



What's In Bloom

(Salt Lake City area)

- beautybush: full bloom
- black locust: full bloom
- common lilac: end bloom
- cotoneaster: full bloom
- fringetree: full bloom
- goldenchain tree: full bloom
- horsechestnut: full bloom/end bloom
- kousa dogwood: full bloom
- nannyberry viburnum: full bloom
- potentilla: full bloom
- snowball viburnum: end bloom
- spirea (bridalwreath): end bloom
- weigela: bloom
- wisteria: full bloom

General News

Africanized Honey Bees in the News

The presence of Africanized honey bees in Utah was highlighted in the local Utah news this spring, where they were described as “killer bees.” This is unfortunate, because death by Africanized honey bees is unlikely. Africanized honey bees have been in southern Utah for at least three years, but have not presented a large problem. If a suspected Africanized bee hive is found, contact a local pest control professional. More information can be found in the Utah Pests fact sheet “[Africanized Honey Bees](#)”.

Insect/Disease Information

CONIFERS

Western Spruce Budworm



Edward H. Holsten, USDA Forest Service, bugwood.com

Western spruce budworm (*Choristoneura fumiferana*) is mostly associated with forested sites where it can be a destructive defoliator. Sometimes this pest can be found in isolated residential areas in Utah, especially areas on the benches, where it can be found on spruce, fir, pine and Douglas-fir.

The larvae that are feeding now hatched last summer. Eggs are laid in August, and larvae hatch about 10 days later. They don't feed, but instead immediately seek out a protected area to

overwinter. The larvae start feeding in spring on needles and buds and later on expanding shoots. Spot them by looking for their path of silken webbing and excrement. They may entirely consume all new foliage before moving on to older needles.

In the urban setting, the budworm population is held in check by a variety of parasites, predators, and amount of food available. If you know you have this pest (look for feeding or shake branches over a cloth tray to look for larvae), then the time to control is now, up until bud break.

Treatment: Insecticides for use in Utah include carbaryl (Sevin, Bayer Advanced Complete) and *Bacillus thuringiensis* (Bt-Foray, Safer). Bt is an organic option that is highly effective on a variety of caterpillar defoliators.

Treatment: strong blast of water; horticultural oil; insecticidal soap; imidacloprid (Merit)

Spruce Spider Mite

Spruce spider mite overwinters as eggs on small branches of spruce (dwarf Alberta, Colorado blue, Norway, etc.), fir, juniper, and arborvitae, and hatch in spring when saucer magnolia is in bloom. Spider mites are very small (requires a hand lens to see), and can be found feeding on lower tree branches, on the bottoms of the needles. Heavy feeding results in chlorotic foliage and needle drop.

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Spruce spider mite is a cool season mite, thriving in temperatures between 60-80 F in spring and fall. When temperatures exceed 85 F, the populations decline, and survivors enter a resting stage as eggs or adults. The time to scout for this pest is now. Check the lowest branches first, by shaking a branch over a cloth tray. The fallen mites will appear rust red in color, and will create a smudge across the paper/cloth surface when rubbed.

Treatment: Dormant oil will kill eggs, and reduce the population. Oil can also be used during the growing season (but will destroy the blue color of blue spruce). Other options include Acramite, Vendex (restricted use), Omite (restricted use), Onager, and Envidor.

European Pine Sawfly



Sawfly larvae have hatched, and are feeding on mugo, Scotch, Austrian, and ponderosa pines. This wasp-like insect overwinters as eggs laid in slits along the length of needles. By July, the larvae finish feeding and drop to the ground to pupate. Adults emerge in the fall to mate and lay eggs.

Initial damage looks like brown wilted foliage because the larvae are only feeding on the margins of the needles. As larvae mature, they group together and gorge on entire needles,

sometimes causing complete defoliation. But because they are feeding on last year's needles, new growth may hide the damage.

Sawflies are not caterpillars. They are related to ants, bees, and wasps. The larvae are social, and stay huddled together in tight groups during feeding, often 2 or more per needle. When attacked or harassed, the larvae rear back their heads in defense, and are able to eject a repellent substance from a sac off the foregut.

Treatment: Treatment is rarely needed as feeding is localized and usually not severe enough to harm the plant. Because they feed together, removing a branch removes the colony; hand-picking is another option. If necessary, options include acetamiprid (Tristar, Ortho Max Flower, Fruit, and Vegetable Insect Killer) azadirachtin (Azatin, Safer Grub Killer), spinosad (Conserve, Green Light), horticultural oil, insecticidal soap. Bt does not work on sawflies.

Dothistroma Needle Blight



Dothistroma needle blight of pines is caused by *Mycosphaerella pini*. Austrian pines are most susceptible, followed by ponderosa and mugo pines.

Symptoms include brown needles (often the base of needles remain green), premature needle drop, loss of vigor, and a slow decline. Needle injury may resemble winter injury or scorch, however, diseased needles will also show gumming and sometimes broken tips that are an ashy-gray color. In addition, dothistroma infections usually occur on the lower and/or inner branches, where moisture is greatest.

Infections occur anywhere on a needle, leaving a "red band" (another name for this disease). The disease often works its way from the bottom of the tree up. In spring and early summer, an infected tree will have brown interior needles, and infections on the current season's needles will not show browning until fall.

For severely infested trees, fungicide treatments should be applied soon, before budbreak. In Utah's dry climate, infection rarely gets to the point of necessitating chemical treatment, however.

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Treatment: Although infections can occur throughout the season, only spring treatments of fungicide (when necessary) are necessary. Three applications of either copper hydroxide (Kocide), copper hydroxide+mancozeb (Junction, Mankocide), or other copper (Bonide, Camelot) may be necessary, starting at budbreak and twice again at 10- to 14-day intervals.)

Winter Injury



We are seeing some symptoms on conifers due to cold injury, when, from Nov. 21-30, 2010, night time temperatures plummeted from the 30s to the first hard freeze of -5 F in some places. These symptoms include needle death from the tip down, chlorotic needles, and possibly bud death. In some cases, the pith is killed, resulting in branch dieback.

Injury seems to be most apparent on marginally hardy plants, such as blue atlas-cedar and giant sequoia. Winter injury to needles of conifers can be distinguished from disease because the necrosis on the needles will end at about the same point on all needles.

Dessication also causes symptoms such as described above, but in this case, the cause is foliar drying due to transpiration on warm winter days. After that hard freeze, the air temperature this winter was somewhat mild, though the ground was frozen. Evergreens will still transpire in heat, and when roots are unable to absorb moisture to replace that lost, needle dieback occurs from the tip down.

The best option now is to wait for new growth to emerge. Where the damage was winter dessication, the growth should be healthy, and will hide the injury, but the effects of cold injury may run deeper. As the season progresses, additional dieback may occur due to the injured vascular tissue.

DECIDUOUS TREES

Flooding Damage to Trees

The threat of flooding is waning, but the damage to flooded trees remains to be seen. (If you experienced any flooding damage to your home, please accept our concern; I'm sure tree damage is the last thing on your mind.)

Roots need oxygen for cellular respiration, and in the presence of saturated soil, oxygen is unavailable. Roots will then die, reducing the tree's ability to absorb and transport water. Aboveground symptoms will not be evident until this summer, when hot and dry conditions prevail. Foliage will wilt and prematurely drop.

Trees that are younger and healthier will have a better chance at survival. Also, the duration and depth of flooding is a factor. Less than a week of flooding may not have an impact on trees, but several weeks of flooding will cause root dieback and possibly tree death. Some trees, such as willows, cottonwoods, ash, and red maple, can withstand flooding better than others. Crabapples, fruit trees, pine, spruce, and linden are all sensitive to saturated soils.

Honeylocust Pod-gall Midge

Honeylocust pod gall (*Dasineura gleditchiae*) is caused by a midge. The first generation eggs were laid within the swelling buds, and feeding by the hatched larvae is starting to be visible in the form of pod-like distortions on the leaves. Each gall contains one to several larvae. Heavily infested leaves drop prematurely and when small branches die back, new shoots

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develop. In general, the galls are not a health problem for the tree. There are several generations each year, and they overwinter as pupae within fallen leaves.

Treatment: If treatment is necessary, oil or carbaryl (Sevin) can be used as leaves are emerging. Both can also be used on subsequent generations.

Honeylocust Plant Bug



Overwintering honeylocust plant bugs will start hatching and building in populations soon, now that honeylocusts are finally starting to leaf out. Nymphs feed with their piercing-sucking plant parts on succulent young foliage for approximately 6 weeks. Leaves damaged by early feeding will be distorted, discolored, and dwarfed. Heavy feeding can cause necrosis and leaf drop, although new flush of foliage will emerge. The nymphs cause the primary damage; once you see adults, it is too late for treatment. There is just one generation per year. Look for plant bug nymphs by shaking several branches over paper or a cloth tray.

Treatment: Target nymphs 7-10 days after budbreak. Examples include insecticidal soap (Safer, Concern, Garden Safe,

etc.), oil (Concern, Lilly Miller), imidacloprid (Admire, Bayer Advanced, Bonide systemic, Gallant, Provado, etc.), bifenthrin (Tundra, Talstar, etc.), permethrin (Aloft, Brigade, Pounce, etc.), carbaryl (Sevin), malathion.

Cankerworm



Eggs of fall cankerworm (*Paleacrita vernata*), laid in November, have hatched, although, like the last few years, populations are low. Cankerworms are small greenish "inchworms", and feed on most deciduous trees including apple, linden, boxelder and other maples, elm, oak, and cherry. Their feeding initially causes small holes, and as the larvae enlarge, they consume entire leaves except the midrib. Cankerworm populations are naturally regulated by parasites, predators, and diseases.

Treatment: If necessary, use Bt (*Bacillus thuringiensis* var. *kurstaki* (Btk)) or spinosad. Bt is only effective when larvae are less than 1/2 inch in size.

Sycamore Anthracnose



Fungal diseases thrive in wet weather, and we are seeing a lot of sycamore anthracnose, caused by *Apiognomonia veneta*.

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The disease causes blight symptoms on leaf shoots, which are large blotchy, necrotic areas that eventually cover the entire leaf. The leaves will drop and additional rain or cool weather will result in new infections. As the temperatures increase, infections will stop for the season and the tree will produce a new flush of healthy foliage.

Unfortunately, the fungus also invades the wood of twigs causing small cankers that results in bud death. These cankers serve as inoculum for new infections each spring, making this disease difficult to control. London plane tree is not as susceptible.

Treatment: Prune out dead or diseased twigs. Two-three fungicide applications should be sprayed in spring starting when buds swell, and then on expanding foliage. If necessary, reapply 14 days later. Unfortunately it is too late this year to treat with fungicides as infections are ending. Systemic fungicide injections (Arborfos, Arbotect) are expensive, but can also be used, in spring or fall.

Maple Anthracnose



All the rain has also brought about maple anthracnose. Unlike the fungus that causes sycamore anthracnose, this fungus does not infect wood, and instead overwinters in fallen leaves, and in some cases, on twigs within the tree canopy. In spring, rain and wind carry spores to newly emerging leaves. Infections begin with purple blotches that usually extend along and between the veins and out to the leaf margins. Smaller spots can coalesce to larger areas. Leaves curl and wither, and the diseased area may extend down the leaf stem. Small brown fruiting bodies will form on the undersides of the leaves, distinguishing this disease from leaf scorch.

Treatment: Sanitation is very important and removal of fallen leaves in autumn is the best option to help prevent infections the following spring. Fungicides are best applied before infections occur, and include copper-based fungicides, chlorothalonil, thiophanate-methyl, mancozeb, or Spectro will help protect foliage from infection.

Bacterial Blight of Lilac and Other Plants



Bacterial blight, caused by *Pseudomonas syringae*, causes wilting shoots, blackened foliage, oozing cankers, and bud death of a variety of plants including lilac, dogwood, cherry, horsechestnut, and serviceberry. The extreme shift in temperature we experienced in late November caused dieback, bud death, and plant stress on some plants, and created ideal conditions for infection.

Pseudomonas syringae lives as an epiphyte on almost all plant surfaces and needs a wound to enter the plant and cause infection, such as through small frost cracks. The bacteria are able to enhance plant damage by freezing due to their ice nucleating proteins which act as a catalyst, causing water to freeze at higher temperatures.

Treatment: Damaged plant tissue should be pruned out in dry weather. Copper applications during bud swell in spring, and in fall, are the only options for this disease.

Upcoming Monitoring/Insect Activity

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Pest	Host Plants	Activity	Indicator Plant
Elm leafminer	elm	adults start laying eggs	flowering dogwood full bloom
Pine needle scale	two-needled pines (mugo, Scotch)	1st gen. crawlers start emerging	kousa dogwood begin bloom
Elm leaf beetle	elms, zelkova	larvae start hatching	weigela full bloom
Oystershell scale	many deciduous trees	1st gen. crawlers start emerging	beautybush full bloom
Black vine weevil	many deciduous shrubs	Adult feeding ("notching") leaves begins in late spring	---
Bronze birch borer	paper birch	Adults emerge and start laying eggs	kousa dogwood full bloom
Cottonwood leaf beetle	<i>Populus</i> sp.	2nd generation larvae hatch	kousa dogwood full bloom
Arborvitae leaf miner	arborvitae	2nd generation larvae hatch	arrowwood viburnum first bloom

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