



# Home, Yard, and Garden Pest Newsletter

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## Crane Fly Larvae in Turfgrass

Crane fly (Family Tipulidae) adults are a common sight during Illinois summers. They look like oversized mosquitoes with slender bodies and very long legs. While some people call them mosquito eaters, they actually do not feed as adults. The adults appear during the summer and spend their time mating and laying eggs. The eggs hatch in the fall and the crane flies overwinter as larvae.

Crane fly larvae, sometimes called leather jackets, are seen and recognized less frequently than the adults. The larvae will reach their full size in the spring and early summer. They live in the soil and feed on turfgrass shoots, roots and crowns.

Crane fly larval feeding in turfgrass is usually a nuisance with no significant injury and control is not warranted. However, with

large populations and wet conditions, larval feeding can cause thinning and larger bare patches in the lawn, which may warrant treatment. If significant injury occurs, it is usually seen in late spring when the larvae are near their full size. On golf courses, crane fly larvae injury can be mistaken for black cutworm injury. Applying a soap flush to the turfgrass can help bring the larvae to the surface of the turfgrass for identification. This can be done by mixing 1 tbsp of dish soap (not Palmolive) with 2 gal of water and pouring it over the turf with a watering can. If you are not sure what kind of larvae you have, they can be submitted to the [UIUC Plant Clinic](#) for identification.

### Control

The crane fly species found in turfgrass typically do very well in damp areas, so the primary cultural control recommendations include reducing moisture. This includes avoiding watering in damp conditions and improving drainage in areas that are often wet. Reducing moisture can make the area less attractive to crane flies and kill larvae. Focusing on regular mowing and fertilizing can also help the turfgrass recover from the injury and reduce the presence of thin or bare areas where adults prefer to lay eggs.



Top: Crane fly adult, Kevin D. Arvin, Bugwood.org  
 Bottom: Crane fly larva (Tipula leatherjacket), Rashbak, Wikimedia Commons

Adding biological control agents such as the nematode *Steinernema feltiae* can help reduce populations of crane fly larvae.

There are multiple chemical options for the control of crane fly larvae. These include carbaryl (Sevin), chlorantraniliprole (Acelepryn), clothianidin (Arena), imidacloprid (Merit). Some are intended to be applied in the fall when crane fly larvae are young and most susceptible to treatment, while others are intended to be applied in the spring when larvae are mature. Be sure to check the specific use section of the individual product label to make sure the product can be applied at the time that suits your situation.

Sarah Hughson

## Boxwood leafminer

Have browning boxwoods? Be sure to check for boxwood leafminer. I watched a row of boxwoods turn brown starting in late winter. I initially suspected winter injury, but when I looked closer, I found tiny, yellow/orange boxwood leafminer larvae in the leaves that I dissected. Sarah Huson wrote about boxwood leafminer in last year's newsletter. I am including her article in this issue for those who may have missed it – Travis Cleveland



Boxwoods with leafminer injury. Inset Image: Boxwood leafminer pupae, Travis Cleveland, University of Illinois

Boxwood leafminer (*Monarthropalpus flavus*) is a tiny midge that can harm boxwoods in its larval stage. The adults emerge in the spring around the time weigela is in bloom. Females lay eggs under the surface

of a leaf and larvae feed on the tissue within the leaf. Larval feeding causes a raised green blister that can be seen on the leaf's surface. The blister may become discolored or flake off later in the season. The leafminers overwinter within the leaves as larvae. They have one generation per year in Illinois.

Boxwood leafminers can cause leaf discoloration, blistering and early leaf drop. In heavy infestations, twigs may begin to dieback. Most varieties of boxwood are susceptible to boxwood leafminers.



Boxwood leafminer (*Monarthropalpus flavus*) larvae in open leaf cells, Jim Baker, North Carolina State University, Bugwood.org



Boxwood leafminer (*Monarthropalpus flavus*) leaf discoloration, Penn State Department of Plant Pathology & Environmental Microbiology Archives, Penn State University, Bugwood.org

Contact insecticide can be applied when adults are actively laying eggs. Adult emergence and egg laying coincides with weigela blooming (GDD base

50: 400-600). Contact insecticides targeting adults include, carbaryl (Sevin), abamectin (Avid), acephate (Orthene) and pyrethroids labeled for use on box-wood leafminer. Imidicloprid (Merit or others) can be applied to target feeding larvae but must be applied after blooming is complete.

*Sarah Hughson*

## Callery Pear Easily Noticeable in Bloom, and Threatening

You may have noticed white flowering trees nearly everywhere this spring. While they're lovely, they can be too much of a good thing and possibly indicate an invasive problem. Callery Pear is in bloom now in Northern Illinois and was in full bloom very recently in Central Illinois. Blooms make these trees easily noticeable and bring awareness to the overabundant and worrisome population in many locations – typically where they don't belong.



*Multiple Callery Pear trees growing wild along an interstate near Chicago, Michelle Wiesbrook, University of Illinois.*

Callery Pear (*Pyrus calleryana*) is also known as “Bradford” Pear which is its most widely planted cultivar. Other available cultivars include ‘Aristocrat’, ‘Cleveland Select’, and ‘Chanticleer’. It was once widely recommended as an ornamental and street tree due to its toughness, its glossy red leaves in the fall and its plentitude of early blooms in the spring. However, as time has passed the negative attributes of aggressive spreading and structural weakness

have become apparent and more easily recognized. Some cities have now banned the planting of this popular tree that was once thought to be sterile. Most recently, Ohio has declared Callery Pear as invasive and banned it from being planted or sold starting in 2023. In Missouri, buy-back programs are being offered where a replacement, native tree is offered up in exchange for photos of you cutting your Callery Pear down.



*Callery Pear flowers, Leslie J. Mehrhoff, University of Connecticut, Bugwood.org.*

This native to Asia is a deciduous tree that grows 30 to 50 ft. tall. The leaves are alternate, simple and broad ovate to ovate with a small, round-toothed margin. Overall, the leaf margin has a distinct wave or ripple. Leaves are shiny, dark green and leathery, growing 1½ to 3 inches long. In the early spring before the leaves emerge, flowers appear as ball-shaped bundles. They are white with five petals and about 1 inch across. Flowers develop into ½ inch diameter hard, spotted, green to brown fruits. While the flowers are abundant and attractive, they have a strong, rancid smell akin to rotting cheese. Naturalized plants can have stout, sturdy spines. Callery Pear grows best in full sun but will tolerate some shade and is adapted to a wide range of environments. Spreading by seed, it forms dense thickets. It leafs-out early and hinders growth of understory plants leading to a loss of diversity.

Introduced here early in the 1900's, Callery Pear was used for experimentation in disease resistance of the common fruiting pear. During this breeding research,

'Bradford' Pear was discovered as a self-sterile cultivar. But shoots can arise from the rootstocks that cultivars are grafted onto and researchers now know that Bradford Pear and other cultivars can cross-pollinate resulting in small fruits containing an abundance of viable seeds which are eaten readily by birds and dispersed in their droppings. To make matters worse, wild individuals can then further the expansion and dispersal by interbreeding and producing even more viable seed. This tree is everywhere. It can be found in nearly every Illinois county. In addition to growing in landscapes, it is often found along roadsides, hedgerows, forest edges, natural areas, wetlands, and sites (old or open fields) that are not being mowed or maintained.

If you have missed the blooms in your area, this tree will be easy to spot again in the fall with its red to purple glossy leaves. Last fall was the first I had noticed all the young saplings that have filled the ditch all along a neighbor's house. Numerous Callery pear cultivars can be found in their beautiful, rural landscape and with no close neighbors around their trees are the obvious source of the seed.

If you have this tree in a landscape you own or manage, consider taking it down if you have the ability and means to easily do so. If not, don't panic. But it would be wise to plan for a replacement in the future. Callery Pear has become notorious for having weak wood and narrow branch angles which make it particularly susceptible to ice storm damage. Many Callery Pears are lost and then replaced (hopefully with another type of tree) as a result of a bad storm.



Callery Pear fruit and leaves, Leslie J. Mehrhoff, University of Connecticut, Bugwood.org.



Callery Pear fall color, Leslie J. Mehrhoff, University of Connecticut, Bugwood.org.



Callery Pear wild sapling turning red in fall, Leslie J. Mehrhoff, University of Connecticut, Bugwood.org.

Before adding this tree to your landscape, please consider the risks. Consider alternative flowering or ornamentals when planting or replacing trees such as:

- Redbud (*Cercis canadensis*)
- Serviceberry (*Amelanchier canadensis*)
- American plum (*Prunus americana*)
- Flowering dogwood (*Cornus florida*)

When it comes to controlling Callery Pear, one sharp cut at the base can go a long way, however, it likely

won't completely kill this tough tree. Resprouting will typically occur unless a herbicide is applied to the base. This tree could also be controlled without cutting it, however remaining dead vegetation will probably need to be removed. Herbicide recommendations include the following.

- Foliar: Apply 2 to 4% v/v glyphosate in water or 1 to 2% v/v triclopyr in water.
- Basal bark: Plants 4 inches in diameter or less – apply a triclopyr ester formulation at a 20% v/v rate, mixed with basal oil, to the lowest 15 inches of the stem.
- Cut stump: Apply glyphosate at a 25 to 50% v/v rate in water or triclopyr amine in water or ester in oil at a 20 to 25% v/v rate within 10 minutes of cutting. Always read and follow the herbicide label before initiating treatment.

Of course seedlings and shallow-rooted plants can be hand-pulled or dug up. Wait until after a rain to make the task easier.

### Additional Resources:

[go.illinois.edu/BradfordPearSV](https://go.illinois.edu/BradfordPearSV)

[go.illinois.edu/CalleryPearCaution](https://go.illinois.edu/CalleryPearCaution)

[Management of Invasive Plants and Pests of Illinois](#)

Michelle Wiesbrook

## Hellebore Black Spot

You had me at *Helleborus*! Hellebores make wonderful additions to woodland gardens or landscapes with partial shade. I have had success growing them in a sloped flower bed mixed with hostas, coral bells, and hydrangeas. Their colorful blooms are one of my favorite signs that winter is giving way to spring.

My hellebores have been relatively low maintenance thus far. Their evergreen leaves are prone to winter injury from cold temperatures and desiccating winds. I simply prune out the tattered, brown leaves before the new leaves emerge. This spring, I noticed that one of my hellebore plants had leaf spots in addition to the typical winter injury. Upon

further inspection, I found the culprit to be black spot, a fungal disease caused by *Microsphaeropsis hellebori* (formerly *Coniothyrium hellebori*). This disease infects many *Helleborus spp*; Christmas rose (*Helleborus niger*) is a common host.



Black spot on *Helleborus* 'Snowbells,' Travis Cleveland, University of Illinois.

### Symptoms

Black spot causes large, dark brown to black spots on hellebore leaf blades and margins. The spots have concentric rings giving them a target-like appearance. As the spots enlarge, they develop an elliptical shape. Multiple spots can coalesce and damage large portions of the leaf. Small, black fruiting bodies (pycnidia) form within the disease tissues; you will likely need a hand lens to see them. Black spot also infects flowers. Many of the flower buds on



Black spot lesions on *Helleborus* 'Snowbells,' Travis Cleveland, University of Illinois.



*Hellebore leaf severely infected with black spot (Microsphaeropsis hellebori), Travis Cleveland, University of Illinois.*

my plant wilted, rotted, and failed to open.

### Disease Management

The pathogen that causes black spot of hellebore produces abundant spores that spread mainly by splashing water and wind-blown rain. The disease spreads rapidly during wet springs or falls. The most effective management option is to remove and destroy the infected leaves. Be sure to clean/sanitize your pruners between plants to avoid spreading the disease. When watering, avoid overhead irrigation that keeps foliage wet for extended periods. I could not find any fungicides labeled for *Helleborus spp.* or hellebore black spot. Many fungicide labels list “black spot,” which refers to black spot of rose caused by a different fungal pathogen. Please let me know if you come across any products labeled for *Helleborus spp.*

Travis Cleveland

## Modified Growing Degree Days

Station Location	Actual Total	Historical Average (11 year)	One-Week Projection
<b>Base 50° F - March 1 through May 10</b>			
Freeport	178	161	300
St. Charles	198	162	321
DeKalb	179	160	302
Monmouth	265	241	402
Peoria	291	265	428
Champaign	312	288	448
Springfield	340	353	480
Perry	354	334	496
Brownstown	460	339	600
Belleville	451	425	598
Rend Lake	502	470	644
Carbondale	524	451	672
Dixon Springs	539	478	686

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 [Pest Degree-Day Calculator](#) (a project by the Department of Crop Sciences at the University of Illinois and the Illinois Water Survey).

Kelly Estes



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