage to send to the Utah Plant Pest Diagnostic Lab for confirmation.

Unfortunately, there is no "cure." Chronic infections can be managed with careful watering, mulching, fertilization, and pruning. If a tree dies from verticillium wilt, remove it and replant with a species that is resistant to the pathogen. (The fungus can survive in the soil for several years without a host.) These include beech, birch, fir, ginkgo, hawthorn, honeylocust, larch, oak, pine, spruce, sycamore, willow, and others.

### Root Weevils



The characteristic leaf-notched feeding by adult weevils is showing up on a variety of hosts including dogwood and lilac. Most weevils that feed on woody ornamentals overwinter as larvae in the soil, pupate in spring, and emerge as adults in June. The adults feed on leaves, where the damage is more aesthetic, while the larvae cause more damage by feeding on roots.

The two most common root weevils in Utah are the strawberry root weevil (*Otiorhynchus ovatus*) and the lilac root weevil (*O. meridionalis*).



Root weevils adult and larval feeding are usually not a concern on mature plants. But where populations are high (as shown above) or where young plants are affected, control may be warranted, targeting the larvae. Two options are predatory nematodes (soil must be kept moist), or imidacloprid soil drench.

## Leafcutter Bees



You may be noticing a similar type of notched feeding as the root weevil, however the foliage cut out is larger, and more circular-shaped. The insect that causes this is not a pest. It is a native, pollinating bee called the leafcutter bee, and it cuts pieces of leaves to use for rearing its young. They prefer rose, ash, and lilac. We do not recommend any control practices because pollinating insects are very important. Enjoy the handiwork of these hard-working, solitary bees!

## Western Poplar Clearwing

**Hosts:** All poplars



We have begun catching western poplar clearwings (*Paranthrene robiniae*) in our traps in all areas of northern Utah. They are emerging from the stems of aspen, hybrid poplars, willow, and cottonwood. They have also been found to attack birch.

Adult females are laying eggs on the bark of preferred hosts, so now is the time to treat if your trees have been attacked by these borers in past years. Trees under stress are most commonly attacked.



Larvae feed on the wood within the tree, and can kill the tree or reduce structural integrity. Injury includes oozing sap, numerous exit holes, canker-like scars, bark swellings, and enlarged holes from woodpeckers scavenging on the larvae.

### Treatment:

Keep trees healthy with optimal watering. Spray the bark with carbaryl or permethrin now, and repeat in mid-August.

## European Elm and Lecanium Scales

**Hosts:** elm (European elm scale); dozens of deciduous plants (lecanium scale)

Crawlers of both the European elm and lecanium scale are active now in the Wasatch Front area. These pests are soft scales that produce honeydew as they feed. This sticky material drips down onto cars, people, and other plants, which can be a nuisance. Branches and bark covered in black sooty mold (that thrives on the honeydew) is a sure sign of a heavy infestation. In addition, branch dieback, stunting, loss of tree vigor, and defoliation also occur.



Females of both species lay hundreds of eggs in early summer, and crawlers hatch beginning in early to mid July, continuing for approximately a month. Crawlers move to the underside of leaves and succulent twigs to feed for the summer, and then migrate back to twig crevices for the remainder of their lives. There is a single generation per year.

Scale insects are difficult to treat, but there are a few windows of opportunity for control. Dormant oil sprays in spring will smother many overwintering soft scales, but for severe infestations, it is not a stand-alone treatment. Targeting the crawler stage is most effective because nymphs are more susceptible to treatment than adults.

#### Treatment

**residential:** summer oil (1%; in temps below 85°F on non-drought-stressed trees) or insecticidal soap

**commercial:** summer oil or insecticidal soap, azadirachtin, carbaryl, synthetic pyrethroids, and malathion.

## Spider Mites

**Hosts:** most deciduous species



Mites thrive in hot, dry, dusty conditions and are starting to become more noticeable now. Keep an eye on your plants for this pest by shaking a low branch over a white cloth or paper. Smear the small bugs for confirmation or use your hand lens to see the tiny, clear bodied bugs with faint black markings on their backs. Heavy feeding causes stippled leaves and reduced plant vigor.

Spider mites feed on weeds and groundcover vegetation in the summer, and migrate up to woody plants when these plants die down or are cut. Typically, predatory mites are in good supply, and keep harmful mite populations in check. But predatory mites are very sensitive to insecticides, and when they are killed early in the season, spider mites have their way.

#### Treatment

**residential:** summer oil (1% in temps below 85°F on non-drought-stressed trees), neem oil, insecticidal soap, Bonide Mite-X (clove oil, garlic), Bayer Insect, Disease, and Mite Control

**commercial:** summer oil or insecticidal soap, azadirachtin, Hexgon, Floramite, Mavrik, Sanmite, Pylon

**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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