

Number 14 - August 22, 2011

Elm Sawfly

We've had a couple of reports of large numbers of elm sawfly larvae in Kankakee and Iroquois counties. These yellowish to white larvae are thick-bodied and approach 1-1/2 inches long when fully grown. They have yellowish heads and a black line running down the middle of their backs with a row of brown to black spots on each side. They are usually curled up on a leaf when discovered. These insects feed on elm and willow, and we are finding most of them either on willow or walking across the ground towards willow trees. They can cause considerable defoliation on their hosts.

Although these insects look somewhat like caterpillars, the adults are wasp-like. They are not true caterpillars, they have more than five pairs of prolegs, false legs, on the abdomen. B.t.k. will not control them. Instead, use carbaryl (Sevin), a synthetic pyrethroid, or another labeled insecticide. Control may not be necessary because leaf loss this late in the growing season is unlikely to harm the health of the tree. (*Phil Nixon*)

Zimmerman Pine Moth

Zimmerman pine moth can be effectively controlled at this time of year. They are susceptible now in southern and central Illinois and will

become susceptible to control at the end of August in northern Illinois. This insect commonly attacks at branch whorls of Scotch, Austrian, red, and other pines. On white pine, it is found more commonly in the tips of branches, causing dieback and a proliferation of shoots due to secondary bud break.

Identification of attacked trees is by the appearance of masses of white pitch on the trunk near the base of one or more branches. This sap exudes from wounds made by the caterpillars tunneling under the bark and through the trunk. Damage can be severe enough to girdle and kill major branches on young trees. However, several years of these moth borers tunneling into the trunk can weaken it, causing the trunk to snap off a few feet above the ground. The tree is usually not killed by this occurrence. Instead, several buds break at this location, resulting in a multi-trunked tree that eventually matures into a much shorter, broader tree than those that are not attacked.

During the summer, the mature, brown, 1-inch long caterpillars pupate under masses of pitch on the trunk. They emerge as gray moths that are about 1/2 inch long. This emergence occurs from about mid-July in southern Illinois to early August in northern Illinois. After mating, the moths lay their eggs on pine trees. Apparently, the moths do not fly very high because damage rarely occurs

more than 6 feet up the tree. As a result, only younger, smaller trees are susceptible to serious damage.

These eggs hatch into tiny caterpillars that wander over the bark for several weeks in the fall before each overwinters under a mass of silk called a hibernaculum. The hibernaculum is typically spun by the caterpillar under a bark flake. In the spring, these tiny caterpillars emerge from their hibernacula and wander again over the bark for several days before tunneling under the bark.

The exposed caterpillars are susceptible to being killed on contact by insecticides during the fall and spring. Once the caterpillars bore into the tree, they are not susceptible to control. Permethrin (Astro) applied to the bark anytime during the next month or so is effective in controlling the newly hatched caterpillars.

Application is also effective when applied in the spring. In a “normal” year, the caterpillars emerge from their hibernacula and become susceptible around mid-April in central Illinois. They are usually active in early April in southern Illinois and late April in northern Illinois. Due to the variability of spring warm-ups, application in late summer is more likely to be effective due to the closer adherence of the larval hatch to calendar date and the longer window of effective application. (*Phil Nixon*)

Large Wasps

There are a number of large wasps that are present in landscapes at this time of

year. They are primarily interested in feeding themselves on flower pollen and collecting insects or spiders to feed their young. As such, they are very unlikely to sting people unless grabbed or stepped on when barefoot. However, their large size makes them obvious to clientele who worry about getting stung or at least ask you what they are.

Cicada killers were discussed in Issue 12 of this newsletter published on July 25, 2011.

Scoliid wasps were also mentioned in the same issue in the green June beetle article as their larvae feed on the beetle grubs. The adult wasps have emerged and are black and red with yellow spots on the abdomen. They are about one inch long and have bluish transparent wings. They are quite active during the day flying low over the turf. Adult wasps lay eggs in the soil where green June beetle larvae are present. Once the eggs hatch, the wasp larvae tunnel through the soil searching for grubs to attack.

Velvet ants are covered with felt-like orange to red setae. These wasps also have dark-colored bands or other markings. They range in size from one-quarter inch for the males of some species to one inch long in other species. Velvet ants feed as larvae on the larvae of bumblebees, cicada killers, and other bees and wasps. In many species, the female is wingless and is similar in appearance to a large, fuzzy ant; she enters bee and wasp nests to lay her eggs. Velvet ants are very hard-shelled to withstand the stings of bees and wasps that discover them in their nests. Males are winged and are active fliers, but are not as aggressive towards people as male cicada killers.

Spider wasps vary in size, but the most obvious species are shiny black to blue-black and are one and one-half inches long. Some species also have red or yellow markings on them. Their wings are transparent black, bluish-black, or reddish. Their larvae feed on stung and paralyzed, but still living, spiders that the mother collects. Similar to velvet ants, spider wasps are also very hard-shelled to withstand bites from their spider prey. In the southwest U.S., there are very large species of spider wasps that attack tarantulas. In Illinois, spider wasps tend to attack wolf spiders and grass spiders. (*Phil Nixon*)

My Tree is in Decline, Now What?

Most trees samples are immediately put into culture in order to isolate any fungal pathogens that may be infecting the vascular system of the tree, after they arrive at the U of I Plant Clinic. If the trees are negative for vascular, fungal pathogens, such as oak wilt (*Ceratocystis fagacearum*), Dutch elm disease (*Ophiostoma ulmi*), and *Verticillium* wilt (most often caused by *Verticillium dahlia*), the sample is carefully examined for signs of tree decline, such as:

- poor branch tip and stem growth (This is a sign that the tree may have been declining for several years, but our client is just now seeing symptoms of major decline)
- pale or yellow leaves
- delayed spring flush of growth
- leaf scorch (Lack of water can also cause leaves to scorch)
- smaller leaves than normal
- early leaf drop
- premature fall color

- dieback of the crown, twigs, and branches
- production of suckers on the branches or trunk
- abnormally large seed production (This also can be a normal response to certain weather conditions or a normal occurrence in some tree species)

If the tree does show signs of decline, we will report this to our client, but it will be up to them to figure out what may be causing stress to their tree. Most clients would like to have a quick fix, but most of the time, it is not that easy. Here is a checklist of causes for decline:

- Have you had extremely high or low temperatures, such as rapid drop in temperature following a period of mild weather in the fall or spring?
- Has there been a fluctuation in soil moisture (drought or flooding)?
- Could there have been mechanical damage to tree roots from nearby construction, livestock, or environmental effects?
- Was there damage to the trunk or limbs due to lawn mowers, vehicles, vandalism, animals, or cracks (ex. sunscald, frost, and lightning)?
- Has the tree experienced adverse weather conditions such as strong winds or hail, diseases, insects, or herbicides at critical periods of plant development?
- Could there have been winter injury?
- Has there been changes in the soil near the tree such as compaction (parked cars), changes in soil drainage, or excessive or lack of soil moisture?
- Has there been soil fill or soil removed near the tree?

- Could the roots have been injured from excess deicing salt, pesticide, or fertilizer?
- Was the tree planted incorrectly?
- Was the tree planted too deeply? Is there volcano mulch or excess soil near the base?
- Did you provide the tree with the proper maintenance after planting?
- Is the tree planted in a site with poor soil structure and drainage (clay)?
- Have you had a soil test? Could there be a soil nutrient or mineral deficiency, imbalance, or improper soil pH?
- Could there be an obstruction that could restrict growing space for roots such as a sidewalk, driveway, patio, or septic tank?
- Do the roots appear to be girdled, poorly formed, or bound in twine (if above the ground)?
- Is there too much competition from surrounding trees or plants?
- Are the surrounding plants near the declining tree injured as well (ex. gas leak, environmental, or chemical injury)?
- Do you have comprehensive history of the pesticide use near the tree? Could a soil sterilant or biocide been used in a nearby gravel driveway or sidewalk?

If you need help with the evaluation of your tree contact your local U of I Extension office or contact a Certified Arborist.

Unfortunately, a stressed tree is more susceptible to disease, insects, and other secondary organisms.

You will need identify what may be stressing your tree, and correct it, if

possible. You can refer to the following report on disease, "Decline and Dieback of Trees and Shrubs"

(<http://ipm.illinois.edu/diseases/rpds/641.pdf>), for further information. In the meantime, we always recommend that you water the tree in times of drought greater than two weeks, fertilize with a general tree fertilizer in the fall, and prune and destroy any dead branches or leaves on or near the tree. It is especially important to remember to trim oaks in late summer and fall only, to avoid infection of oak wilt. (*Stephanie Porter*)

Update on Imprelis Herbicide

This summer, we have witnessed widespread damage to pine and spruce trees caused by the newly registered Imprelis herbicide (aminocyclopyraclor) by DuPont. For background information, please see Stephanie Porter's article in the Home, Yard, and Garden Newsletter: <http://hyg.ipm.illinois.edu/article.php?id=307>.

On August 4th, DuPont voluntarily issued a suspension of sale. They are still investigating the issue and have yet to determine exactly what went wrong. They have sent guidance letters to turf management professionals as well as turf product distributors which can be found here: <http://www.imprelis-facts.com/letters-and-statements/>. DuPont also has created a website and hotline, <http://www.imprelis-facts.com/> and 866-796-4783, for information about returns, refunds, and resolutions. They ask homeowners specifically to contact them.

I was told recently that landscape companies are paying for damages up front and are being reimbursed from

DuPont. This has been quite a blow to the smaller companies.

Imprelis has composting restrictions on the label. Trees that have died or have been damaged by Imprelis should be properly disposed of. The recommendation is that they NOT be chipped or placed back into the landscape.

It is a shame that this has happened as Imprelis is highly effective on ground ivy (creeping Charlie). I think it will eventually return to the market place, but only time will tell. They say time heals all wounds, but the wound of thousands of dead trees from Minnesota to New Jersey is a fairly big wound to heal. (*Michelle Wiesbrook*)