

Madison-Monroe-St Clair Unit

Below the Canopy

For Master Gardeners and Master Naturalists



March
2022



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Office Support Associate

Patty Stanton
Office Support Associate

Staff Updates

Patty Stanton is retiring on March 31. She worked in the office for 23 years, and she has been a tremendous help with a variety of programs. Patty has supported volunteer trainings, the helpline, garden tours, and Gateway Green Industry Conference just to name a few of her favorites. She declined having an open house, but welcomes visits, phone calls, emails or cards. We have been appreciative of her support over the years, and she will be missed by many.

Paige Brown resigned as Office Support in early March. Paige worked in the Waterloo office as the fiscal secretary. She has taken a new position with Washington University.

Nicole Hellon joined the Unit on January 5. Nicole works in the Collinsville office primarily, and she has been training with Patty and Paige. She has enjoyed the opportunity to meet some of the volunteers and looks forward to meeting even more in the future.

Replacement Name Tags

If you have a broken name tag or can't find it, let Sarah know by April 30, so we can order a replacement.

Horticulture Helpdesk Workers

The gardening and natural resource questions have started coming into the office. If you would like to answer questions from home, please let Sarah know. We can email you questions in categories that you are comfortable in answering. If you would like to answer questions at the office, the help desk is open at both offices. Please notify the office which days you would like to work. The helpline is traditionally open from 9 am to noon, but if you would prefer to work in the afternoon, please let us know.

RiverWatch Training Opportunity

Protect Illinois Waterways by becoming a RiverWatch Citizen Scientist. Upon completing training and becoming certified, volunteers adopt a stream site and examine indicators of water quality like stream habitat and the diversity of species such as dragonfly nymphs, beetle larva, midges, and snails. Citizen scientists play an important role in helping identify potentially degraded waters and areas that may need better protection. Training is offered Sunday, April 3 at Lewis & Clark Community College, Godfrey. Register [here](#).

Naturalist Phenology for March

Compiled by Bill Klunk and Elizabeth Frisbie, Master Naturalists

Be on the lookout for:

- ⇒ Increasing Spring Peeper (*Pseudacris crucifer*) frog populations singing (chirping) in ponds, vernal pools and lakes
- ⇒ Early spring wildflowers such as Eastern spring beauty (*Claytonia virginica*) to bloom
- ⇒ Eastern Mole (*Scalopus aquaticus*) to move nearer the surface and begin to dig shallower hunting tunnels (visible on the surface)

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 to reserve a spot.

- **March 29 at 1:30 pm— Pelleted Seed**
- **April 26 at 1:30 pm—Jumping Worms**

Everyday Environment Webinar Series

Register to participate online [here](#).

- **March 10 at 1 pm— Return of Large Predators**
- **April 14 at 1 pm— Illinois Archaeology and our Natural Resources**
- **May 12 at 1 pm— Geothermal Energy**
- **June 9 at 1 pm— The Conundrum of Common Names**

Small Farms Winter Webinar Series

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

- **March 24 at 1 pm—Growing Great Grapes**

Forestry Spring Webinar Series

Wednesdays, March 30-May 25 from 2-3 pm.

Illinois Extension Forestry team will lead a nine-session series for woodland owners. The series is free and open to the public and will explore how landowners can manage their trees for better return on investment, improve habitat for wildlife species, learn more about the native ecosystems and restoration potential, and mitigate forest threats such as forest pests, invasive plants, and storm damage. Sign up for one session or the whole series [here](#).

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 following the session. The first few months of topics are as follows:

- **April 7- Common, Easy-to-Diagnose Plant Diseases**

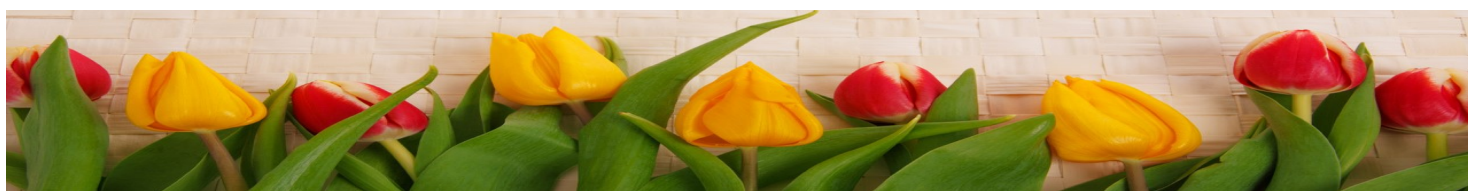
Color of Spring

March 26 from 9-11:30 am at Waterloo office

Topics for the day include Compost and Fertilizing, Beneficial Insects and Tree Care. The program costs \$5. Register [here](#) by March 21.

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.

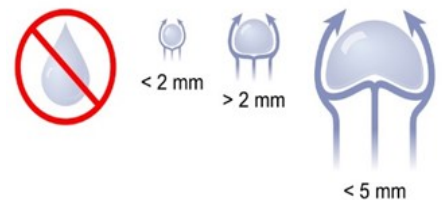
Wondering While Wandering
March 2022
Elizabeth Frisbie, Master Naturalist



Many of us love a “good storm,” which makes sense since storms are such a powerful and sensory experience. Some people enjoy watching the cloud formations or the front roll in. Others love the feel of the wind or raindrops on their faces or the sound of the rain falling or thunder crashing. Some individuals love the aftermath best, finding the unique smell post rainfall refreshing. After our recent storms I began to wonder what creates that distinct smell and why sometimes falling rain feels gentle on one’s skin while other times it seems to pelt us.

As we all know, rain is an essential part of our planet’s water cycle; it is responsible for depositing most of the fresh water on our planet. Historically, Earth has experienced rain for a long time. Fossils dating back to 2.7 billion years ago show indentations of raindrops. These drops fell on layers of ash from volcanic eruptions and then more ash fell on top, preserving the marks made by the raindrops. Today, the Earth’s globally averaged annual precipitation is 990 mm (39”). Antarctica is the driest continent, tallying only 6.5” of rain or snow annually while North America’s annual average is 256” of rain. Modern meteorologists categorize rain into four main types. Frontal rain involves a cold, polar air mass encountering a humid, tropical air mass, causing stratus clouds to form as the air in the warm front rises above the cold front and is cooled and therefore condenses. Orographic rainfall happens when moist air is lifted as it moves over a mountain range. The rain falls upwind of the mountain range as the air rises and cools down. Convective rainfall results from the sun heating the Earth’s surface causing water vapor to form through evaporation. As the land heats and warms the air above it, the air expands and rises. The rising air then cools and condenses resulting in rain. Monsoonal rainfall is a result of a seasonal change in the direction of a band of winds at 30° north and south latitude combined with the sun’s heat. In our region, two types of clouds almost always result in rain within 24 hours: cumulonimbus (tall, puffy cloud that appears flat at the top) and nimbostratus, a flat and gray low-level cloud. Interestingly, rain is supposedly the reason we have daily weather forecasts today. According to the story, an American owner of a radio station was caught in the rain. As a result, he decided that the potential for rainfall should be discussed several times a day on his station. Other stations began to do the same and weather forecasting, especially about rainfall, became a standard feature on radio and later television.

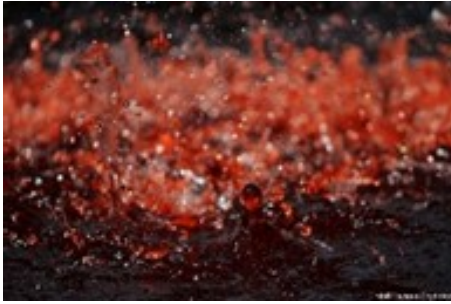
Most of us have an incorrect perception of what raindrops look like. Their shape is determined by their size and falling speed but in no case does a raindrop look like a teardrop! Falling raindrops’ sizes are determined by several factors including where the drop originates in the cloud and where the cloud is located on the planet. As water molecules condense and bind together prior to falling, their shape is fairly spherical. Drops less than 2mm while falling remain spherical in shape and are called cloud droplets. Once above 2 mm size, the bottom of the sphere begins to flatten as it falls because of the air pressure it encounters during the fall. This results in most raindrops resembling the top half of a hamburger bun (flat bottom with a curve domed top) instead of a teardrop shape.



Even though raindrops are very small (ranging in sizes from 0.1 to 9.0 mm), the weight of rain is substantial! Scientists figure that an inch of rain spread across an acre of land is equal to about 27, 154 gallons and weighs approximately 226, 000 pounds (113 tons). When all the rain falling across the world is combined, it is estimated that 1 billion tons of rain falls on the Earth every minute!

When it comes to speed, the size/weight of each drop determines how quickly it falls. Calculated at sea level and in no-wind conditions, drizzle (sized 0.5mm) falls at 2 m per second (6.6’ / sec) which is 4.5 mph while large drops (5 mm/0.2”) impact at 9 m per second (30’ / sec) or fall at 20 mph. On average raindrops fall at speeds between 5 and 18 mph. However, the maximum speed can reach 25 mph. When figuring from a typical cloud height of 2,500’, an average size raindrop falling at 14 mph takes about 2 minutes to reach the ground. Smaller raindrops may take up to 7 minutes to fall from 2,500 feet. When rain falls quickly, it hits much harder and can damage plants or feel painful on our skin. Thankfully, atmospheric pressure slows most rain down and prevents this damage.

Especially in spring, the grass may look greener and the air smells fresher after a rainfall. These are not misperceptions. Rain drops contain dissolved nitrogen from the air. This acts as a natural fertilizer and makes the grass appear greener after it rains. The fresh, post-rain aroma is called petrichor. “Petrichor” is a Greek word composed of “petra” which means “stone” and “ichor,” the fluid believed to flow in the veins of the gods in Greek mythology. The fresh smell comes not from the water but from the molecule geosmin, produced by streptomycete, microscopic soil-dwelling bacteria.



As rain falls on dry soil, it creates air pockets containing small amounts of geosmin. Other rain drops release the air pocket, dispersing geosmin into the air resulting in the fresh smell. Aerial spores may also impact human’s experience of rain. For instance, since Homer’s time (c. 8th century BC), episodes of blood rain have been recorded. Prior to scientific research, humans believed this red rain was actually blood falling from the sky. Today, consensus is that aerial spores of green microalgae *Trentepohlia annulata* cause the falling rain to turn red. Green, black and yellow rain have also been reported.

References: National Geographic Society, Old Farmer’s Almanac, Scientific American, www.weather.gov

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