March 2021

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Cross Timbers Master Naturalist Newsletter

President's Pen — Sharon Hamilton

"Life is nothing but an electron looking for a place to rest."- Albert Szent- Györgyi

Why would this renowned scientist* make such a silly statement? Because, at the smallest level, he is correct.

All over planet Earth, with a few exceptions, the source of energy that wrenches electrons away from their rest is the sun. Solar energy drives life. Partners in this electron-energy capture are molecules you may remember from high school biology: the chlorophyll every green leaf and the various enzymes plant cells make.

Where do these unfortunate electrons come from? Water! Using the sun's energy, chlorophyll tears water molecules apart, discarding oxygen gas as a by-product. (Don't forget oxygen; we'll see it later.)

Green plants, using our hapless electrons and carbon dioxide molecules like Lego blocks, build organic compounds that constitute their bodies and feed almost all the herbivores, predators, and decomposers in our Biosphere. Probably the most abundant enzyme of Earth is Rubisco, the plant molecule that "fixes carbon," enticing electrons and carbon atoms to forge bonds and build organisms.

But back to the electrons—they are carried along inside plant compounds, stored in roots, fruits, stems, and leaves, often ingested by consumers. We use them as our energy sources! All of the chemical reactions in our bodies depend on the foods we eat.

Inside our cells, billions of tiny mitochondria (yes, the "powerhouses of the cell") grab the electrons from organic compounds, harness and extract their energy, and dispose of them. We use the energy to hike into nature, to dig and transfer native plants to restore depleted landscapes, to clear the ice off our sidewalks and vehicles, to provide seeds for cold, hungry birds and squirrels, and to hold tight to our loved ones.

The substance that finally accepts the energy-exhausted electrons is oxygen gas. The product—the resting place—water. Or as anyone who has seen Disney's The Lion King may all it, the "circle of life."

Yes, life depends on electrons looking for places to rest. But how profound are the creatures and processes Nature has invented for them to do so!

*Szent-Györgyi was a Nobel Prize winning biochemist who first isolated vitamin C and was active in the Hungarian resistance during World War II.

Page 2 Plant of the Month-Carolina Phlox: Josephine Keeney

Carolina Phlox, Thick-leaf Phlox, Phlox Carolina.

This lovely Texas native is a perennial herb with an intoxicating fragrance. Its native habitat is woodland edges and clearings. It is found from northeast Texas to Georgia and north to Maryland.

The erect stems grow up to three feet tall with a gorgeous cluster of fuchsia pink flowers at the top. The bloom period lasts two or three months, starting in June and lasting till the end of September.

If the stems are cut back by about half, after the blooms fade, it will re- bloom again in a few weeks, making the bloom season very long.

This beautiful flower can tolerate some shade but it will do best in full sun. It has a tendency to develop powdery mildew, if it doesn't get enough light. Carolina Phlox loves moisture, so keep it moist but not soggy.

It is best propagated by division or cuttings, which are very easy to root. As the plant becomes older it comes back stronger every year. This plant does very well in north central Texas if given appropriate moisture.

The stock I have came from a cutting started by a friend's grandmother from Cooper, Texas who found this Phlox in a meadow.

There are many native Phlox in Texas.

Drummond phlox, Phlox drummondii,
Rio Grande Phlox, Phlox glabriflora
Texan Phlox, Phlox nivalis subsp. texensis
Downy Phlox, Phlox pilosa subsp. latisepala
Goldeneye Phlox, Phlox roemeriana
Pointed Phlox, Phlox cuspidate
Wild Blue Phlox, Phlox divaricata
Threadleaf Phlox, Phlox mesoleuca
Santa Fe Phlox, Phlox nana
Trailing Phlox, Phlox nivalis
Oklahoma Phlox, Phlox oklahomensis
Prairie Phlox, Phlox pilosa
Streamside Phlox, Phlox pilosa subsp. riparia
Cold-Desert Phlox, Phlox stansburyi
Threeseed Phlox, Phlox triovulata

Above-Close-up flower

Below— Flower Bed



Page 3 Get to Know CTMN Member: Kevin Pajak - Carol Marcotte

What year did you get certified? I earned my certificate the same year that finished training. That was a fun class. Mom, who had cancer, took the classes with me. One of her best moments in life, she said was becoming a Master Naturalist. So it was double special for me. Mom soon passed after this, but the memories of it and how wonderful we are to each other will last a lifetime.

What do you do for fun? I am a hobbyist writer. I also love working on our 13.2 acres. Melinda has me jumpin'.

Do you work? I am an adjunct Professor at TCC south campus. I earned my M.A. in Rhetoric at UTA.

Do you live somewhere very special? Yes. I live with the light of my life, Melinda. How does that influence your MN interests? She makes me do stuff.

Do you have a special interest as a Master Naturalist? I love River Legacy. Also, I literally grew up at the Fort Worth Museum



of Science and History. I popped out and mom slung me under one of the lab tables in the science department. I spent my days there doing natural science and (when I was old enough) joining the Science Club. We would go on science outings and go on weekend and week long camping trips. Needless to say, I have been peering into nature's mysteries all my life. From 1988 to 1993, I moved to California to get to know my Dad. He and mom divorced when I was eight. While out there, I became a hippie and a nudist. I also started touring with the Grateful Dead.

Tell us about your family. Zane never met a stranger and he absolutely loves Frank. We all love volunteering and nature.

What advice do you have to the next generation of MN? Network and volunteer in more than one place. And... Never see trash as failure. A lot of trash means that people who don't get out into nature ARE getting out into nature. That is the start. These new people just need some guidance to understand their role in nature. Trash is NOT defeat. It is an opportunity to educate and help others while they learn how magic nature is.

Bug of the Month: Leaf-footed Bug, Acanthocephala terminalis—Carol Marcotte

While walking in my backyard during the last couple of days of the mid-February snow, I found this Leaf footed Bug lying on top of the snow. It was frozen. It looked as if it fell out of the sky onto the snow.

From my research I learned the adults are active late summer to early fall. He must have gotten lost.



Page 4 Featured Project: Citizen Science--Armchair Botanist, BRIT – Sharon Hamilton



"Texas sits at an ecological crossroads, with extreme gradients and biological diversity. Over 200 years' worth of herbarium specimens lie in the "dark," unavailable for researchers to access unless they physically visit the herbaria. Help BRIT liberate this data for research and education.

Your contributions add to data needed to answer many scientific questions: to uncover patterns about species richness and diversity with regard to climate and spatial gradients; to investigate vegetation responses to climate change; and to inform land management practices." —Tiana Rehman, BRIT Herbarium Collections Manager

Activities: View online images of herbarium specimens of Texas plants. Read and transcribe the labels into an online database so that all researchers can search for and access the specimens. Over 1.4 million specimens are waiting for you!

As you transcribe specimens, you will learn a lot about the native flora of Texas, about how different plants are classified, and about the history of botanical research and collections.

Training: Zoom training sessions every Wednesday at noon. The invitation for that informal Zoom session is available the day of the event at www.brit.org/armchairbotanist. This live Zoom training qualifies for one hour of AT credit.

Concerned you don't know enough about naming or classifying plants?

Don't worry! Quality control processes are in place. **Three people independently transcribe each specimen, so your work will be reviewed.** An "in-app" chat group and "Help" are available. A built-in tutorial is available once you register with the website www.notesfromnature.org.

Dates and Times: Your own schedule: Contributions range from 5 minutes to 5 hours a week. Each specimen takes about 4 minutes to complete.

Location: Anywhere with a steady internet connection! Use your desktop or tablet.

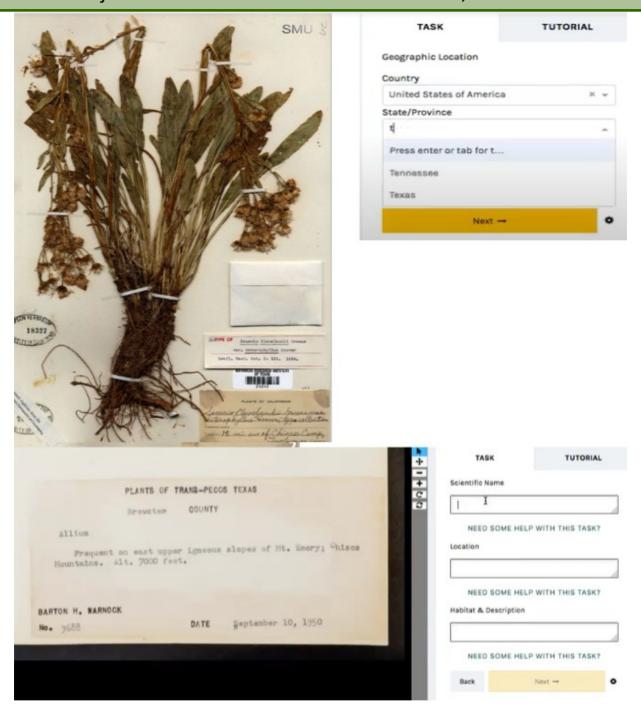
How do I participate?

Contact Tiana Rehman, Herbarium Collections Manager: trehman@brit.org

Or go to: www.brit.org/armchairbotanist

A pre-recorded Zoom training session is here: https://www.youtube.com/watch?v=Qxrl3RwUL_4&feature=youtu.be (No AT hours granted for viewing this pre-recorded session.)

Page 5 Featured Project: Citizen Science--Armchair Botanist, BRIT – Sharon Hamilton



Get to know the work of major botanists such as Barton Warnock and L.H. Shinners.

Images captured from

https://www.youtube.com/watch?v=Qxrl3RwUL_4&feature=youtu.be

Page 6 RMP Duck Pond, Arlington and Rainbow Trout with Nick Griffin-- Carol Marcotte

It's Wednesday February 10th. Temperature is 27 degree F – cold. I drive to Randol Mill Park Duck Pond to meet Nick Griffin and Andy Wallace with Texas Parks and Wildlife Department, Inland Fisheries Division. Yes, it's the same

Nick Griffin who taught a mammalogy class to our 2020 Fall Trainees.

We are waiting for Elizabeth to deliver over 1000 Rainbow Trout to the pond. She's driving 1.5 hours this morning from Texas Freshwater Fisheries Center (TFFC), Athens Texas. She arrives. Elizabeth is in a pickup truck with what appears to be 2 tanks and long tubes in the bed. She skillfully backs up to the shore of the pond. First, she tests the water temperature. Nick takes his net, scoops out some Rainbow Trout from a tank and puts them into the water. He waits and observes his test trout for shock.

With mutual consent 1,003 Rainbow Trout, Oncorhynchus mykiss, are released from the tanks, through the tubes into the chilly pond water. According to Griffin "These Rainbow Trout are on average 8-10" long and

1 year old. In the wild, a female trout is 15-16 inches at around age 2, while it takes a male 3 years to reach that size range. The trout we release are stocked to be caught and harvested. They will not survive the warm water temperatures we get."

The Rainbow Trout eats primarily invertebrate larvae, insects and smaller fish. Predators in RMP pond are humans, snapping turtles, and birds, like heron and kingfisher. Fisherman appeared right away on the shore of the pond armed with their rods and reels. "Fisherman will follow the trucks to our delivery ponds, lakes or rivers. They know when and where our truck will arrive." Griffin said.

Want more fun? Bring your friends and family is enjoy "Take Me Fishing" at TPWD Fly Fest, Saturday March 13, 2021, 8:30 am - 5:30 pm, River Park Trailhead, 3100 Bryant Irvin Rd, Fort Worth, TX 76109



Learn more about Texas Freshwater Fisheries Center at

https:// tpwd.texas.gov/spdest/ visitorcenters/tffc/ facts/







Page 7 Trees of the Cross Timbers Series – Mexican Plum (Prunus mexicana) – Carol Marcotte

Whiling walking through the woods in early spring, you may come across a native tree of white surprise. More than likely it's a Mexican Plum.

This tree blooms from February, March and April.

The leaf has double row of fine teeth, green to red fruit, smooth bark.

This tree grows at a slow rate, with height increases of less than 12" per year up to 15-35 ft. tall.

Plums turn from green to yellow to mauve and then finally to purple as they ripen from July through September. The fruit is eaten fresh and made into preserves, jelly, and is also consumed by birds and mammals.

Larval Host: Tiger Swallowtail, Cecropia moths

References: https://www.wildflower.org and http://ctufc.org







Page 8 NICE! Plant of the Season: Avon Burton

NICE! Native Plant Partners is collaboration between the Native Plant Society of Texas and local nurseries to offer natives that are right for the local environment. Our goal is educate the public and promote the use of native plants. Why? Native plants provide a beautiful, hardy, drought-resistant, low maintenance landscape while benefiting the environment. Native plants, once established, save time and money by eliminating or significantly reducing the need for fertilizers, pesticides, water, and lawn maintenance equipment. Let's be nice to the environment and use native plants.

Support our NICE! plant partner nurseries - Eco Blossom Nursery, Marshall Grain, Queen Bee's Garden, Stegall's Nursery, Stuart Nursery, and Weston Gardens in Bloom. We are interested in growing NICE! with more nursery partners. Recommendations welcome.

NICE Spring 2021 Plant of the Season is Prairie Verbena, *Glandularia bipinnatifida* .



Prairie Verbena, Photo courtesy of Avon Burton

Call or visit one of our participating nurseries listed below to ask about the plant of the season.

EcoBlossom Nursery

Online shop with delivery - Contact Anna Hurst (817) 720-5970

https://ecoblossom.com/

Weston Gardens in Bloom

8101 Anglin Drive, Fort Worth, 76140 (817) 572-0549

www.westongardens.com

Stegall's Nursery

5652 Wilson Road, Fort Worth, 76140 (817) 483-0682

www.stegallsnursery.com/

Marshall Grain Garden Center

3525 William D Tate Ave., Grapevine, 76051 (817) 416-6600

www.marshallgrain.com

Queen Bees Garden

200 E Main Street, Azle, 76020 (817) 444-2400

www.queenbeesgarden.com

Stuart Nursery

2317 Fort Worth Hwy, Weatherford, 76087 (817) 596-0003

www.stuartnurseryinc.com

Page 9 City Nature Challenge 2021

City Nature Challenge 2021: Dallas/Fort Worth

April 30, 2021 - May 3, 2021

Join Texas Parks and Wildlife, Texas Master Naturalists, the Nature Conservancy, the Audubon

Society, and many others in a fun challenge to see which city can document the most species during

April 30 - May 3. It is easy to participate by joining an event or making observations on your own using the iNaturalist app. With the iNaturalist app, you just take a picture of a plant or animal, and the community will help identify which species it is. Any observation in the greater metropolitan area of Dallas/Fort Worth will count during the four day challenge. You can participate by exploring the life in your backyard, in your local park, or on a field trip with your local naturalist group. You can also help with IDs for other people's observations to increase our species count, come to a bioblitz, or even hold your own event!

The City Nature Challenge is organized by Natural History Museum of Los Angeles County and California Academy

of Sciences.



Mountain Bluebird at Benbrook Lake

Glenn Butler

March 2021

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	I	2	3	4	5	6
	E	G	F	А, В,		В, F
7	8	9	10	11	12	13
		К	F, H	A, B, J		В, М
14	15	16	17	18	19	20
	D		F, C	А, В Ј,		В
21	22	23	24	25	26	27
			F	А, В,		В
28	29	30	31			
			F			

- A-FWNC- Restorative Greenhouse from 9:30-11:30 AM
- B- FWNC- Natural Guard- Outdoor Conservation from 9 AM to 12 PM
- C--Sierra Club Monthly Meeting via Zoom. Via Facebook or Meetup.
- D- CTMN Monthly Chapter Meeting via zoom
- E- CTMN Board Meeting, contact a board member if you would like the Zoom link.
- F— Molly Hollar Wildscape Volunteer Opportunity from 9 am –12 pm. The mini class has been canceled until further notice.
- G-BRIT Brown Bag Lecture from noon to 1pm, more info HERE
- H- On the trail for Texas Screwstem, 10:00 p.m. 1:00 p.m. Register HERE
- I— Tarrant County SW Sub Courthouse Garden Volunteer Opportunity from 8am –12 pm. Contact Gailon Hardin J-Southwest Regional Hulen Library Native Plant Demonstration Garden on the 2nd and 4th Thursday of each month. Saturday can be scheduled with leads. From 8:30 to 12:30 am (Summer 7:30 to 11:30 am). Contact Theresa Thomas
- K- Texas Master Naturalist Virtual Trainings #TMNTuesdays!
 L- NPSOT Spring Symposium, 9:45-3:15, Register HERE, \$20 for members, \$30 for nonmembers
- M- OS Gray 9-12 am/pm.
- *The State has imposed significant restrictions to all face to face events due to Covid-19, allowing only mission critical activities

Guidelines are in effect until January xx and will likely be extended beyond that date. Contact project leader for information specific to the worksite before traveling to any event listed below.

** For contact numbers and more information check out the website calendar