



## What's In Bloom

(Salt Lake City area)

Butterfly bush: bloom  
Goldenrain tree: bloom  
Mimosa: bloom  
Rose-of-Sharon: bloom  
Shrub roses: bloom

Smokebush: end bloom  
Smooth hydrangea: bloom  
Sourwood: bloom  
Sumac: bloom  
Trumpet vine: bloom  
Vitex: bloom

## Insect/Disease Information

### DECIDUOUS TREES

#### Aspen Leaf Blight and Leaf Spot



William Jacobi, CSU



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You may be noticing aspen or other poplar trees dropping foliage now. There could be a variety of causes, such as aspen leaf blight or leaf spot. Both diseases affect all species of poplar, and leaf spot also affects willow. Neither disease will kill trees or severely harm plants, however, younger trees can be more affected.

Aspen leaf blight is caused by the fungus *Venturia tremulae* on aspen, and *V. populina* on other poplar species. These fungi overwinter in twigs only as resting spores. Infections occur in spring to leaves, petioles, and shoots, resulting in blackened lesions and a shepherd's crook drooping. Eventually the tissue becomes brittle and will drop. Woody tissue will not be killed beyond the succulent shoot tips.

Aspen leaf spot is caused by several *Marssonina* species. Infections occur in spring, and continue with moist weather. Spots are brown with yellow margins. They range in size from small and round to large and blotchy. The hot dry weather has nixed any more new infections, but existing ones are becoming more obvious. Infected leaves are turning prematurely yellow and dropping. Do not confuse the yellowing from leaf spot with nitrogen deficiency.

#### Treatment

*Aspen leaf spot*: rake leaves in fall to reduce inoculum, apply a protective fungicide (chlorothalonil) at budbreak and repeat at 14-day intervals while wet weather persists

*Aspen leaf blight*: prune infected shoots; do not wet foliage; thin crown in winter; apply preventative fungicide (Banner, mancozeb) at start of leaf expansion and continue at 14-day intervals as needed

## Insect/Disease Activity continued from previous page

### Oystershell Scale



William M. Ciesla, Forest Health Management Int.

Dozens of deciduous plants can be attacked by oystershell scale. In Utah, common hosts are maple, ash, lilac, hybrid poplars, aspen, cottonwood, and willow. Oystershell scale is an armored scale, which means that it is protected by an outer shell that is just about impervious to contact insecticides.

This scale overwinters as eggs under the dead mother's shell, hatching in spring as crawlers. They settle in a new location within hours, and form a hard covering within 5-7 days. Except for the crawler stage, they are immobile all their lives, feeding on plant cell contents through a straw-like stylet.

A second generation of crawlers are emerging now in most areas of northern Utah.

#### Treatment:

- scrub scales off limbs in winter
- prune the most infested limbs
- apply dormant oil before budbreak (limited control)
- apply insecticides to crawlers:
  - 1-1.5 % oil
  - acetamiprid (Assail)
  - bifenthrin, cyfluthrin, lambda-cyhalothrin and other pyrethroids
- apply dinotefuran (Safari) to crawlers or as soil drench in spring

## CONIFERS

### Cooley Spruce Gall Adelgid

Spruce gall adelgid is the insect that causes the cone-like galls on branch tips of the blue spruce. This insect has a two-year life cycle that consists of five stages and requires two hosts to complete. Three occur on spruce, and two on the alternate host, Douglas-fir.

Adelgids overwinter as immature females at the base of spruce needles and in spring, develop a white, cottony coating under which they lay their eggs.



galls are splitting open now to release adult adelgids; some will fly to Douglas-fir; some will remain on spruce



adelgid nymphs inside each gall chamber look like this

Egg hatch and spruce bud break coincide: the hatched eggs crawl to the base of the newly expanding needles. As the young insects feed at the needle bases, they release a substance that causes swelling. Eventually, a gall forms that is filled with dozens of chambers in which the developing insects feed for the next several months.

At this time of year, the galls dry and crack open, and winged females are released and seek out Douglas-fir trees. They lay eggs on the needles, which hatch to form the woolly adelgid stage. This stage causes twisted and yellowed needles. Nymphs of the second generation overwinter on Douglas-fir needles. This population remains on Douglas-fir for the following spring and summer through several generations, and in late summer, females fly to spruce to overwinter and begin a new life cycle. It is known that some individuals are able to remain on spruce, and some remain on Douglas-fir.

A few galls on your Colorado blue spruce is not harmful. They can be easily pruned out, but at this time of year, it is too late. Prune new ones next spring while they are still green.

## Insect/Disease Activity continued from previous page

Heavily infested trees can become less vigorous and look unsightly, and may need control. One method is to spray a dormant oil spray in late fall. A spring-time spray is also effective, but must be timed before the new growth emerges. Keep in mind that horticultural oil sprays on blue spruce can cause them to turn green.

An application of imidacloprid in spring can also minimize damage.

### Pine needle scale



Pine needle scale attacks Scotch, mugo, and Austrian pines. It is an armored scale whose covering is white in color. Heavy feeding causes yellowed, short needles and limb dieback.

Pine needle scale overwinters as eggs under the dead females. The first generation of eggs hatched in early June into small yellow crawlers, which settled on last year's foliage. For the last several weeks, these scales have been developing into adults, and males have pupated and emerged as a tiny winged adult. After mating, the females continued to grow for a couple of weeks before laying approximately 40 eggs under her armor.

This brood of eggs is hatching into crawlers now in northern Utah, lasting through the next several weeks.

**Treatment:** target crawlers now with two sprays of summer-weight oil, or one spray of a pyrethroid

### Broadleaved Herbicide Damage

The ability to kill weeds in the lawn is a convenience many of us are thankful for, however, when improperly applied, this convenience comes with a price. Herbicides used in the lawn are in a group called broadleaved post-emergence herbicides, and most are growth regulators. Examples include dicamba and 2,4-D.

Types of herbicide injury:

**chlorosis** (yellowing): secondary veins will remain bright green while primary veins, and spaces between veins, will contrast sharply as a bright yellow

**necrosis** (death): dead spots or leaf edges that follows a "drip" pattern; symptoms can show up on one side of the plant due to drift or root absorption on that side

**distorted growth:** foliage/petioles are twisted (epinasty), elongated, cupped upward or downward, leathery, and/or with feathered edges

Causes of injury and how to avoid:

- drift: do not spray in wind; use as coarse a droplet size as possible
- volatilization: spray in the morning when temperatures are cooler (below 85° F); even plants in bud are able to be affected by volatilization; some materials are labeled as "low volatilization" (amine formulations of 2,4-D, or granular formulations)
- root uptake: do not spray within the dripline of trees or shrubs

Herbicide injury may appear anywhere from a few days to several weeks after exposure. Most healthy woody plants will recover from growth regulator herbicides unless the tree or shrub is under severe stress (such as from water deficit), or the dose is extremely high. New growth will appear abnormal, and may persist for more than one season.

To help the exposed plant recover, water deeply and slowly once/week. If the incident occurs in spring or early summer, fertilize, otherwise, do not.

### Examples of growth-regulator injured plants:



herbicide drift damage to pines causes twisted, bent foliage

**Insect/Disease Activity continued from previous page**



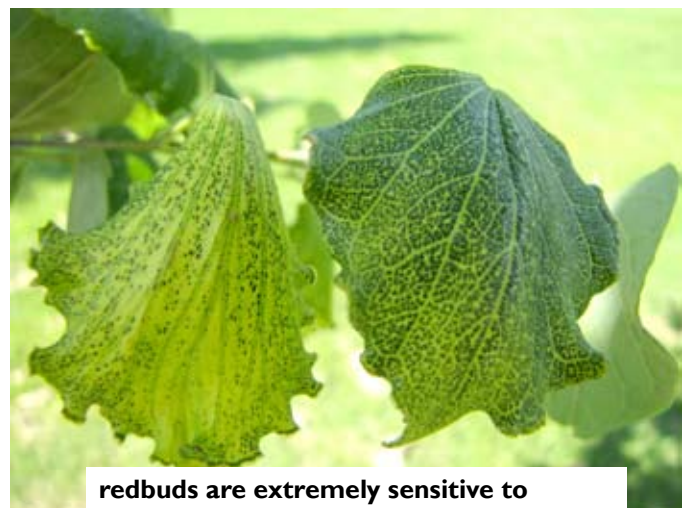
**new growth on pears will be slender and stunted**



**this apple tree is trying to recover; note chlorotic and elongated foliage**



**rose foliage is chlorotic and strappy, and the flowers are distorted; these plants were affected while still in bud and had no healthy growth; as a result, they probably will not recover**



**redbuds are extremely sensitive to small amounts of growth regulator herbicide; the symptoms are classic, with cleared primary veins, feathered leaf edges, downward cupping, and leathery, elongated leaves; this tree may take several years to recover**

## Degree Days and Pest Monitoring Timeline

### Upcoming Monitoring/Insect Activity

Pest	Host Plants	Degree Day Timing (base 50)	Indicator Plant
Black pineleaf scale	Austrian, Scotch	Crawlers emerge at 1068	elderberry full bloom
European elm scale	elms (not American)	Crawlers peak at 1029-1388	goldenrain tree bloom
Euonymus scale	most euonymus species,	2nd generation crawlers at 1050-1900	goldenrain tree bloom
Elm leaf beetle	elms	2nd generation larvae at 1300	----
Pine needle scale	2- and 3-needled pines	2nd generation crawlers 1390-1917	butterfly bush
Cooley spruce gall adelgid	blue spruce	Adults emerge from galls at 1500-1775	----
Oystershell scale	deciduous plants	2nd generation crawlers at 1600-1700	----

### Current Growing Degree Days (base 50)

March 1 - Monday, July 27

County	Location	GDD (50)
<b>Box Elder</b>	Perry	1603
	Tremonton	1494
<b>Cache</b>	North Logan	1221
	Providence	1368
	Smithfield	1214
<b>Carbon</b>	Price	1519
	Spring Glen	1346
<b>Davis</b>	Kaysville	1554
<b>Salt Lake</b>	Holladay	1689
	West Valley City	1732
<b>Tooele</b>	Erda	1738
	Grantsville	1991
	Tooele	1715

County	Location	GDD (50)
<b>Utah</b>	Alpine	1424
	Genola	1616
	Lincoln Point	1493
	Orem	1650
	Payson	1581
	Provo	1772
	Santaquin	1551
<b>Uintah</b>	Vernal	1500
<b>Weber</b>	Pleasant View	1610

**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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Editor: Marion Murray, [marion.murray@usu.edu](mailto:marion.murray@usu.edu)

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