

Spring Pests Emerging

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What's In Bloom (Wasatch Front)

- Bridalwreath spirea: end bloom
- Chanticleer pear: end bloom
- Cranberrybush viburnum: begin bloom
- Crabapple: begin bloom
- Flowering dogwood: begin bloom
- Forsythia: end bloom
- Kwanzan cherry: bloom
- Lilac: begin bloom
- Oregon grape: bloom - end bloom
- Quince: bloom - end bloom
- Purpleleaf plum: bloom - end bloom
- Redbud: full bloom
- Serviceberry: end bloom

Insect/Disease Activity

CONIFERS

Cooley Spruce Gall Adelgid

Cooley spruce gall adelgid has a somewhat complex life cycle in that it alternates between blue spruce and Douglas-fir. They overwinter as immature females (a fundatrix) at the base of needles and new buds, and in early to mid-spring, they start to develop a white, cottony coating. They lay their eggs underneath, keeping them protected.

Egg hatch will begin soon, at the same time as bud-break. The newly 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. The swelling needles coalesce to form one gall that envelops the developing nymphs, where they will feed in individual chambers for the next several months.

Treatment: If your spruce trees are infested, treat with an imidacloprid spray in the next 1 to 2 weeks to target the hatching eggs, or apply a soil drench now. A few galls on your Colorado blue spruce is not harmful. They can be easily pruned out. Prune them while they are still green (before mid-July) and destroy the galls. Pruning old galls is not helpful since the insects have already left them.

European Pine Shoot Moth

The European pine shoot moth attacks shoot tips of young, 2-needled pines. Larvae tunnel into shoots and buds, killing them as they feed. Infested shoots are covered with a silk webbing mixed with pine pitch. This insect is a minor pest, but heavy infestations result in rounded trees with multiple leaders and stunted growth.

The larvae spent the winter within pine buds, and this spring, as the shoots begin to expand, the larvae will begin feeding again. They sometimes exit the overwintering shoot and move to another. Now is a good time to target these migrating larvae.

Treatment: Prune out wilted bud tips and shoots with oozing pitch. Target larvae as they move from one location to another with spinosad (Conserve, Ferti-lome, etc.), pyrethrin (Pyganic), carbaryl (Sevin, Bayer) or synthetic pyrethroids (cyfluthrin, bifenthrin, lambda-cyhalothrin).

Pine Needle Scale

Pine needle scale is an armored scale that attacks two- and three-needled pines like Austrian, Scotch, and mugo pines. The appearance of this scale is white in color, as opposed to the black pineleaf scale which is dark gray. It is also not as serious a pest in Utah as the black pineleaf scale. As the scale sucks plant juices, the needles turn yellow and may drop prematurely. Most pines can tolerate a small population.

Eggs of the pine needle scale hatch into crawlers starting when lilacs bloom (late April to early May) and continue for approximately 2-4 weeks. There is a second generation of crawlers in late July.

Treatment: Horticultural oil (1%) applied about a week after lilac full bloom, and again 1-2 weeks later targeting the crawlers, is effective and safe on natural enemies. Other contact sprays include Sevin or products containing permethrin, bifenthrin, cyfluthrin, or other synthetic pyrethroid. Full coverage of all needles is important.

Pine Aphid

Aphids of all species are hatching now, including a *Cinara* species of pine aphid on Austrian and other pines. Although aphids will hatch in large numbers in spring, many will die due to frost or heavy winds and/or rain. Those that survive will serve as early food sources for beneficial insects. Lady beetles have been active on “warm” days for several weeks now. As the beneficial insect population increases in spring, aphid infestations will eventually be kept in check in an ideal ecosystem.

Pine trees can withstand a high population of aphids before showing any symptoms, which would be yellowing and loss of needles. If this occurs, and if visual examination of trees shows large colonies of aphids, a control may be warranted.

Treatment: insecticidal soap, summer oil, imidacloprid (Merit, Bayer Advanced)

White Pine Weevil

White pine weevil adults become active at full bloom of forsythia, which has happened in many areas along the Wasatch Front. During that time, and within a week afterward, is the time to treat, targeting the adults.

Adults overwinter in leaf litter and mated females will crawl up pine (limber, western white, Scotch, Japanese), spruce (Norway, blue) or Douglas-fir trees to the terminal growth where they lay eggs within holes they have created on the stem. Larvae bore into the terminals, resulting in wilting and tip dieback, which is evident by August.

Treatment: Thoroughly spray the upper portion of the tree with a pyrethroid such as bifenthrin or permethrin. Prune out wilted terminals in the summer.

DECIDUOUS TREES

Cankerworm

Cankerworms are leaf-feeding caterpillars on various tree species including apple, ash, beech, elm, linden, maples and oaks. There are two species, the spring cankerworm and the fall cankerworm. The fall cankerworm is most common in Utah. It overwinters as eggs on branches and twigs, and larvae will be hatching in the next week or two (shown above). The caterpillars are greenish in color, and move like an inchworm, traveling from branch to branch on silken threads.

They feed irregular holes out of leaves, but do not cause serious damage. You may notice them in late June as they swing down from the trees to burrow into the soil. There they pupate and the fall cankerworm emerges as adults in late fall to mate and lay eggs.

Cankerworm populations rise and fall over the years. Population size peaked in Utah in 2007, and natural enemies, disease, and harsh winters have brought the numbers down to tolerable levels. They have been low for the past several years, and will probably be low for 2011 as well.

Treatment: If control is necessary, Bt (*Bacillus thuringiensis*) is an excellent option. It must be applied before the caterpillars are longer than 1 inch in size. Another excellent option that is safe on beneficials is spinosad (Conserve, Green Light).

Lilac-Ash Borer

Lilac-ash borer adults will be flying soon, when lilacs are in full bloom or soon thereafter. Ash tree should be treated about 7-10 days after full bloom of lilacs and again 2-3 weeks later, depending on the product used.

Lilac-ash borer attacks green and white ash, mountain-ash, lilac, and privet. 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.

This insect overwinters as a larva inside the host plant and pupates in spring, emerging as an adult moth, usually in early to mid May. Emergence continues for about 6 weeks. Egg-laying occurs within 7-10 days of emergence.

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. For chemical control, the best option is to target the adults.

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. Options include: products containing permethrin (Hi-Yield), bifenthrin, or lambda-cyhalothrin (homeowner use); chlorantraniliprole (Acelepryn), permethrin (Astro, Covert, Waylay), or bifenthrin (Onyx) (commercial use)

Snowball Aphid

Snowball aphids (*Ceruraphis viburnicola*) feed on the terminal leaves of snowball, mapleleaf, and blackhaw viburnum species, causing severely twisted, cupped, and ruffled foliage. They overwinter as eggs on twigs, and are hatching now. They reproduce and feed for about 2 months on the viburnum, and then leave the host for a secondary host until September (the secondary host is unknown), when they return to viburnum to lay eggs.

Look for nymphs under newly expanding leaves; use a hand lens if necessary.

Treatment: Horticultural oil or insecticidal soap are safest and very effective to use before the leaves have become curled and cupped.

Western Tent Caterpillar

Foam-looking tent caterpillar egg masses have been found on chokecherry and ornamental cherry in locations along the Wasatch front (top left). Eggs are hatching now or will be hatching soon (at leaf expansion), and the larvae will create webbed tents at the ends of branches or where branches fork. As they mature and eat up the food within the tents, they will venture out to feed on fresh foliage and return to the tent at night. The larvae mature in 5-6 weeks and leave the tree to find a place to pupate.

Tent caterpillars are more a nuisance than a threat to the tree. They can be destroyed by opening up the next and exposing them to predators. It can be fun to use a blowtorch to singe the nests.

The southwestern tent caterpillar occurs in southern Utah, and feeds voraciously on cottonwoods, willows, and chokecherry.

Treatment: A large amount of materials are registered for use on tent caterpillars including spinosad, Bt (*Bacillus thuringiensis*, on young larvae), carbaryl, malathion, insecticidal soap, pyrethrin, permethrin, indoxacarb (Provaunt), etc. The key is to treat trees early, when eggs are just hatching.

Upcoming Monitoring/Insect Activity

Pest	Host Plants	Activity	Indicator Plant
European pine shoot moth	two- and three- needled pines	Larvae move to new shoots	Red maple first bloom
Western tent caterpillar	cherry, crabapple	Eggs begin hatching	Forsythia full bloom
Cankerworm	many deciduous trees	Egg hatch	Tatarian honeysuckle, red horsechestnut first bloom
Birch leafminer	birch	Mines visible	flowering dogwood full bloom
Elm leafminer	elm	Adults active	flowering dogwood full bloom
Lilac-ash borer	lilac, ash, mountain-ash, privet	Adults lay eggs	7-10 days after lilac full bloom
Pine needle scale	two-needled pines (mugo, Scotch)	First gen. crawlers	lilac full bloom - end bloom

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