COOPERATIVE EXTENSION SERVICE
HOME, YARD & GARDEN PEST NEWSLETTER
College of Agricultural, Consumer and Environmental Sciences, University of Illinois at Urbana - Champaign
Illinois Natural History Survey, Champaign

Number 15 - August 27, 2012

West Nile Virus

The hot, dry summer has apparently been responsible for higher levels of West Nile virus earlier this year in Illinois. The virus is reaching levels about a month earlier than is typical. As it normally builds from mid-August through the fall, this early increase followed by human cases makes it likely that its impact will be much higher than recent years. This increased level makes it important to protect landscape workers and others involved in outdoor activities.

The first Illinois human fatality in 2012 has been reported from northern Illinois by the Illinois Department of Public Health (IDPH). A DuPage County man in his 70s, who had underlying health conditions, was diagnosed with West Nile virus earlier this month and died last weekend. The first human case of West Nile virus was reported in Southern Illinois. A Crawford County woman in her 80s tested positive for West Nile Virus.

There are record levels of West Nile virus activity nationwide and very high mosquito activity in Illinois. Through the second week in August, 693 cases had been reported to the Centers for Disease Control and Prevention (CDC). That is the highest number of West Nile virus disease cases reported to CDC through the same period since West Nile virus was first detected in the U.S. in 1999. More than 80 percent of the cases have been reported from six states (Texas, Mississippi, Louisiana, Oklahoma, South Dakota, and California).

IDPH currently is reporting 21 human cases of West Nile virus in Illinois. The first human case of West Nile virus was reported on July 24--about a month earlier than most human cases in previous years. There were 34 human cases for the entire year in 2011. So far this year, 38 counties have reported mosquito batches, birds or people testing positive for West Nile virus.

West Nile virus is transmitted through the bite of a mosquito that has picked up the virus by feeding on an infected bird. Common West Nile virus symptoms include fever, nausea, headache and muscle aches. Symptoms may last from a few days to a few weeks. However, four out of five people infected with West Nile virus will not show any symptoms. In rare cases, severe illness including meningitis or encephalitis, or even death, can occur. People older than 50 are at higher risk for severe illness from West Nile virus.

Landscapers and other workers should protect themselves from bites and make suggestions to clientele to reduce the number of mosquitoes. Avoid being outdoors when mosquitoes are most active, especially between dusk and

dawn. When outdoors, wear shoes and socks, long pants and a long-sleeved shirt, and apply insect repellent that contains DEET, picaridin, oil of lemon eucalyptus or IR 3535, according to label instructions. These repellents should provide about two hours of protection. Other repellents may be effective, but usually do not last as long, with many organic products being effective for only about 20 minutes, requiring frequent reapplication.

The northern house mosquito, *Culex pipiens*, that transmits West Nile virus and St. Louis encephalitis from birds to humans and other mammals breeds in smelly, stagnant water. The adults typically do not fly more than half a mile, so neighborhood mosquito reduction efforts can greatly decrease the likelihood of being infected.

While doing landscape work, advise clientele about mosquito breeding sites that they can address. Clientele should eliminate all sources of standing water where mosquitoes can breed, including water in tree holes, gutters, old tires, and other items that hold water. Bird baths, wading pools, and flowerpot dishes should be dumped and rinsed weekly before refilling.

Garden pools should contain goldfish, bait minnows, or other fish that will eat mosquito larvae. Koi, being ornamental carp, do not feed enough on mosquito larvae to be effective biological control agents. Garden pools without fish or only containing koi should be treated with *Bacillus thuringiensis israeliensis* available as donuts, briquettes, granules, or other slow release forms that provide mosquito larval control for a month or more.

Additional information about West Nile virus can be found on the IDPH website at www.idph.state.il.us/envhealth/wnv.htm. Surveillance numbers are updated on the IDPH website at www.idph.state.il.us/envhealth/wnvsurveillance12.htm. (*IDPH news release modified and added to by Phil Nixon*)

European Paper Wasp

European paper wasp, *Polistes diminula*, has been identified in Urbana in central Illinois. This wasp has been in northern Illinois for several years. In North America, it is found in southern Canada and the northern U.S., being common in Ontario, Michigan, Ohio, and Wisconsin. It has not been found south of southern Virginia. In the eastern hemisphere, it is native to southern Europe and Asia and northern Africa. It will surely continue to spread farther south in the U.S.

This wasp builds umbrella-shaped nests like other paper wasps in the same genus. Like other *Polistes* wasps, the larvae are fed mostly caterpillars that the adults collect and chew into baby food to regurgitate to the larvae. Like other paper wasps, they will attack and repeatedly sting intruders.

Polistes diminula not only builds its nests under eaves and in twiggy shrubs as do other native paper wasps in the genus, but it also builds nests in confined spaces such as the piping in swing sets and clotheslines, tree hollows, attics, and junction boxes used in electrical and irrigation systems. It is also more aggressive in finding caterpillars, with areas containing large numbers having almost no butterflies due to caterpillar predation. Unlike

other *Polistes*, it also feeds on other insects besides caterpillars. Nests are started earlier in the spring and the life cycle from egg to adult is quicker. This results in larger nests containing more wasps than native species.

Eliminate paper wasps nests by spraying the underside of the nest with an aerosol wasp and hornet spray. These typically contain pyrethroids, but some contain essential oils such as mint oil or rely on freezing the insects with the propellant. Fire departments commonly use foam generators used to extinguish fires to cover and suffocate the wasps.

Spray in the evening when all of the adult wasps are on the nest, but early enough to not need a flashlight. Disturbed wasps fly at lights. Stand off to the side when spraying a nest, as falling, dying wasps can still sting. Knock down and destroy the nest the next day, although any remaining larvae will starve without the attending adults. Usually, larvae unguarded by the adults do not live long enough to starve as other wasps will find them and feed them to their own larvae. (*Phil Nixon*)

Downy Mildew of Impatiens Is Back in 2012

This week, the U of I Plant Clinic has confirmed downy mildew of impatiens (*Impatiens walleriana*) in Cook County. It is apparent that the recent rains and cooler night temperatures provided the perfect environment for disease infection. Earlier this year, in HYG issue #3, http://hyg.ipm.illinois.edu/article.php?id=354, I warned readers to watch out for this unbelievably destructive disease.

This disease has sporadically been reported in the US since 2004 in greenhouses. However, many regional outbreaks of impatiens downy mildew occurred for the first time in landscape beds and container plantings in 2011. In 2012 (as of July 31st), there have been confirmed reports of impatiens downy mildew in most of the states in the eastern half of the United States as well as Texas and Oregon. Sadly, it appears that this disease may be here to stay.

Scout your impatiens and look for leaves curling downward on newer growth. Soon, white to light-gray fuzz may show on leaf undersides. New leaves may appear as stunted or discolored (yellow or pale green). Unfortunately, this disease can infect very quickly and cause complete leaf defoliation or plant collapse to occur.

What can you do to protect your impatiens?

1. When purchasing all garden impatiens (including double impatiens and mini impatiens), balsam impatiens, garden balsam, or rose balsam (New Guinea impatiens are resistant), be sure that they are in good health and inspect them for disease. Native wild impatiens (jewelweed) is also susceptible to impatiens downy mildew.
2. Don't plant impatiens too closely together or in heavy shade.
3. Do not water impatiens via overhead sprinklers (especially at night) and avoid any other conditions that may promote leaf wetness.
4. Scout for this disease often, especially when the temperatures become cooler (spring or fall).

Sporulation and infection will not occur during hot or dry conditions. EARLY DETECTION IS THE KEY!

5. Remove all diseased plants AS SOON AS POSSIBLE! All infected plants, fallen debris, and roots should be removed and destroyed! DO NOT PLACE DISEASED PLANTS IN THE COMPOST PILE!
6. Once plants are infected with this disease, there is NO chance of saving them!
7. There are some fungicides available; however they are used for protection only! They will not "cure" this disease. In addition, the fungicides need to be applied often, so they usually are not an economical or a feasible choice for homeowners. Remember to rotate chemistry to avoid fungicide resistance.

For additional information on downy mildew of impatiens, you can check out the following websites:
http://www.ballhort.com/pdf/ImpatiensDownyMildewGrowerGuidelines.pdf
http://www.ballpublishing.com/GrowerTalks/ViewArticle.aspx?articleid=18917
http://www.ballpublishing.com/GrowerTalks/ViewArticle.aspx?articleid=18921

(*Stephanie Porter*)

Bleeding Canker on European Beech

Bleeding Canker is a potentially lethal disease to mature European Beech trees (*Fagus sylvatica*). Researchers at Cornell University have been working extensively with this disease and have identified three closely related species of *Phytophthora* that are involved. *Phytophthora plurivora, P. pini* and *P. citricola* all cause similar bleeding canker symptoms discussed below.

Symptoms

Bleeding cankers appear as dark-colored areas with wet-looking or sappy material slowly oozing from the cankers. The lower portions of the trunk are usually first to be infected and show symptoms, but the cankers can occur several feet above the soil line.

Bleeding cankers can severely damage the aesthetic value of the beech tree's bark. However, the greatest damage occurs beneath the bark where the pathogen attacks and kills the cambial areas, causing damage to outer xylem tissues. Removing the cankered bark reveals discolored cambial tissues. Cambial tissues will also show a characteristic reddish-pink discoloration. Purple-leaved cultivars are reported to have a more pronounced pink coloration to infected cambial tissues.

As the bleeding canker expands, it essentially girdles the tree. Foliage in the canopy of infected trees may appear sparse with dieback, chlorosis and wilted leaves. Severe infections may result in the tree's death.

The European beech appears to have some natural defenses against the pathogen. Many trees have been found with cankers that appear to have been walled-off by the tree. Stressed trees with subsequent weakened defenses are believed to be at greatest risk. Drought seems to be at the top of the list of stresses that favor the disease development.

Disease Management

- Scouting European beech trees can help catch the canker early during disease development. The dark-colored cankers can be easily spotted on most trees. Fortunately, this disease is rare and much less common on American beech (*Fagus grandifolia*).
- As with most disease prevention strategies, avoid stressing the tree. The current severe drought may put many mature beech trees at risk. Planting a tree at the top of a slope may increase this risk. Bleeding canker combined with two successive years of drought may have finished the tree off. Irrigating at-risk trees may be beneficial. A light layer of mulch will help maintain adequate soil moisture. Avoid suffocating the roots with heavy layers of mulch.
- Fungicides are available for preventative use and to slow the spread of cankers. Cornell University has reported good results from bark drench applications of systemic fungicides containing the active ingredient *mono- and di-potassium salts of phosphorous acid*. The current recommendation is to mix 1 part fungicide with 1 part water. A bark penetrating surfactant such as Pentra-Bark should be added to the mix. As always, read the labels on both products before applying.

(*Travis Cleveland*)