

# Madison-Monroe-St Clair Unit

## Below the Canopy

For Master Gardeners and Master Naturalists



February  
2022



Illinois Extension  
UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN

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### 2021 By the Numbers

Thank you to everyone for your support of the Master Gardener and Master Naturalist programs last year!! **Unit Master Gardeners reported over 8,700 hours and Unit Master Naturalists reported over 4,100 hours in 2021.** We appreciate all that you do for our communities and look forward to another exciting year.

### New Certified Volunteers

Congratulations to the volunteers who have completed their internship over the past few years. We welcome **Master Gardeners, Kathy Baird, Kathryn Biarkis, Paul Brigman, Diane Diekemper, Stephen Disney, Veronica Douglas, Carla Eilers, Brenda Gray, Andrew Grull, Nancy Heimann, Angie Holliday, Zachary Jefferson, Richard Mannz, Heather Mestemacher, Pam Pinegar, Leslie Rice, Kim Rossi, Carole Valencia, and Master Naturalists Kathy Baird, Jami Bossart, Lisa Dean, Ann Glosecki, Lesley Lake, and Bill Wheeler.** Keep up the good work!!

### Coffee and Tea in 2022

Mark your calendar for the monthly Coffee and Tea Zoom programs. The additional summer and fall dates will be announced this spring.

- February 21 at 10:30 am
- March 31 at 6 pm
- April 27 at 8:30 am
- May 25 at 6 pm
- June 30 at 1 pm
- July 26 at 10 am

The program provides an informal opportunity for volunteers in the Unit to connect and share what's happening in their garden and ask questions. Elizabeth will share what's happening in her jungle, and volunteers are invited to share a presentation. It might be a presentation on a topic or it could be a project update or slide show. NOTE: We are allowing one additional presentation per month to allow time for group discussion during the programs. Email [ruth1@illinois.edu](mailto:ruth1@illinois.edu) if you would like to reserve a month.

### Naturalist Phenology for February

Compiled by Bill Klunk and Elizabeth Frisbie, Master Naturalists

Be on the lookout for:

- ⇒ Red-winged blackbirds (*Agelaius phoeniceus*) returning to our area (Male scouts arrive around the 14<sup>th</sup> followed later by females.)
- ⇒ Groundhog (*Marmota monax*) also known as Woodchucks or Whistlepigs, coming out of hibernation (In our Unit area, most Groundhogs end hibernation during the 2<sup>nd</sup> or 3<sup>rd</sup> week of February.)
- ⇒ As temperatures warm, listen for birds to begin their territorial and courtship songs. An early one is the White-breasted nuthatch (*Sitta carolinensis*). Listen for the male singing "ank, ank, ank, ank, ank, ank" or "whi-whi-whi-whi" to attract a mate later this month.

# Continuing Education Programs

## Four Season Webinar Series

Register to participate online [here](#).

The program is also available at both offices. Call or email [ruth1@illinois.edu](mailto:ruth1@illinois.edu) to reserve a spot.

- **February 15 at 1:30 pm— Organic Gardening**
- **March 8 at 1:30 pm— Shade Gardening**

## Everyday Environment Webinar Series

Register to participate online [here](#).

- **February 10 at 1 pm— Illinois Nutrient Loss Reduction Strategy Report**
- **March 10 at 1 pm— Return of Large Predators**

## Small Farms Winter Webinar Series

Register to participate online [here](#). Below is a sample of some topics that might interest MGs and MNs.

- **February 17 at 1 pm—Pawpaws**
- **March 3 at 1 pm—Introduction to Vermicomposting**
- **March 24 at 1 pm—Growing Great Grapes**

## CE Series for Master Gardeners

New for 2022, we're launching a continuing education webinar series entirely devoted to Master Gardeners. Because these webinars will be directed just towards your continuing education, we'll be able to go more in-depth into topics which will help you better your horticultural knowledge, as well as cover those volunteer specific topics that our other webinars can't necessarily delve into. Webinars will take place LIVE on the first Thursday of every month from 1:00-3:00 PM and they will all be recorded and available on YouTube following the session. Some sessions may take up the full two hours and some may be shorter.

You can register for each monthly session [here](#). Only register if you plan to attend live. Everyone will have access to the recording the day following the session. The first few months of topics are as follows:

- **March 3- Help Desk 101**
- **April 7- Common, Easy-to-Diagnose Plant Diseases**

## Nature is Local Webinar Series

Topics discuss incorporating native plants in the landscape and resources that can help. Register at [go.illinois.edu/NatureIsLocal](http://go.illinois.edu/NatureIsLocal).

- **March 3 at Noon— Enrich Your Yard with Native Plants**
- **March 10 at Noon— Prairie Establishment & Maintenance**

## Weekend Gardener

**March 5 from 9 am-1 pm**

The event is virtual and free again!! Register to attend individual sessions or all four classes. Topics include I-Pollinate, Extending the Growing Season, Growing Fruit in Containers, and Color in the Garden. Register by Feb 28 at [go.illinois.edu/WeekendGardener](http://go.illinois.edu/WeekendGardener).

## Gateway Green Industry Conference

**March 9 from 8 am-4 pm at the Gateway Convention Center, Collinsville**

GGIC has lots of great topics that offer advanced training for Master Gardeners and Master Naturalists. The target audience is arborists and landscapers, but there is still lots of info that can be used in a home garden or at project sites. Topics include urban tree diversity, xeriscaping, and native plants. To view the class listings and registration, click [here](#). Contact the office for the discount code for volunteers.

*Check out the Unit Webpage for the most up to date info.*

<https://extension.illinois.edu/mms>

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

If you need a reasonable accommodation to participate in the program, please contact the Madison-Monroe-St. Clair Unit.  
Early requests are strongly encouraged to allow sufficient time for meeting your access needs.

Wondering While Wandering  
February 2022  
Elizabeth Frisbie, Master Naturalist



Sitting in my kitchen watching the snow fall in the woods I spotted movement out of the corner of my eye. Glancing down, I discovered a Brown Marmorated Stink Bug (*Halyomorpha halys*, Stål) overwintering in my house traveling across the floor. Like Asian ladybeetle (*Harmonia axyridis*), various Spiders, and Cockroaches, adult Stink Bugs come into our homes during autumn for a warm space to survive the cold winter months. But what of their counterparts who remain outdoors? How do other insects survive the year's coldest season?

Insects are ectotherms, meaning they must generate their own heat and will die if the temperature of their environment falls below the melting point of their body fluids. This leaves insects two choices for their survival: avoid freezing altogether or adapt so they can tolerate freezing. Seeking warm shelter (such as home invasion) and migration are the primary ways insects completely avoid freezing temperatures. By leaving the freezing environment for a warmer one, these insects may remain active, often in the adult stage of development, throughout the winter. In our region, Asian ladybeetles and Stink Bugs are common home invaders while the Monarch Butterfly (*Danaus plexippus*) is a popular example of an insect that migrates to a warmer climate by flying to Mexico.

For the insects that remain outdoors, adaptations are required in order to survive. Many types of insects overwinter in a non-adult stage. Their egg, nymph, pupa or larva use sheltering strategies in microhabitats to prevent freezing. For example, Flies (*Diptera*) overwinter in either the larval or pupal stage under manure or leaf litter piles or other protected locations. The Woolly Worm/Bear Caterpillar, the larval stage of the Isabella tiger moth (*Pyrrharctia isabella*), curls up to hibernate under the protection of heavy leaf cover. Many Dragonflies (*Anisoptera*) and Mayflies (*Ephemeroptera*) are active during the winter, feeding and growing in their nymph stage under the ice in ponds or streams. Moths in the Silkworm Family (*Saturniidae*) overwinter as pupae attached to a food plant branch. Several species of insects, including Japanese Beetles (*Popillia japonica*) overwinter as grubs burrowed deep in the soil below the frost line to survive. Last, a few insects spend winter in their egg stage. In Illinois, the most common example of this is the Praying Mantis (*Mantodea*).



Insects overwintering in their adult form have evolved two major survival strategies. Freeze-avoidant insects keep their body fluids liquid while freeze-tolerant insects manage the formation of internal ice. In locations such as ours where winter is characterized by long periods of cold temperatures, the dominant strategy is freeze avoidance. This is achieved in several ways. Some insects enter dry hibernation, getting rid of all the food and water in their bodies so that ice cannot form and kill them. A thick waxy coating on their exoskeleton that protects against ice formation keeps other insects alive. Other freeze-avoidant insects produce cryoprotectants which act like the antifreeze in our cars. These chemicals, composed in part of sugar and glycerol, replace the water in the insect's body, thereby reducing the lethal freezing temperature.

Utilizing the above strategies, the majority of adult-stage insects then enter into a state of either diapause or hibernation. Diapause is defined as "a physiological dormancy induced by certain adverse environmental conditions." The insect's metabolism slows down and their growth and development temporarily cease during diapause. Diapause differs from hibernation because the state of being is caused by environmental changes like colder temperature and shortening daylight. As the insect's body notices these changes, the state of diapause automatically sets in. In contrast, other insects, like their mammalian counterparts, actively prepare to enter hibernation, a condition of inactivity wherein the creature is in a deep resting state with very slowed heart and digestion rates, but some growth may occur. Insects that hibernate seek out warmer, sheltered spaces in which to

hibernate going underground, wriggling between a tree's bark, entering humans' homes or burrowing under rocks and leaf litter. Examples of insects that hibernate in our region include: Yellowjackets (*Vespula spp.* & *Paravespula spp.*), Wasps (multiple families/types in IL), Hornets (*Vespa spp.*), Woolly Worm/Bear Caterpillar and female Mosquitos (*Culicidae*) (the males die at the end of the season; only the females overwinter). Some insects' hibernation process is similar to that of mammals. These insects complete "traditional hibernation," eating as much as they can to fatten their bodies prior to seeking shelter and then entering a very slow metabolism state. It is these insects who flood their bodies with cryoprotectants to keep from freezing. Other insects enter a state of "dry hibernation." Rather than eating as much as they can before hibernating, these insects rid their bodies of food and liquids. Since water must adhere to particles to crystallize and turn into ice, if there are no particles within the insects' body, water has a very low freezing point. In fact, water can cool down to -43.6°F without freezing if particles are absent! Thus, insects in a dry hibernation state can survive in extremely cold temperatures.



Last, but certainly not the least, Honey Bees (*Apis mellifera*) take a completely different approach. Rather than hibernate, these Bees remain semi-active during the winter, sheltering in hives or hollow trees. They generate extra heat for survival in several ways. As temperatures fall, Honey Bees form population clusters. The overwintering Bees consume extra food (up to 30 pounds of stored honey for those studied in hives) and heat energy is then produced by the oxidation of the honey. Next, worker bees circulate the heat energy throughout the hive by fanning their wings. Researchers also believe that individual bees are able to raise their body temperature by vibrating their wing muscles. (This process is similar to shivering, a survival strategy used by birds wherein muscle tremors in the body increase internal body temperature.)

References: Brody Brothers Pest Control; Hodgson, Dr. Erin (Department of Entomology, Iowa State University); IDNR; IL Field Museum; www.rescue.com; Smithsonian Institute: National Museum of Natural History Information Tip Sheet #65; U of I Extension "Where Did All These Insects Come From?"

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### ***Citizen Science Volunteer Opportunities***

Looking for a volunteer opportunity you can do from home? Check out these Citizen Science programs. You report what you see in your backyard to help scientists learn what's happening in our area.

#### **Great Backyard Bird Count**

**February 18-21**

Share information about the local area during the Great Backyard Bird Count on February 18-21. Monitor your backyard, park, or natural area for at least 15 minutes for as many times during the count time as you like. Upload the data to the website. For more details about the event and to learn how to record your observations visit [www.birdcount.org](http://www.birdcount.org).

#### **I-Pollinate**

**Spring/Summer**

A research initiative, through the University of Illinois, Urbana-Champaign, designed to collect state-wide pollinator data. I-Pollinate enlists citizen scientists to participate in three research projects and collect data on monarch egg and caterpillar abundance, pollinator visitation to ornamental flowers, and state bee demographics. Visit <https://ipollinate.illinois.edu/> for more info. Participate in the training now, so your garden can be ready to go in the spring. The self-paced online training is available now.

# Welcome to My Jungle

By: Dr. Elizabeth Wahle, Extension Educator



*My Jungle the previous May (L), then in early February before (C) and after (R) the start of the first big snow of 2022.*

How perfect for Punxsutawney Phil to predict six more weeks of winter on the day when snow was falling heavily in the St Louis Metropolitan. School would have been cancelled when and where I grew up in Indiana on a day like that. But because of COVID-19, snow days for students are coming to be a thing of the past with our increasing ability to switch rapidly to remote learning. Remembering my growing up in the 60s and 70s, one of the local banks maintained a phone service that provided the time and temperature, plus any announcements of a school delay or closing. There was no internet, so my brother and I would dial the number repeatedly until we got a ring rather than a busy signal, then wait with anticipation to hear whether our day would be one of freedom with friends. Phones used to have an actual dial, so it was tedious work to call repeatedly after getting a busy signal because every other kid in the county was calling too.

When I can't be out gardening, my mind always turns to the study of new plants for possible trialing, which usually leads to the very enjoyable process of plant sourcing and acquisition. But sometimes you just can't find a plant you are looking for or others keep beating you to it. Seeds are a nice alternative, plus it is usually cheaper if you want more than one plant. Most temperate perennial seed have a stratification (warm and/or cold treatment) requirement before germination can occur, and its up to the gardener to provide those requirements. Most temperate perennial seed you buy is not stratified because it keeps longer in the unstratified state. Once a cold treatment (~34-41°F) for example has been met, the seed will lose viability if not kept chilled or planted in suitable growing conditions.



*Temperate perennial seed set outside for the winter to meet chilling needs, plus covered with hardware cloth to prevent seed predation by squirrels and other rodents.*

Over the years, I have grown a lot of temperate perennial seed that varied in their needs for breaking dormancy. Many just need simple dry/cold treatment for a month or two, and in that case the desired number of seed (or the whole packet if you need that much) can be placed in a sealable bag in the refrigerator for the required amount of time...the sealable plastic bag or storage container prevents dehydration of the seed. If I am really on top of things, I just plant in the fall and let Mother Nature provide the chilling. I have some really astute squirrels though, so I tend to plant seed in pots and leave them outside for the winter with a frame of hardware cloth over the top for protection. Once they grow to transplant size, I move them to their intended site. Some seed need a warm dark period before a cold moist period. In that case, a grow mat for heat and aluminum foil over the pot to block light works, then it can go outside for the winter if you time it right, or the whole pot can go in the refrigerator.

American ginseng seed (*Panax quinquefolius*) as an exception is commonly available pre-stratified because it requires a full year of cold/moist stratification, creating a market for growers like me who don't want to wait that long by doing it themselves. But much like pawpaw (*Asimina triloba*) seed, the American ginseng seed should never be allowed to dry out and needs to be planted as soon as possible following stratification.

I recently found a seed source for downy lobelia (*L. puberula*) and the seed is reported to need 60 days of moist, cold stratification. Since I am running a bit late for Mother Nature to reliably provide my chilling needs, my plan is to use the refrigerator. Normally, I would just place larger seed between moist paper towel or moist sand in a sealable bag, but Lobelia seed is like dust, so I plan to sow the seed on the surface of a small pot of moist sand. The whole pot will go in a plastic bag to retain the moisture before going into the refrigerator for a few months. If all works as it should, the seed will germinate once I bring the pot out of the refrigerator and expose it to light and warmth.



*American ginseng seedling grown from purchased seed that had been pre-stratified(cold/moist) for an entire year.*

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