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Last Weekly Issue

This is the last weekly issue of the Home, Yard, and Garden Pest Newsletter for this year. We will continue with issues every other week through July, August, and September, ending the year with monthly issues in October and November. Generally at this time of year, pest problems tend to be less numerous and urgent, allowing less frequent issues.--*Phil Nixon*

Japanese Beetle

After last week's article on Japanese beetle adults, I received several reports of sightings in northern Illinois. I appreciate these reports as it helps keep me up-to-date. Japanese beetle adults were found on June 26 in central Lee County, June 27 in northeastern Kendall County, June 29 in southwestern Ogle County, and July 1 in DuPage County. Thus, the beetles are out in northern Illinois.

Historically, Japanese beetle adults emerge in northern Illinois just before the Fourth of July holiday. I predicted emergence just after the holiday last week based on northern Illinois generally have pest events about two weeks later than central Illinois. With Illinois being about 400 miles long, pests generally emerge over a four week time span from Cairo to Rockford.

It is still too early to tell even in central Illinois about the numbers of Japanese beetle adults that will be present this year. It appears that their numbers will be high again this year in southern Illinois based on limited scouting conducted on June 29 in Murphysboro. One report from Monmouth indicates relatively high numbers, but this may not hold true throughout northern Illinois. Historically, the Illinois River valley appears to dampen the effects of cold winter temperatures with soils not freezing as deeply in that area. There are commonly higher populations of insects that are winter temperature sensitive in that area of western Illinois.

Keep scouting for beetle numbers and treat if populations are high enough to create significant damage. Remember that preventing early damage can result in less damage throughout the season. You might be ahead to spray if in doubt, but lower populations may allow you to eliminate follow-up insecticide sprays. Our recommendations for insecticidal control were covered in last week's newsletter. --*Phil Nixon, Dale Baird, Alice Cassens, Jeff Rugg, Martha Smith, Morton Arboretum*

Spittlebugs

Spittlebugs tend to be more numerous in wet springs. Although most of these

insects do not cause severe damage, the spittle of the nymphs is noticeable to commercial clientele. Meadow spittlebug commonly attacks deciduous plants, particularly clover, and many flowers, as well as arborvitae. Pine spittlebug attacks Scotch, Austrian, and white pines, spruces, and firs. Juniper spittlebugs attack junipers. The meadow spittlebug and juniper spittlebug usually cause little damage, but the pine spittlebug requires control if it is numerous.

Spittlebugs overwinter as eggs in the stems of plants. The hatching nymphs feed on stems and secrete a frothy liquid from the anus and the epidermal glands. The nymphs then spread this spittle over their body until they are entirely enclosed in what appears to be a glob of white spit. The nymphs take up to seven weeks to mature. If you remove the spittle, you can see that meadow spittlebug nymphs are green and juniper and pine spittlebug nymphs are brown. Both spittlebugs emerge as brownish adults that look like wide leafhoppers. They are about 3/8 inch long and elongate to oval in shape. Adult meadow spittlebugs vary in color, ranging from tan to dark brown and may have light stripes running along their sides. Juniper spittlebug adults are tan. Pine spittlebug adults are either a mottled medium brown or dark reddish brown.

Both nymphs and adults feed on plant sap. However, in heavy infestations, the wounds caused by pine spittlebug feeding result in resinous deposits that can restrict sap flow. Pine spittlebug feeding sites also serve as an entrance point for *Diplodia* shoot blight. Meadow spittlebug is rarely numerous enough to cause damage. Most damage caused by meadow and juniper spittlebugs is aesthetic, due to the presence of the spittle masses.

Pine spittlebug nymphs can be controlled with a forceful spray of cyfluthrin (Tempo, Bayer Advanced Multi-Insect Killer), acephate (Orthene), carbaryl (Sevin), or dimethoate (Cygon). Dimethoate is not labeled for landscape use but can be used in nurseries. Meadow and juniper spittlebug nymphs can be washed off of plants with forceful streams of water. In rare instances, acephate or carbaryl may be needed. --*Phil Nixon*

Cedar-Quince Rust

Cedar-quince rust is caused by a fungal pathogen called *Gymnosporangium clavipes*. This fungus infects more than four hundred and eighty plant species in eleven genera in the rose family, including mountain ash, hawthorn, quince, flowering quince, serviceberry and apple. Possible evergreen hosts include Eastern red cedar (*Juniperus virginiana*), common (*J. communis*), creeping (*J. horizontalis*), Rocky Mountain (*J. scopulorum*) and savin junipers (*J. sabina*). In order to survive, the fungus must "move" from an evergreen host to a deciduous host.

On evergreen hosts, infection occurs on needles and new shoots. This rust causes rough looking branch swellings. Most of the infected tissue dies after the telial stage of the fungus forms, killing small twigs. Sometimes the fungus becomes perennial, and infected tissue elongates slightly each year. Most landscapers are familiar with the roundish galls of two related rusts, cedar apple rust and cedar hawthorn rust, but many have never noticed the cedar-quince rust galls which appear as branch swellings. Once the fungus become wet, it swells, becomes

gelatinized, and appears bright orange. The image shows a juniper host with round galls of cedar-apple rust on the left and stem swellings of cedar-quince rust on the right.

On deciduous hosts, leaves, petioles, young branches and fruit are usually infected, and symptoms vary widely among the various hosts. Hawthorns and serviceberries are common deciduous hosts of cedar-quince rust. Pinkish fruiting bodies (aecia) develop mainly on branches, thorns, and the fruit of hawthorn, while foliage may be free of infection. Both hawthorn and serviceberry fruit often becomes heavily covered with aecia. Hawthorn branches develop swollen cankers much like those on the evergreen host. These cankers girdle stems and cause die-back on most infected branches. Galls become black by mid-summer. The infection of thorns, stems and fruit also help separate quince rust from apple and hawthorn rusts. The second image shows a hawthorn infected with cedar-quince rust. You can see young stem galls on the left, old stem galls on the right, uninfected leaves, and infected fruit.

The Disease Cycle: Stem swellings (telia) on the evergreen host develop quickly in wet spring weather. The telia develop teliospores which then form basidiospores. The basidiospores are blown or splashed onto the deciduous hosts such as hawthorn. With adequate moisture, infection can occur between 36° and 75° F. Severe infection can occur between 50° and 75° F. Seven to ten days after infection, spots or swellings develop on the deciduous host leaves. Several days later, the formation of tiny black dots (spermagonia) develop within the spots. Weeks later, aecia are formed. Aeciospores are released from the aecia during rain or as morning humidity

lowers. The spores become airborne and infect susceptible evergreen hosts during late summer and fall. Swellings (both fungal and host plant tissue) develop on the evergreen host the following spring. Once the swellings are mature, a few hours of wet, cool spring weather is sufficient for repeated telial swelling and the release of the basidiospores. The cycle continues in this manner from year to year.

Cedar-quince rust has become a problem in the Illinois landscape. Grow resistant varieties whenever possible. Follow good cultural practices and remove as much of the infected twigs, fruit and leaves as possible. Do this in dry weather to prevent further spread of spores. If infection is severe, consider following recommended fungicide treatments as listed in the *Illinois Commercial Landscape and Turfgrass Pest Management Handbook* or the *Home, Yard, and Garden Pest Guide*. --
James Schuster

White Mold Weather

White mold is the common name for a fungal disease that occurs in very wet conditions. Other common names include watery soft rot, cottony rot, and Sclerotinia disease. The disease generally becomes most prevalent in areas where vegetative growth is dense, air movement is restricted, and the soil stays wet longer than normal. Heavily irrigated areas may have this problem even when rainfall is short. Dense, wet areas have occurred throughout much of Illinois this planting season.

There are three fungal species that cause this disease: *Sclerotinia sclerotiorum*, *S. minor*, or *S. trifoliorum*,

but you won't be able to distinguish the species in the field. These fungi may infect hundreds of plant species. Look for the disease on aster, begonia, columbine, dahlia, delphinium, larkspur, peony, snapdragon, and other garden plants. Vegetables such as bean, carrots, tomatoes, and peas are hosts, as well as soybeans and some woody plants.

Symptoms of white mold may occur on any above or below ground portion of the host plant. Look for tan or bleached lesions which become covered with a fluffy white mycelial growth (mold). This growth is very white and wispy when compared to the dense, gray mold of *Botrytis*. White mold appears most commonly on stems. Stem tissue dies from the site of infection to the tip of the stems. As the disease develops you will see large, black resting bodies of the fungus that look much like irregular rabbit pellets. These resting bodies are called sclerotia, and they are composed of tightly packed mycelia. They will grow in or on the plant tissue. The fungus can survive many years as sclerotia buried in the soil. The first image shows a salvia plant infected with white mold. A sclerotium was removed from inside the stem and is indicated on the probe. Often the sclerotia are seen on the outside of the stems, as seen in the second image. Although black on the outside, these resting bodies are white internally. The presence of sclerotia, white mold, and bleached stems confirms this disease. As the infected plant tissue dries, the white mycelium may dry up or disappear, but the stem will still be bleached or tan as if it were grabbed by a very hot hand or glove. The infected stem is generally hollow.

This disease is discussed in University of Illinois report on plant disease #1008, *Sclerotinia Disease, White Mold or Watery Soft Rot* available online at <http://www.aces.uiuc.edu/~vista/abstracts/a1008.html>. Correct identification of the white mold disease is important to disease control. The resting stage may remain in the soil for many years, causing problems at that location on many other hosts. Sclerotia in the top 2 to 3 inches of soil germinate each year given conditions favorable for the fungus. There is no cure for infected plants. They wilt, collapse, and die rather quickly. When replanting, choose nonhost crops for the infected area. A list of plants susceptible to this disease is provided in RPD 1008. --Nancy Pataky

Vinca Blights

Vinca (Periwinkle) is grown as an evergreen or semi-evergreen ground cover in Illinois. It is popular because it provides a pleasant, soft, green ground cover in shady locations. Unfortunately, there is a fungal disease problem of periwinkle that can be very persistent once it invades a site. This disease is called Vinca stem blight. The damage from vinca stem blight has been obvious this spring. Pull back some of the foliage in your vinca bed and look for black or brown stems and runners hidden below.

Vinca stem blight is caused by a fungus named *Phoma exigua* var. *exigua*. The fungus thrives in moist conditions such as those found in dense plantings of ground covers, especially in the spring when there is plenty of moisture and succulent tissue. Black lesions may develop on the leaves and stems first, often girdling and killing runners. Stems

and foliage then become brown as they are killed by this fungus. Those stems infected last year are hosting the fungus now. If you see the black lesions, look for pin-head sized fruiting bodies of the fungus in the black tissue.

A look-a-like disease, Rhizoctonia root rot of vinca, causes top decline by rotting the roots. It may also cause black stem lesions, but you won't find fruiting bodies in the lesions. If you are not sure which disease is present, here are some tips. Look for fruiting bodies in the black stem lesions to confirm Phoma blight. Dig up an infected plant and look at the root system. *Phoma* does not cause a root rot. *Rhizoctonia* will cause roots to decline. Additionally, a University of Illinois publication on stem blight of vinca minor is available free of charge on line at
<http://www.aces.uiuc.edu/~vista/abstracts/a640.html>.

Vinca stem blight is difficult to control, but you can make some headway right now. Work with plants only when they are dry. This helps minimize disease spread. Remove infected plants, including old runners that may be hidden among other plants. Clean out dead leaves to open up air movement in the bed. If irrigation is needed, water the soil rather than the foliage. There are many fungicide options to protect new growth. Those with some systemic activity and listed in the *Illinois Commercial Landscape and Turfgrass Pest Management Handbook*, include 18 Plus, 26 GT, Banner MAXX, Chipco 26019, Compass, Cygnus, Heritage, Iprodione, ProPensity, Propiconazole, Savvi, Sextant, Spectator, and Zyban. There are also protective contact products available. Fungicide

applications should be initiated when the disease first appears.--Nancy Pataky

Invasive Species Spotlight--Giant Hogweed

Giant Hogweed (<http://www.invasivespeciesinfo.gov/plants/hogweed.shtml>) is a recent exotic weed introduced into the Illinois landscape. It can degrade natural landscapes and possesses health risks to people.

Native to the Caucasus Mountain and southwestern Asia, giant hogweed (*Heracleum mantegazzianum*), has been introduced to Europe, Canada, and the United States. This invasive plant has been confirmed in several states including Maine, New York, Pennsylvania, Washington, Oregon, Michigan, and most recently, Illinois. Giant hogweed was confirmed in Illinois in August 2006 in Lake County. Plants were found by participants in the New Invaders Watch Program, a cooperative program that engages citizens to spot new invasive species that pose a threat to healthy ecosystems. This species is now on the Federal List of Noxious Weeds and illegal to propagate, sell, or transport in the US. As indicated by its name, this biennial or short-lived perennial can grow between 10 and 15 feet tall. It has enormous compound leaves, up to 5 ft. wide on the bottom sets, with 3 deeply incised leaflets. Thick stems are from 2 to 4 in. thick, hollow and covered in purple blotches and coarse white hairs. The easiest stage of identification of Giant Hogweed is in its flowering stage. Numerous small white flowers are born in June or July in large flat-topped

umbels up to 2½ ft. across. After the flowers produce their seeds by late-summer the plant dies back to the thick taproot. Its stem may persist throughout the winter.

Giant Hogweed belongs in the carrot or parsley family (*Apiaceae*). It has several look-a-likes (http://www.hort.uconn.edu/cipwg/hogweedLookalikes/HogweedLookAlike_WEB/index.htm), including Cow Parsnip (*Heracleum lanatum*), Angelica (*Angelica atropurpurea*), and Poison Hemlock (*Conium maculatum*)-- all common plants found in Illinois. Although many of these plants may look like Giant Hogweed at first glance, none of them get to be as large or have its exaggerated characteristics. Other distinguishing characteristics include hollow stems, between two and four inches in diameter, with dark reddish-purple splotches and coarse white hairs. Leaves are compound, lobed, deeply incised and may grow up to five feet in width. Flowers appear from mid-May through July. As with other members of the carrot family, the flower heads are umbrella-shaped, up to 2 ½-feet in diameter across a flat top with numerous small flowers.

In addition to being a noxious weed, Giant Hogweed can be harmful to humans. It produces a clear, watery sap that is capable of causing photodermatitis-- a sensitivity of the skin to sunlight. The sap produces painful, burning blisters or even painless red blotches that may turn purple over time. It is very important to wear gloves when handling this plant and also to avoid smoke if this plant is being burned nearby.

It is believed that giant hogweed made its way into the United States as an ornamental plant or was brought into the country for its fruit, which is used as a spice in Iranian cooking. Undoubtedly, its unique stature and appearance has enticed gardeners to cultivate this plant. However, due to its size and rapid growth, giant hogweed readily out-competes many native plants. This perennial can survive in a variety of areas, but is common along roadsides, right-of-ways, railroads, vacant lots, streams, and rivers. Once established in an area, it can create a significant decline in biodiversity, increase soil erosion along riverbanks, and is difficult to eradicate. In addition, it often grows in wet areas, and can be considered an invasive freshwater weed.

Giant hogweed is still rare in Illinois. While visitors in natural areas are unlikely to encounter this plant, it never hurts to keep a watchful eye for this and other invasive plants.

For more information, stop by the Illinois CAPS blog (www.illinoiscapsprogram.blogspot.com) for all the latest news on invasive pests in Illinois.--*Kelly Estes*

Beware the Pretty Vines Found in the Landscape

Vining plants are often desirable in the home landscape. They cleverly disguise carefully placed trellises and their form seems to take on a life of its own. Some vines have been known to cover trees, poles, cars, and even slow moving animals I suspect. Quite a few vines are considered weedy by most. Too often, people will allow an unidentified, cute,

little vine to flower. Fast forward a few years, and its population will be out of control. The initial cuteness impression will be long gone and efforts will be underway to eradicate it.

Proper identification is critical to good weed control as is scouting often for emerging weed issues. Need some help identifying those mystery vines? Here is a brief description of some of the more common weedy vines found in lawns and gardens. As with all broadleaf weeds, leaf arrangement, flower type and the presence of underground structures such as rhizomes or tubers all play a key role in identification.

Honeyvine milkweed (*Ampelamus albidus*) is a perennial vine that spreads by seed and long spreading roots. The leaves are heart-shaped on long petioles and opposite on the stem. Flowers are small, whitish, and borne in clusters. It forms a smooth, green seed pod that is similar to that of common milkweed. Pods persist into winter and can then be spotted easily in the landscape when evergreens are the backdrop. The presence of the pod is a dead giveaway for identifying this weed.

Hedge bindweed (*Calystegia sepium*) is a perennial vine that spreads by rhizomes. The leaves are alternate on the stem and are distinctly triangular in shape with a pointy tip. The leaf base is cut squarely. The flowers are white to pink, and funnel-shaped like that of morningglory, another vine I will discuss in a bit. Bindweed is often mistaken for morningglory which is an annual weed. Initially, it may not be perceived as much of a problem, although, the rhizomes can help this vine spread quickly.

Field bindweed (*Convolvulus arvensis*) is similar to hedge bindweed except the leaves are arrowhead shaped with a rounded tip.

Also, the leaves are smaller and the leaf bases are rounded with outwardly divergent lobes. I try to keep the two straight by thinking "hedges have edges". Field bindweed is a rhizomatous perennial as well.

Wild buckwheat (*Polygonum convolvulus*) is similar also, but the lobes at the base of the leaf point backwards toward the petiole and it has an ochrea which is the easiest way to differentiate between these species. An ochrea is a papery sheath that encircles the stem where the petiole attaches to the stem. It is indicative of the smartweed family for which it is a member. Also, the flowers are greenish white and inconspicuous. They are clustered on long white racemes. Wild buckwheat is an annual so there are no rhizomes like the bindweeds have. Don't let this fool you; it is still considered a "serious weed" according to *Weeds of the North Central States*.

Morningglories (*Ipomoea spp.*) are often confused with bindweed and wild buckwheat too except the leaf shape is quite different. Depending on the species, leaves are either heart shaped or 3-lobed (ivy like). The cotyledons are butterfly-shaped. Most of the morningglories found in Illinois are summer annuals so reproduction is by seed. Bigroot morningglory or wild sweet potato as it's also called (*I. pandurata*) is a perennial found across the state. Both bigroot and tall morningglory have heart shaped leaves like honeyvine milkweed, however, the leaves are alternate on the stem. Bigroot morningglory can be distinguished by its reddish purple centered white flowers and large underground tubers.

Controls for vines include repeated pulling or cutting back, mowing, mulching, and herbicides. In a turf situation, grass should be properly maintained and mowed as high as possible. These vines have a difficult time growing in thick, lush turfgrass. Postemergent herbicides that provide at

least some control of these vines include but are not limited to the following: 2,4-D, carfentrazone, quinclorac, dicamba, oxyfluorfen, and triclopyr. Glyphosate may also be used for spot applications as it is a non-selective herbicide. Be sure to carefully read and follow all label directions. Repeated applications may be necessary. Summer annual weeds are most susceptible to treatment in the spring or early summer when they are young. For perennials such

as the bindweeds, fall applications may be most effective.

Beauty is in the eye of the beholder, you know. Just today as I snapped a picture of field bindweed in flower, an innocent bystander said that she thought the flowers were so pretty. She's right. They *are* pretty --*up close*. But when I see this vine cover a shrub, I can't think of it being anything other than a weed.--*Michelle Wiesbrook*