April 8, 2011

In this Issue:

What's In Bloom (Salt Lake City area)

aspen: bloom
paper birch: begin bloom
pussywillow: begin bloom
red maple: begin bloom
silver maple: full bloom

Insect and Disease Activity

Oil for Overwintering Insects

Typically, a dormant oil application should be applied after tree buds have started to swell in response to rising temperatures. Before leaves emerge, it is safe to use 2% application of horticultural oil. If leaves are more than half emerged, drop the concentration of oil down to 1-1.5% (i.e., 1% oil would be 1 oz oil in 100 oz water).

Aphids such as linden aphid, honeysuckle aphid, and green peach aphid, overwinter as eggs on twigs of their host. As temperatures warm and plant buds swell, aphid eggs start becoming “active,” making them very susceptible to horticultural oil. The oil smothers the eggs and can significantly reduce the aphid population on the tree. Some early aphids have already started hatching.

Oil also targets scale insects, which overwinter as young nymphs and/or adults. Nymphs are sensitive to oil whereas the adults may survive an oil application. Armored scales, such as oystershell scale (shown above, many hardwood hosts) or black pineleaf scale (pines) must be controlled with a second application of oil or insecticide targeting the emerging crawlers (newly hatched eggs).

Winter Injury

This was an interesting La Nina winter—lots of snow in the mountains, and lots of freezing and thawing in the valleys. Fluctuating temperatures in the winter can cause havoc with some plants.

Evergreen plants are susceptible to dessication, which happens when foliage transpires on warm days but the roots, which are in frozen soil, are unable to translocate water back to the foliage to replace what is lost. As a result, foliage turns brown and dies. Sometimes just the tips of needles or leaves die. Newly planted evergreens are most susceptible because their root systems are not fully developed and do not store as much water. Once a new flush of foliage emerges, the damage becomes much less noticeable.

Hardwood trees may be injured on their bark by sunscald. Young trees or trees with dark, smooth bark are more susceptible to sunscald injury. This type of damage occurs when late season afternoon sun shines on the bark and warming the cells "out of dormancy." A severe dip in temperature the following night kills those tender cells, resulting in death of portions of the bark. Symptoms may not be evident until fall, after the tree growth has finished for the season. Normal growth of the bark splits at the areas where sunscald has occurred. Sunscald is a double whammy for trees, because not only is there a wound on the bark, but the wound then becomes attractive to wood-boring insects such as the pacific flatheaded borer.

Prune out Cankers and Diseased Wood Now

Cankers are areas of dead bark and cambium caused by fungi or bacteria. Now is a good time to inspect your trees for overwintering cankers and prune them out, but prune only in dry weather. Look for areas where the bark is sunken, splitting, darker in color, or with gumming or ooze (especially evident on crabapple, ornamental cherry, poplars, spruce, and pine). If you find a suspected canker, scrape a bit of bark away. If the tissue just underneath is brown, it is probably a pathogen-caused canker. Keep scraping the bark until you find healthy tissue, then prune about 6 inches below that, or at the next branch crotch.
Some examples:

Dead limbs on crabapple may be fire blight	Brown shoot tips on juniper may be tip blight
Cherry trees with swollen areas or what looks like black charcoal is black knot.	Spruce trees with dead limbs that have white, dried pitch, or limbs of poplar trees that have a tarry ooze may have been killed by cytospora canker. This image shows dead cambium exposed under the bark adjacent to healthy cambium.

White Pine Weevil

This insect will attack white pine, Austrian pine, blue spruce (shown), limber pine, scotch pine, Norway spruce, Douglas-fir, and others. Now is the time to target adults.

white pine weevils attack the tops of spruce, pines, Douglas-fir, and others

Adults mate in fall and spend the winter near the soil surface. In spring, they crawl up the host tree where they may feed at the top, or fly great distances to the top of another host tree. They feed on tissue just below the terminal bud, and soon afterward, females lay their eggs within the feeding sites. A single female can lay about 100 eggs on various host trees.

The eggs hatch into white larvae that feed just under the bark for several months, eventually killing the terminal leader. As the leader dies, it typically forms a distinct crook that is indicative of the white pine weevil. Trees are not killed by this pest, but those that are attacked year after year will be stunted and misshapen. (When the leader dies, a lateral branch curves upward and "assumes the position" of leader.)

The larvae pupate within the terminal in late July-August, emerging as adults in August to September.

Treatment: At the first sign of wilting (in early summer), prune out the terminal leader to reduce insect population. If necessary, apply a product containing permethrin in spring (April-May).
