



Naturalist Notes

President's Note

Hello Gulf Coast Members,

It is hard to believe that we are half way through the year, but it is true. And the Summer temperatures are a reminder of that!

Our July chapter meeting will be on the 11th (second Thursday, due to the holiday on the 4th) and it will be an awards meeting. Please make sure all of your volunteer and AT hours are up to date and email the board if you are due for certification, recert or a milestone award. Please note: Our membership director, Mary Horn, has announced that the "45 day rule" for entering hours is steadfast. The state office is no longer allowing wiggle room on this. Special circumstances require a special request to be made.

I look forward to seeing you soon,

Julia Trimble, President
Texas Master Naturalist - Gulf Coast Chapter
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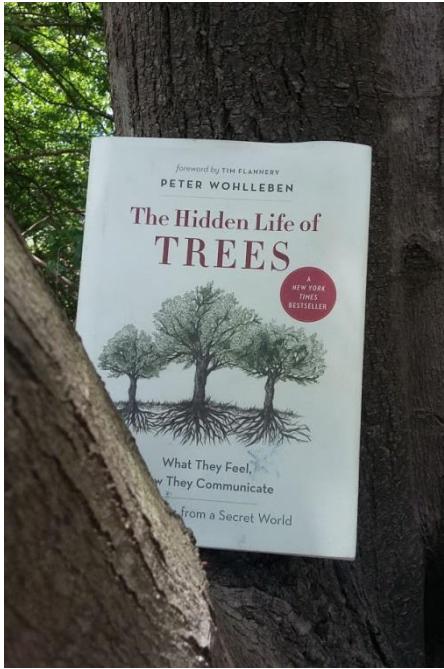
Left to right - Alisa Kline, Sophia Havasy, Michelle Broussard, Hilde Berry (guest), Irmie Willcockson, Jenn Drummond, Julia Trimble.

Zoo Trip to New Texas Wetlands Exhibit

A few of us braved the heat to check out the new Texas Wetlands exhibit. Many of us remember the old duck pond, this exhibit is in the same location, but completely different.

A large enclosure takes advantage of the mature trees, and visiting ducks. Smaller enclosures hold a pair of whooping cranes, a bald eagle, and two smallish American alligators.

Although I personally prefer 'real wetlands' such as Brazos Bend, it's worth checking out.



Book Review

The Hidden Life of Trees - What They Feel, How They Communicate

2015, Peter Wohlleben, available at Houston Public Library and Amazon

A great book changes the way you look at the world. Peter Wohlleben's book has changed the way I experience trees. For example, in Chapter 2 The Language of Trees, the author discusses examples of trees using scents to warn other trees of approaching herbivores. Trees therefore have a sense of smell. Trees also react to insects attacking by sensing each insect's unique saliva. Trees therefore have a sense of taste. In the lab, the roots of grain seedlings 'crackled' at 220 Hz, and seedlings exposed to this frequency of sound oriented their roots towards it. Therefore trees may also have a sense of hearing.

Although many times slower than humans, trees also use electrical signals to communicate with each other. Just as important as the trees themselves are the network of fungi that connect trees to each other. Fungi exchange both messages and nutrients between trees.

Other chapters describe the differences between a forest managed for timber and a forest left largely unmanaged, the importance of straight trunks and symmetrical crowns, and how trees sense the number of hours of daylight to determine when to unfurl new leaves in the spring, just to name a few. Each chapter is short, making for bite-sized reading.

Peter Wohlleben's personal experience grew in the forest close to Huemmel, a small community in the Eifel mountains, over decades as a forester. He not only draws on his experience but presents insights from scientists studying forests in both the field and the laboratory.

I highly recommend this book to anyone who is looking for a new perspective on trees.



Join HNPAT on July 20th at the Deer Park Prairie for snacks, a walk on the prairie, and mothing. For other public events visit <http://nationalmothweek.org/events-map-2-2/>

Thistles and not thistles

Thistles are in the same family as sunflowers, *Asteraceae*. There is something both unexpected and fitting in this. People who know almost nothing of flowers would, I imagine, have the best chance of identifying three flowers: roses, sunflowers and thistles. Each of these flowers are so particular and unlike other flowers that we almost always recognize them. It's one of those tricks nature likes to play on us, to have two things deeply related and vastly dissimilar.

Thistles almost always have spines. Spines and thistles go together so obviously that other plants with spines have come to be called "thistles," but they aren't really related to true thistles. There aren't that many true thistles. An artichoke is one (you are eating the flower). You can tell a true thistle, because it will have only disc flowers and no ray flowers. This sounds, at first, like completely useless information, because you don't know what a disc flower or a ray flower is. But you do, it's just that no one ever shared the names.

Most of the flowers in the family *Asteraceae* are compound flowers. If I asked you to draw a flower, you would draw a compound flower. You would draw a flower with petals around the rim and a big button in the middle, like a daisy. That's a compound flower. The ray flowers are what you usually think of as a flower petals. The disc flowers are what make that center bump.*

Some flower petals have reproductive organs buried in them. Some do not. A dandelion is a flower that is composed only of ray flowers. All disk flowers have reproductive organs.

This upright prairie coneflower (also known as Mexican hat) has drooping rays and a tall column of disc flowers. The disc flowers on the column open sequentially over weeks starting at the bottom of the column. You can see that this one has almost all the disc flowers open.



Left - Thistle; Right - Upright Prairie Coneflower
credit Alisa Kline

The coneflower is dramatic because it has a tall column of disc flowers; less dramatic versions are more common. Black-eyed susans are more typical-looking compound flowers. The disc flowers are in the center "button," the ray flowers are the petals.

We don't have many true thistles blooming in the Park. I found some a couple of weeks ago and have been looking for other thistles without luck. They are actually somewhat endangered and have a nasty reputation (those spines). But they are excellent sources of nectar and pollen.

Bumblebees love thistles. All bees love them, but particularly bumblebees. This is not intuitive. Thistles are made up of a multitude tiny, long-throated, dainty disc flowers. No one has ever thought of a bumblebee as dainty. But they do have very long tongues! Very few insects have tongues long enough to sip nectar from a thistle, so any bumblebee (or hawk moth) in the neighborhood is going to have that tasty liquid all to themselves.

The other reason I'm focused on thistles is that we have a notable "not thistle" blooming in the Park right now and it is one of my favorite flowers. The American basketflower. The basketflower is also an all-disc flower affair. In fact, everything about it looks like a thistle. Except it's not. It has no spines and whoever gets to determine these things has pronounced that the American basketflower is not a thistle.

Before it blooms, the flower looks like a tiny clenched baby fist. It also looks a lot like a thistle (which it isn't)!

*Big thanks to my fellow master naturalist Jenn Drummond for helping me to understand the whole ray/disc flower issue.

Alisa Kline

<https://buffalobayou.org/blog/>



Organism of the Month

Marsh Periwinkle (*Littorina irrorata*)

The marsh periwinkle (*Littorina irrorata*) is found in salt marshes from Long Island Sound to Florida, and west along the Gulf coast to Texas. Marsh periwinkle arrived in the US in ship's ballast in the 1800's from Europe, where it is considered a delicacy.

Marsh periwinkle is usually associated with marsh smooth cordgrass (*Spiratina alterniflora*). It moves up and down the cordgrass depending on the tide, and water temperature. As it eats the grass, it deposits feces into the wound, which encourages the growth of fungus. The snail then also feeds on the fungus.

Predators such as fish, crabs, and sea urchins keep the population of marsh periwinkle in check. Without predation the snail can negatively impact cordgrass population.

Sources: https://animaldiversity.org/accounts/Littorina_irrorata/,
www.lumcon.edu



credit jennformatics on
iNaturalist

Gulf Coast Master Naturalist Far Afield

Julie d'Ablaing spent the last two months volunteering at the Southwestern Research Station in the Chiricahua Mountains, a field station of the American Museum of Natural History. She submitted the following article on one of the projects, protecting the Chiricahua Leopard Frog (*Rana chiricahuensis*).

While recently volunteering at the Southwestern Research Station¹, (SWRS), a field station of the National History Museum of America, in Portal, SE Arizona, I had the opportunity to attend a meeting of those involved in the ongoing efforts to protect the Chiricahua Leopard Frog (CLF) led by Arizona Game and Fish Department.

The CLF (*Rana chiricahuensis*) is listed as a “threatened” species anywhere it is found in the USA². The Portal area is part of Recovery Unit 3 – outlined above and including the entire Chiricahua Mountains and surrounding desert areas. The major recovery actions of identifying, restoring, creating and protecting remaining populations and potential habitat have been ongoing for several years in this region.

One of the key treats to the CLF in this area is the American Bullfrog, a species that is not native to the region, but was introduced by pond owners. Great effort has gone into the mapping of available water sources for frogs in this Skye Island landscape and the distribution of bullfrogs.

David Hall (University of Arizona) leads the bullfrog monitoring and removal effort in the Portal (5 mile) Buffer Zone. The buffer zone is in place to protect the Cave Creek drainage, where breeding populations of CLF are present at the SWRS in a series of warm (72 degrees), spring fed ponds. These warmer spring waters are believed to contribute to the success of the CLF survival rates at this location. The 5 mile buffer distance is believed to be sufficient to stop bullfrog invasions during the summer monsoons.



The removal of bullfrogs has taken the form of draining water from tanks to disrupt reproduction and prevent reinvasions in already cleared sites and hand removal (night hunting). To date 65,000 bullfrogs and tadpoles have been removed! Tadpole eating fish are introduced to cleared ponds with a Safe Harbor Agreement with the landowners. The recovery actions of establishing new, reestablishing former or augmenting existing CLF populations will only be feasible once the bullfrogs are successfully removed.

Cornell University is funding research into the genetic diversity of the SWRS CLF, relative to the genetic diversity range wide, to assist with future re-introduction efforts. CLF populations and habitats are monitored, an activity encouraged for all SWRS volunteers, and particularly the participants of the annual Herpetology class at the station. There is also a BioBlitz, based at the Chiricahua Desert Museum in Rodeo, New Mexico, occurring annually in July or August, promoting citizen science by residents and visiting herpetology enthusiasts.

References:

1. <https://www.amnh.org/research/southwestern-research-station/interns-volunteers>
2. <https://ecos.fws.gov/ecp0/profile/speciesProfile?spcode=D02F>



The Southwestern Research Station (SWRS) is a remote biological field station of The American Museum of Natural History, located in the Chiricahua Mountains of southeastern Arizona. SWRS provides scientists, educators and students the opportunity to study one of the most biologically rich environments in the United States. As a non-profit organization it is in need of assistance, and one may apply to volunteer during the Spring and Fall, for between six and eight weeks to do basic chores; washing up, housekeeping and general maintenance for 4 hours a day for 6 days a week. The remaining time you have to follow your own interests or get involved with some of the ongoing research projects.

<https://www.amnh.org/research/southwestern-research-station/interns-volunteers>



Valley Carpenter Bee (*Xylocopa varipuncta*) – lower right, on roadside Antelope horns milkweed (*Asclepias asperula*), Portal, AZ.

credit Julie d'Ablaing

During the eight weeks I spent at the SWRS this Spring I had the opportunity to meet various non-researcher guests, listen to talks hosted by visiting groups and get involved in some of the ongoing projects;

- Earth Watch / Hawk Watch high school groups visited studying the local forest owls,
- the Great Old Broads for Wilderness retreat – talks on the Northern Jaguar Project (www.northernjaguarproject.org), and the grey wolf recovery efforts, and the impact of the Border Wall,
- Arizona Fish and Wildlife meeting focused on the efforts to protect the threatened Chiricahua Leopard Frog. We installed a liner in one of the local Safe Harbor ponds.
- Visited with birding groups enjoying the Spring migration,
- Assisted the Hummingbird Monitoring Network with biweekly hummingbird banding,
- Visited with native bee enthusiasts as they collected desert species,
- Collected rock specimens for the SWRS display and collection,
- Made videos of Mexican Jay dominance behavior in support of a research project,
- Visited Guadalupe Canyon with local botanist, and originator of Pollinator Corridors Southwest, (www.pocosouthwest.org)
-and enjoyed many hikes.



Results from 1st Spring Bioblitz at the Nature Discovery Center

Russ Pitman Park has about 3.5 acres of natural areas, divided into habitats such as deciduous woodland and prairie. The first bioblitz yielded 205 species of animals, 15 species of fungi, 3 species of slime molds, and 51 species of plants (as of May 23rd). Because the NDC has an exhaustive plant list, naturalists did not attempt to catalogue every species of plant, so this is an undercount. Several GC chapter members participated in the bioblitz. Impressive!

Heartwood Chapter AT Day

Eight GC members took advantage of the Advanced Training Day offered by the Heartwood Chapter June 1st.

Back: Richard Solberg, Michelle Broussard, Patti Thompson

Front: Lauren Blanton, Melinda Kincaid, Mary Spolyer

Not pictured: TJ Butler

