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

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Black Knot

Black knot is a common fungal disease that affects at least 25 *Prunus* species, both edible and ornamental. The disease is caused by the pathogen, *Dibotryon morbosum*, which infects the new twigs, branches, and fruit spurs during the spring. Trunks also can become diseased. Most infections occur between bud break and 2 weeks after bloom when wet conditions are accompanied by temperatures of 55° to 77°F.

Early symptoms of the disease are easily overlooked and appear in the autumn as swellings of the current year's growth. Swelling of infected branches is arrested during winter dormancy, and resume the following spring. The bark on swelling branch eventually ruptures revealing corky, olive-green fungal tissue. By the fall, affected tissues are hard, brittle, rough, and darken to a characteristic coal black color. Affected branches often fail to leaf out the following spring or wilt and die by early summer. The infected branches that remain living have black knots that elongate on a perennial basis. Knots can develop to be one foot or longer. The disease becomes more severe with each growing season. Black knot does not typically kill a tree but causes deformed growth if left unchecked.

Disease Management Options:

- Purchase disease free plants. Carefully inspect the plants prior to purchase. Avoid plants with visible knots or abnormal swelling on branches and twigs.
- During the dormant season (late winter or early spring) prune out infected branches. Make cuts 4 to 8 inches below any obvious infected tissue. Destroy (burn) or bury affected branches
- Remove and destroy any unwanted Prunus species. that may be harboring the pathogen. Wild plums and cherries are more susceptible to black knot than cultivated varieties. If your landscaped area is near a wooded site, look for galls on the wild Prunus species. Infected wild trees should be removed.
- Fungicide sprays should be applied as soon as buds open and must be continued every 2 weeks until about 3 weeks after petals fall. Many copper fungicides are registered for use against black knot. Carefully read the product label to ensure that it has been approved for the host and disease.

(*Travis Cleveland*)

May Beetle

True white grubs, also known as 3-year white grubs and May beetles, consist of many species in the genus *Phyllophaga* in Illinois. Their life cycle varies from 1 to 3 years. At least one 3-year species is present as adults at this time. These 1-

inch-long, reddish-brown to dark brown, stocky May beetles are active at night, feeding on the foliage of oak, ash, crabapple, and other deciduous trees. They eat the edges of the leaves, occasionally removing leaf tissue to the midvein. Because the feeding occurs at night, no pest is seen during the day: They are hiding in the thatch of the lawn. Scouting the trees after 9 p.m. usually reveals the feeding beetles. Several insecticides are effective in controlling these leaf-feeding beetles, but the damage is usually not heavy enough to warrant treatment.

Having a 3-year life cycle, other May beetles are likely to be found as large grubs during tree planting and other soil digging. Large grubs will pupate during the summer, emerge into the soil in early fall, and spend the winter underground as adult beetles before emerging next spring to feed on tree foliage and reproduce. (*Phil Nixon*)

Japanese Beetle

Many Japanese beetle larvae did not survive the winter, particularly in the northern half of the state. Research has shown that Japanese beetle grubs do not migrate deeper than 11 inches into the soil for the winter. They die if the soil temperature reaches 15 degrees F or if they are subjected to freezing temperatures for 2 months. Last winter the soil was frozen to 15 inches deep in central Illinois and 30 inches deep in northern Illinois for several weeks. Based on previous experience, it is likely that about two-thirds of the larvae died during the winter in the northern half of the state.

In addition to cold temperature mortality, Japanese beetle larvae require approximately 11 inches of water from egg hatch in late July into the fall. Although we received abundant rain in spring of 2013, much less rain fell from July through October, averaging 9.5 inches during that time in most of the state. Although that was made up in irrigated turf, many grubs probably died in other areas. This will reduce the number of adult beetles in southern Illinois and cause even further reductions in the northern half of the state.

Northern and southern masked chafer grubs require less water and tunnel deeper than Japanese beetle grubs. In areas of central Illinois and other areas where these grubs are numerous, neither drought nor cold is likely to have reduced their numbers. Where Japanese beetle adults are few, masked chafers are likely to invade those turf areas. However, that is likely to be short-lived as it appears that where Japanese beetle is numerous, masked chafers almost disappear. (*Phil Nixon*)

Modified Growing Degree Days (Base 50°F, March 1 through June 12)

Station Location	Actual Total	Historical Average (11 year)	One-Week Projection	Two-Week Projection
Freeport	848	639	991	1148
St. Charles	696	602	830	979
DeKalb	716	693	863	1024
Monmouth	837	755	986	1146
Peoria	873	799	1027	1194
Champaign	924	824	1083	1256
Springfield	1062	905	1228	1406
Brownstown	1039	975	1207	1387
Belleville	1094	1005	1251	1426
Rend Lake	1159	1086	1335	1521
Carbondale	1148	1030	1312	1486
Dixon Springs	1170	1096	1337	1514

Insect development is temperature dependent. We can use degree days to help predict insect emergence and activity. Home, Yard, and Garden readers can use the links below with the degree day accumulations above to determine what insect pests could be active in their area.

GDD of Landscape Pests
GDD of Conifer Pests

Degree day accumulations calculated using the Illinois IPM Degree-Day Calculator (a project by the University of Illinois Department of Crop Sciences and the Illinois Water Survey). (*Kelly Estes*)

Emerald Ash Borer Activity

Degree day accumulations have reached levels where we would expect adult emerald ash borer activity in infested areas of the state.

There are several metallic green beetles that are seen every day during the summer months. Several are commonly confused with the emerald ash borer. The two I most commonly receive calls and questions about are the Japanese Beetle and the six spotted tiger beetle. Both are similar in size to the emerald ash borer, which is about 3/8 – 5/8 inch long. The Japanese beetle is rounder in its shape, and has bronze coloration on its elytra as well as that metallic green sheen. The six spotted tiger beetle is close to the emerald ash borer in size and shape, but has six white spots on its elytra. For more information on these and more look-alikes, check out these links:

Native Borers and Emerald Ash Borer Look-alikes
http://www.emeraldashborer.info/files/e-2939.pdf

Don't be Fooled by Look-Alikes
http://www.emeraldashborer.info/files/E2944.pdf

Other signs and symptoms to look for in potentially infested ash trees:

- Canopy dieback (begins in the top 1/3 of the canopy, progresses until the tree is bare.
- Epicormic shoots (sprouts grow from the roots and trunk, leaves often larger than normal)
- Bark splitting
- Serpentine galleries (larval galleries generally S-shaped)
- D-Shaped exit holes

(*Kelly Estes*)