



# Home, Yard, and Garden Pest Newsletter

Issue 4 • June 8, 2022

## In This Issue

- Bagworms . . . . . 1**
- Oak Apple Galls . . . . . 2**
- A Few More Weed Seedlings Recently Found in Central Illinois 3**
- Cryptocline Needle Blight of Yew . . . . . 4**
- Gymnosporangium Rusts on Apples, Crabapples, and Hawthorns . . . . . 5**
- ALLELOPATHY: A Plant's Chemical Warfare . . . . 7**
- Illinois Monarch Project Wings of Dreams Bio Blitz . . . . . 8**
- Modified Growing Degree Days . . . . . 8**

## Bagworms

Bagworms (Family: Psychidae) are an insect that everyone has probably seen, even if they weren't sure exactly what they were looking at. Bagworms are caterpillars that spin a small protective silk bag over their body. They decorate the bag with bits of leaves or other debris and drag the bag behind them as they walk, a behavior similar to that of hermit crabs. As the caterpillars grow, you may see bags up to 1.5 inches long.

In late summer, female bagworms fasten their bag to a tree or shrub, close the opening of the bag, pupate, lay eggs and die. The eggs overwinter inside the bag and hatch in late spring, usually late-May to early-June. When the young caterpillars emerge from the bag, they spin a strand of silk that is picked up by the wind and carries them to new host plants. This process is called ballooning and can continue for up to 2 weeks after egg hatch, until the caterpillars find a suitable host plant.

Bagworms feed on arborvitae, juniper, cedar, spruce, white pine, crabapple and many other ornamentals. They are common on trees and shrubs near buildings or in parking lots.

Injury caused by bagworms is most obvious when bagworms are mature, in July and August. Deciduous trees that experience heavy bagworm feeding can refoliate, so the injury is mostly aesthetic and will not cause lasting damage. However, significant bagworm injury to evergreens can cause lasting damage and impact overall tree health. It is most effective to treat bagworms when they are young, so some landscape managers may choose to identify and record locations with bagworm damage in the summer and



*Left: Bagworms on arborvitae, Sarah Hughson, University of Illinois  
Center: Bagworm on crabapple, Sarah Hughson, University of Illinois  
Right: Close-up of a bagworm reaching out of the bag, Sarah Hughson, University of Illinois*

plan to treat the following season.

Apply treatments for bagworms two weeks after egg hatch (when catalpa is in full bloom). At this time, the young caterpillars have finished ballooning, settled onto a host plant to feed, and are most susceptible to treatment. Mature caterpillars are less susceptible to treatment and applications will not reach the insects after they close the opening of the bag and begin to pupate. Effective treatments for bagworms include: Btk (Dipel, Thuricide), Spinosad (Conserve), carbaryl (Sevin), acephate, and pyrethroids like cyfluthrin (Tempo) and permethrin (Astro).

One non-chemical control method that can be done anytime of year is hand picking the bags from trees and shrubs. It is especially easy to see bags on deciduous trees in the fall after the leaves have dropped. Just be sure to dispose of the bags away from the host plants. If a bag is simply dropped on the ground, the eggs inside are not killed and find their way to the host tree when they hatch. The bags can be stomped or disposed of in trash that is changed regularly.

*Sarah Hughson*

## Oak Apple Galls

Numerous galls are found on oak trees, and almost all of them are caused by cynipid wasps. Adult cynipid wasps are smaller than pinheads and do not sting people. The largest cynipid galls are the oak apple galls, being spherical, hollow galls that mature to sizes up to 2 inches in diameter, depending on the species of cynipid and the oak host. The legless, white larva typical of cynipid wasps lives in a small, seed-like structure in the center of radiating fibers that extend to the inside edge of the gall. Although they are initially green, oak apple galls mature to tan galls with a hard, papery exterior. Although the galls are common and easy to see, they are seldom important enough to need to be controlled.

*Travis Cleveland*



*Developing oak apple gall, Travis Cleveland, University of Illinois*



*Split oak apple gall, Travis Cleveland, University of Illinois*



*Mature oak apple galls with exit holes, Travis Cleveland, University of Illinois*

## A Few More Weed Seedlings Recently Found in Central Illinois

In the last issue of the Home, Yard, and Garden Newsletter, I wrote about 12 weed species that have recently germinated and can be widely found right now in central Illinois. Two weeks have passed and we have experienced some warmer temperatures and rainfall – both of which are needed for germination of you guessed it, MORE and DIFFERENT weeds! Here I present to you 5 more species that can be found making their way above ground if they aren't there already.

**Common purslane (*Portulaca oleracea*)** – is a prostrate, summer annual that typically germinates late spring/early summer. The leaves and stems are reddish in color, thick, and succulent (juicy even). The leaves are wedge-shaped and rounded at the tips. The roots are fibrous and easily removed from the ground by pulling. The flowers are small and yellow with 5 petals, appearing July to September. This weed can easily handle dry conditions and stem fragments can produce new roots. Avoid cultivation. Some don't consider common purslane to be a weed at all as it is edible and sometimes grown for that reason.



Common purslane, Michelle Wiesbrook, University of Illinois.

**Pineapple weed (*Matricaria matricarioides*)** – is a low growing, bushy, summer or winter annual. The rosettes can stay green year around. The leaves are smooth and finely divided making it fine in texture.

When crushed, the leaves have a sweet odor like pineapple. Its shallow taproot allows it to be pulled easily. The flowers are rounded and greenish yellow, appearing May through September.



Pineapple weed, Michelle Wiesbrook, University of Illinois.

**Spotted spurge (*Chamaesyce maculate* or *Euphorbia maculata*)** – is a mat-forming, warm-season annual that reproduces by seed. It has a shallow taproot and pulls easily from the soil. It thrives in dry, sandy sites. Spurges have milky sap that exudes when they are injured. The leaves are small, opposite, oval, and sometimes purple-spotted and/or hairy. The flowers are very small and present July to September in the axils of the upper leaves. Prostrate spurge is very similar and considered by some taxonomists to be the same species.



Spotted or prostrate spurge, Michelle Wiesbrook, University of Illinois.

**Velvetleaf (*Abutilon theophrasti*)** – is an erect, usually unbranched, summer annual with a shallow, branching taproot. The leaves are alternate on

the stem, large, and heart shaped. Both the stems and leaves are velvety soft to the touch and densely hairy. They emit an unpleasant odor when rubbed. The flowers have 5 yellow petals. The seed pod is characteristic in shape and resembles the fluted edge of a pie crust. In fact, dried seed pods have been used to imprint a pretty design into the top of butter, giving this weed the nickname of Butterprint. While this plant has an interesting appearance, allowing it to develop seeds is a mistake as seeds remain viable in the soil for over 50 years.



*Velvetleaf, Michelle Wiesbrook, University of Illinois.*

**Yellow nutsedge (*Cyperus esculentus*)** – is an erect, grass-like warm-season perennial sedge. Leaves are yellow-green in color, waxy, and with a strong midrib fold. The stems are triangular rather than round or rounded as with grasses. It spreads primarily by underground rhizomes and tubers (nutlets), but can spread by seed too. The inflorescence is large and branched. Dormant tubers may remain viable for 10 or more years. This weed is often found on moist, poorly drained sites.



*Yellow nutsedge, Michelle Wiesbrook, University of Illinois.*

For assistance with identification, consult with your local University of Illinois Extension office or the booklet, “Identifying Weeds in Midwestern Turf and Landscapes” available at: <https://pubsplus.illinois.edu/products/identifying-weeds-in-midwestern-turf-and-landscapes>. You may also submit plant samples to our Plant Clinic located in Urbana. Please see <http://web.extension.illinois.edu/plant-clinic/> for more information.

*Michelle Wiesbrook*

## Cryptocline Needle Blight of Yew

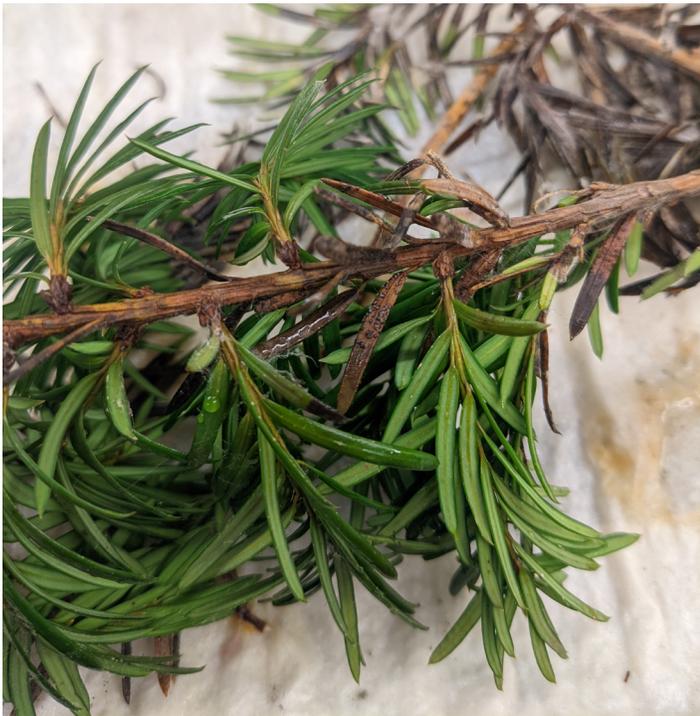
The Plant Clinic has seen an increase in the number of yew samples diagnosed with Cryptocline needle blight in the past few years. This fungal needle disease does not appear to be one of great concern given the lack of information about it in the literature. It has been reported in New England and eastern Canada on a few different species of yew. In the past few years, it has been confirmed on samples from Champaign, Cook, Lake, and Tazewell counties in Illinois.



*Cryptocline Needle Blight of Yew, Diane Plewa, University of Illinois Plant Clinic.*

Symptoms can occur on current and previous years’ needles. Needles develop chlorotic spots, bands, or the entire needle can turn light yellow. These areas

then become brown and necrotic, and eventually, small black fruiting bodies develop on the surface of the needles.



*Cryptocline Needle Blight of Yew, Diane Plewa, University of Illinois Plant Clinic.*

stress and pruning out diseased tissue during dry weather. A fungicide containing copper labeled for use on evergreens against needle blights may be of use. Always follow label instructions for any product you choose to apply.

We recommend maintaining plant vitality by watering during periods of dryness during the growing season, lightly mulching the base of the plant, pruning out dead branches during dry weather, and fertilizing in spring right before new growth expands (usually in late March or early April). A light application of a slow or timed released fertilizer can also be used in late summer or early fall for especially stressed plants. According to the *Manual of Woody Landscape Plants*, 6<sup>th</sup> Ed., yew do best in fertile soil with sufficient moisture and excellent drainage. Yew plants do not tolerate soggy or water-logged soils; these conditions lead to plant stress, damage, and even death. Yews can be grown in sun or shade conditions. Ideally, they are protected from strong winds which can lead to needle desiccation. Generally, yews do not tolerate extremely hot or cold temperatures, but they should thrive across most of Illinois if planted in the right spot. Yew are unfortunately very tempting to deer.

*Diane Plewa*

## Gymnosporangium Rusts on Apples, Crabapples, and Hawthorns



*Cryptocline Needle Blight of Yew, Diane Plewa, University of Illinois Plant Clinic.*

According to what little information is available, humid environmental conditions favor development of this disease. Plants under stress due to improper site selection, poor soil quality, or adverse environmental factors appear to be more susceptible to this disease. Management consists of reducing plant



*Cedar-hawthorn rust on Downy Hawthorn (Crataegus mollis), Urbana, IL, June, 2022*

Rust symptoms were evident on downy hawthorn this past week in central Illinois. Three cedar rust diseases commonly occur in Illinois:

- Cedar-apple rust (*Gymnosporangium juniperi-virginianae*)
- Cedar-hawthorn rust (*Gymnosporangium globosum*)
- Cedar-quince rust (*Gymnosporangium clavipes*)

**Cedar-apple rust** is the most common of the above three. Infections can occur on leaves, fruits and twigs of apples and crabapples. For ornamental trees, leaf symptoms are more of a problem than stems and fruit symptoms. Leaf symptoms first appear in May and June as pale yellow spots on the upper leaf surface. The spots eventually enlarge and turn orange in color. They will also begin to appear on the underside of the leaf, eventually forming tube-like structures (aecia). Infections may result in yellowing leaves and defoliation.



*Cedar-apple rust on apple, Travis Cleveland, University of Illinois.*

**Cedar-hawthorn rust** can infect several species within the rose family and cause similar foliar symptoms to cedar-apple rust. The pathogen is considered minor on apple, crabapple, serviceberry and pears. However, the pathogen can cause severe disease on certain hawthorn species (*Crataegus spp.*). The downy hawthorn (*C. mollis*) is considered very susceptible to this disease, while infections seem to be less severe on hawthorn species with glossy leaf surfaces (*C. crusgalli*, *C. viridis* 'Winter King'). This rust disease most often affects leaves, causing yellow spots that enlarge eventually and develop a

gray-brown color. Severely infected hawthorn leaves often turn bright yellow before dropping prematurely. This pathogen can also damage fruits and twigs. However, this type of injury is more likely the result of cedar-quince rust.



*Cedar-hawthorn rust on Downy Hawthorn (Crataegus mollis), Travis Cleveland, University of Illinois.*

**Cedar-quince rust** will also infect various members of the rose family. Serviceberry, chokeberry, quince, hawthorn, and apple are some of the more noteworthy hosts. Leaf symptoms for this disease are limited to infections of petioles and veins. This pathogen causes noticeable damage to stems, thorns and fruits of susceptible species. Stems and thorns may become enlarged and deformed. Fungal aecia cover infected fruit, giving them an orange, fringed appearance.



*Cedar-quince rust stem and fruit infections, Travis Cleveland, University of Illinois.*

## Disease Management

Most homeowners tolerate the injury caused by rust diseases. When controls are warranted, start with cultural practices. Remove any nearby, unwanted juniper hosts, or prune out galls from the infected branches. Be aware that spores may still blow in from neighboring properties. Select rust-resistant cultivars when planting new apples, crabapples, or hawthorns. If cedar rust diseases are a yearly problem, consider protecting high-value plants with fungicides. It is too late to protect this year's growth. Mark your calendars with a reminder to apply fungicides early next spring to protect new growth. Most fungicides are considered to be low risk to bees and other pollinators. However, some fungicides are known to synergize with other pesticides and products within the spray tank, potentially increasing their toxicity to bees. If you must apply a fungicide during bloom, we recommend selecting a pesticide that has the least toxicity to bees but is still effective against the target pest.

The Pollinator Network at Cornell University published a useful guide to help applicators select lower-risk pesticides for pollinators in landscape, ornamental & turf management:

[A Pesticide Decision-Making Guide to Protect Pollinators in Landscape, Ornamental and Turf Management](#)

Travis Cleveland

## ALLELOPATHY: A Plant's Chemical Warfare

When I think of plants that can defend themselves from pests, I think of thorns on roses or a venus fly trap, but not necessarily a black walnut tree? Besides the potential nut falling onto my head, they can pack a powerful punch on other plants. Some plants can inhibit the growth of another. This biological process is called allelopathy. Allelopathy refers to one plant's beneficial or harmful effects on another from the release of biochemicals called Allelochemicals. These allelochemicals can be used as growth regulators, herbicides, insecticides, and antimicrobial crop protection products.

The term allelopathy is from the Greek-derived com-

pounds allelo and pathy (meaning "mutual harm" or "suffering"). Gardeners and farmers have used allelopathy for many years. Allelochemicals can significantly affect the growth of other plants in good or bad ways. For example, when using straw mulch, the allelopathic chemicals from the decomposed straw act as a weed suppressant. French type (*Tagetes patula*) marigolds release a chemical in the soil, preventing root-knot nematode eggs from hatching. Sunflower, walnut, and sorghum can suppress many plants from growing near them, leaving them nearly weed-free. They can release these chemicals even in decomposition, making them a good mulch.

Common plants with allelopathic properties include

- Wheat
- Elderberry
- Red maple
- Forsythia
- Golden Rod
- Chicory
- Garlic mustard
- Sunflower
- Buckwheat
- Rye
- Tall Fescue
- Kentucky bluegrass

Now that you understand what allelopathy is, search for those plants and allelopathic as you begin to plant your garden or flower bed. This will allow you to know more about that plant and if it has those properties. A concern is that some of the allelochemicals in the decomposition of plants can be persistent, so should you notice a continual decline in your plants, you might want to remove the mulch. Composting that plant material will deactivate those residues.

Allelopathic plants use this process to survive in nature and reduce competition from nearby plants. This can mean that allelopathy can play an essential role in farming systems to control weeds, diseases, and insects. The allelochemicals are environmentally friendly and can have a great value in sustainable agriculture. There is still a lot more research to know about allelopathic plants and their properties.

*Additional Resources:*

<https://edis.ifas.ufl.edu/pdf%5Carchived%5CHS%5CHS186%5CHS186-11820230.pdf>

<https://morningchores.com/allelopathic-plants/>

<https://www.frontiersin.org/articles/10.3389/fpls.2015.01020/full>

<https://www.gardeningknowhow.com/garden-how-to/info/allelopathic-plants.htm>

Maria Turner

## Illinois Monarch Project Wings of Dreams Bio Blitz



The Wings of Dreams BioBlitz is a competitive species count between individuals, families, and organizations across Illinois. Observations gathered during the BioBlitz will provide valuable data, including populations, rare species, and species diversity in Illinois! In addition to competing in a fun tournament, you are benefiting biologists around the world with your scientific data!

Sign-up for the Wings of Dreams BioBlitz starts May 7. Participants can enter observations by posting directly to the IMP Bioblitz 2022 iNaturalist page through the Seek app from June 20 to 26. Participants are eligible for a chance to win one of 3 coveted awards, including most observations, most species, and most observed species.

View the following event flyer for additional information -

[https://securservercdn.net/198.71.233.72/hp2.923.myftpupload.com/wp-content/uploads/IMP\\_WOD\\_HowtoJoin-3.pdf](https://securservercdn.net/198.71.233.72/hp2.923.myftpupload.com/wp-content/uploads/IMP_WOD_HowtoJoin-3.pdf)

Maria Turner

## Modified Growing Degree Days

Station Location	Actual Total	Historical Average (11 year)	One-Week Projection
<b>Base 50° F - March 1 through June 6</b>			
Freeport	616	555	699
St. Charles	636	538	716
DeKalb	623	554	706
Monmouth	779	682	880
Peoria	793	719	894
Champaign	844	761	944
Springfield	879	864	988
Perry	863	807	976
Brownstown	1043	791	1162
Belleville	998	947	1122
Rend Lake	1105	1023	1228
Carbondale	1084	972	1208
Dixon Springs	1101	1004	1226

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



**Illinois Extension**

UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN

College of Agricultural, Consumer and Environmental Sciences

University of Illinois, U.S. Department of Agriculture, Local Extension Councils Cooperating.

University of Illinois Extension provides equal opportunities in programs and employment.

The mention of trade names in this newsletter is for general information purposes only. It does not constitute an endorsement of one product over another, nor is discrimination intended against any product.

©2022 University of Illinois Board of Trustees. For permission to reprint, revise, or otherwise use, contact [hygnewsletter@illinois.edu](mailto:hygnewsletter@illinois.edu)