



Naturalist Notes

President's Note

Because it's a busy time of the year for myself, as it is for all of us, this note will be rather short. As the year quickly winds to a close, I just wanted to wish you all the best for the holidays and the happiest of New Year's! 2020 will be a great year for our chapter and I'm looking forward to every moment of it.

All my best,

Rebecca Lloyd, President
Gulf Coast Chapter



2019 Annual Meeting - Rockwall, TX



Our Gulf Coast Chapter had a total 14 people attending.

Standing from left to right: Linda Knowles, Mary Spolyar, James (Jim) Kennedy, Mary Horn, John Egan, Irmi Willcockson, Paulette Pittman, Jerrel Geilser. And kneeling from left to right: Richard Solberg, Bob Romero, Andrea Matthews. Not pictured are Jerry Hamby, Alisa Kline, and Sophia Havasy.

Pristine Prairies: Clymer Meadow & Paul Mathews Prairie

I attended an all day field trip on Saturday conducted by Brandon Belcher from the Nature Conservancy. My experience with pristine prairies is limited and thought it would be interesting to make a visual comparison to our in-progress restoration work at Sheldon.

There were plenty of differences and similarities that were observed and you would guess many more that could be studied. The most observable similarity observed was related to the respective native prairie plants. Much of what we have here in our Coastal Prairie is recognizable there in these Blackland Prairies. The most observable difference (for me) was related to the soil/land "appearance". As we moved through these specific Blackland Prairies , I observed no prairie wetland ponds nor Mima mounds like I see at Sheldon. When we did walk up on a mound, Brandon described the area as a 'gilgai'. My physical take as we moved across the prairie is that it felt like we were walking across an area that had been previously made full of ruts by heavy tractor tires crossing wet soil. Wrong. It is a natural condition caused when the soil there swells when wet and shrinks when in drought, creating an undulating land surface. As you might imagine according to Brandon, these prairies are very difficult to mow and his preferred maintenance is a controlled burn. There is some fairly detailed information about gilgais on-line if you wish to learn more.



The photo attached is of the Paul Mathews Prairie. The difference in height of the touring members of our group is not caused by a difference in their stature, but a difference in the height or depth of the gilgai they are standing in.

John Egan



Field Trip to Ladonia Fossil I spent Saturday at the Ladonia Fossil Park. We got an introduction to safe fossil hunting in the Sulphur River, were able to see fossils collected by various amateur paleontologists, then did our own hunting. As there had been no rain for weeks, the river was pretty picked over. Nonetheless, I enjoyed looking, and went home with a lovely bivalve specimen.

Irmi Willcockson

Field Trips - A Valued Part of the State Meeting



Lewisville Lake Environmental Learning Area - bird banding and bird observation site

The primary reason I have attended the TMN annual meeting since joining the program in 2014 is to take part in the field trips, which have introduced me to natural gems across the state. Over five days preceding and during the 2019 conference, I attended two half-day and two full-day field trips to several Blackland Prairie sites.

While it was a thrill to hike through sections of Clymer Meadow, which I first learned about while completing my TMN training, my favorite field trip was an all-day visit to Lewisville Lake Environmental Learning Area, a 2,000-acre preserve that hosts a range of ambitious projects. Our group's first stop was a bird banding and observation area, where students from the University of North Texas catch and release resident and migratory birds for the purpose of banding, weighing, and recording data.” We also visited a greenhouse facility that grows native plants and learned about an initiative to raise, reintroduce, and monitor two species of box turtles, whose populations have declined over the past fifty years. We ended the day by hiking through two restored prairie sites and learning about the prescribed burn schedule and protocol.

The volunteers who led us, most of whom are members of the Elm Fork Chapter, were most gracious hosts and reminded me, yet again, of the passion and energy that members of the Master Naturalist program possess across the state.

Jerry Hamby

Brit Field Trip - Linda Knowles**Tree Top Tenor**

Singing his arias from the top
of a red bud tree like a tenor
hoping to shatter glass, I unplug
my earphones and listen to his
mockingbird riff of blue jay,
cardinal, woodpecker stutter.

The way he struts his songs,
though hawks circle nearby,
makes me wonder: when
did I lose the courage to sing?

Excerpt of the poem "Tree Top Tenor" by local poet and artist Carolyn Dahl, published in her latest book "Art Preserves What Can't Be Saved".

Although the subjects of her poetry range widely, many poems in this collection feature animal companions, both wild and domestic. I found her poetry engaging and easy to read. But I also find myself going back again, re-reading.

You can find this and other collections by Carolyn Dahl at River Oaks Bookstore.

Do-Over

Two years ago, I saw something I had never seen before. It was during our regular walking tour, so a bunch of other people got to watch it with me, but the only photograph I managed to get was of the footprints left behind.

What we saw was a wasp laboriously dragging an immobile caterpillar across the silt.

I have regretted ever since that I did not get a photo or video so I could share it on the blog. But last Saturday, I saw it again and this time, I had my camera. The only hitch is that I didn't see it in the Park. I was in north Texas for the Texas master naturalist state conference. So I'm calling a do-over. In the video, notice how huge the grasshopper is in comparison to the wasp, and then, realize that what to us are small pebbles are, to the wasp, significant hurdles. She is doing is the equivalent of dragging a refrigerator over an obstacle course. And she makes it look effortless. In the slow motion part, notice how she maneuvers the grasshopper in-between the larger pebbles.

Since the wasp I saw in the Park was dragging a caterpillar (an armyworm, as I recall) it was likely a different species. The wasp I saw in Ladonia was in the genus *Prionyx*. I know this because she was dragging a grasshopper.

Solitary wasps are amazingly specialized in what they feed their offspring. In this way, a lot of wasps can live right next to one another without having to fight over resources. One wasp feeds her young caterpillars, another spiders; *Prionyx* prey upon grasshoppers.

Wasps that live in hives (which are what most people think of when they think of wasps) have very different lives from solitary wasps. At some point, I will write about colonial wasps, but this post is about solitary wasps.

Adult solitary wasps live on nectar and occasionally a bite or two of a critter. They don't need a ton of food because they don't live that long. They have only one job: reproduce.

A female *Prionyx* must mate, then must deliver a paralyzing sting to a grasshopper. She drags this grasshopper to a promising spot, digs a hole, drags the stunned grasshopper into the hole and lay an few eggs on it. She covers it all over and her job's done. I could not find information on how many times a female wasp will do this, but I suspect it is more than once. My reading indicated that she lays only one or two eggs per grasshopper. That isn't enough to ensure species survival so I suspect many grasshoppers meet this fate at the hand of a single female. What I do know is that her young are well provided for.

The principle here is kind of like when your mom was out but left you some food in the fridge so you didn't starve. Lacking refrigeration, the wasps can't store dead food for very long; that's why the grasshopper is stunned rather than killed. It lasts longer.

The wasp eggs are more or less attached to the grasshopper so that as soon as they are born, they can start right in eating. While adult wasps live on nectar, larva are pure carnivores.

Diabolically, these larva do not excrete their waste products because to do so might kill the host they are eating. They want their meal to stay alive as long as possible because they will feed on it for about five months. They store their waste internally until the host is dead and then they expel it all at once before they begin their final transformation from larva to adult wasp, which will be done in a cocoon.

I don't know how long the wasp remains in the cocoon, but it is clear that the bulk of the wasp's life is spent between egg and emergence as a wasp. After that, it's mate, stun a grasshopper, dig a hole and lay a few eggs.

Shortly after I photographed this wasp, she abandoned the grasshopper and began flying in circles as though looking for something. At the time, I thought she was looking for the hole she had dug in preparation for the grasshopper, but it turns out they stun the grasshopper first and only then dig the nest. This makes sense because you can't predict where you will find a grasshopper to stun and the size difference between the two means the wasp can drag the grasshopper only so far. So she stuns her prey and then looks for a good place to set up her nest.

I don't know how many nests each adult *Prionyx* makes. But I am fairly sure they don't survive very long. The average life of an adult wasp is only 12-22 days.

During the conference, I was also able to spend time at Hagerman National Wildlife Refuge. They maintain a pollinator garden which was overflowing with butterflies, moths, bees and other assorted insects. North Texas has been without significant rainfall for some time and this maintained garden was one of the only well-stocked nectar/pollen sources around.

Alisa Kline

Excerpted from her blog <https://buffalobayou.org/blog/do-over/>





Organism of the Month

Spiny Softshell Turtle (*Apalone spinifera*)

The scientific name describes two characteristics of this turtle. *Apalone* comes from the Greek and means soft or tender. This refers to the slightly flexible carapace, lacking scutes and covered with a leathery membrane. *Spinifera* means spine-bearing. Males have a spiny anterior edge of the carapace, females do not.

This species consists of 6 currently recognized subspecies, and is widespread throughout the US, into Canada and Northern Mexico. Although they prefer slow moving water with a sandy bottom, they are found in a variety of bodies of freshwater. Spiny softshell turtles are cryptically colored, and coloration can vary by location, sex, and for females, age.

One interesting physiological characteristic is bimodal respiration, meaning the turtles can exchange oxygen and carbon dioxide in both water and air. Underwater, gas exchange happens through both skin and cloaca (Yes, turtles are butt-breathers!) This species is more dependent on underwater respiration than other freshwater turtles. This means that they are particularly intolerant of anoxic conditions.



Turtle observed along White Oak Bayou in May
Credit Irmi Willcockson

The diet consists of both animals such as crayfish and insects, as well as algae and other plants. The turtles are benthic feeders.

Spiny softshells reach sexual maturity between 8 and 10 years of age. Females lay multiple clutches of 9-38 eggs, and do not guard the eggs. Sex is determined genetically, not by incubation temperature. Life span for females is up to 50 years.

Overall the species is stable.

Sources: inaturalist, McGill Office for Science and Society