



Texas Master Naturalist

Rio Brazos Chapter

June 2022 – Summer Newsletter

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It seems that this summer has started earlier than anticipated, at least temperature wise and precipitation wise. I would have thought that the extreme heat and drought would have dampened the growth of forbs and grasses, but to my surprise wildflowers and grasses have blossomed with grand blankets of color on fallowed prairies. Plants will be maturing into the summer months producing seeds, tubers, and rhizomes to secure next year's generation of plants. Of particular interest to me are the explosion of Milkweed in our three-county service area. Even when traveling along our county roads, Milkweed can be discerned in the many pastures that have laid fallowed for many years or with pastures that have cattle grazing in between the Milkweed plants. When Milkweed pods have turned brown and opened to release their seed in June and July, I will collect a few seeds and attempt to grow them to supply next year's plants for the Monarch butterfly and the many other insects that depend on the Milkweed. As plants and animals adjust their activities to adapt to the increased heat of summer, they will raise their offspring to maturity and ready them for the survival of the coming year.



As we move into the summer months, we will slow down a little until we become acclimated to its heat and humidity. We will have more time to observe and record our findings during the summer months and vacations will be planned that will give us opportunities to observe plants and animals that will be different from what we observe in our home environments.

In closing, this summer season will challenge us with extremes in temperature but the abundance of wildlife and plants will keep our interest piqued for learning and teaching what we have learned to others in our communities.

Robert Slaughter

President

Texas Master Naturalist, Rio Brazos Chapter

"Any prairie farm can have a library of prairie plants, for they are drought-proof and fire-proof, and are content with any roadside, rocky knoll, or sandy hillside not needed for cow or plow. Unlike books, which divulge their meaning only when you dig for it, the prairie plants yearly repeat their story, in technicolor, from the first pale blooms of Pasque in April to the wine-red plumes of bluestem in the fall. All but the blind may read, and gather from the reading new lessons in the meaning of America." Aldo Leopold

Events and Adventures

On the Rocks – Exploring Geology in Central Texas

By Melody Holm

From the oldest rocks in Texas to a recently carved gorge, the Rio Brazos Chapter's Central Texas field trip drew 16 chapter members, trainees, spouses, and friends to the Central Texas Uplift and surrounding Edwards Plateau the week of May 15, 2022. The group explored the unique landscapes and habitats of 1.1-1.4 billion year old granite and gneiss at Enchanted Rock State Natural Area and Inks Lake State Park, 318-542 million year old limestones and dolomites at Longhorn Caverns and Pedernales Falls State Parks, and existing landscapes transformed in only a few days by geologic processes at Canyon Lake Gorge.

Jamie Langham, park interpreter and guide, shared her insights into and passion for the unique rocks, landscapes, and habitats on the Enchanted Rock granite dome. The group observed and learned about the beginning of life on rock as exhibited in fractures (cracks) and vernal (seasonal) pools on the surface of bare granite. The unique geologic environment supports several one-of-a-kind species found nowhere else in the world. As a bonus, Jamie also led the group to the contact between the Town Mountain Granite and Valley Springs Gneiss at Inks Lake SP. The contact shows the nature of granitic intrusion into pre-existing rock.



Bob Walker and his friend Leroy Wunderlich exchange thoughts on Enchanted Rock. Foreground: Successional vegetation in vernal pool (depression). Background: Little Rock (lower dome) with basin rim of tree-covered limestone at skyline. The term "Central Texas Uplift" refers to geologic uplift. The area is a topographic basin rimmed by more resistant limestone and dolomite rocks.



Rio Brazos Chapter members, family, and friends in Longhorn Caverns, Central Texas Field Trip 2022.

At Longhorn Caverns SP, the group explored and learned about karst features (sinkholes and extensive wide fractures in surface rock) and the unique habitats such features support. A tour of the cool rocks underground (cavern) in the afternoon was welcome during high heat time. There the group learned about cave formation and the special habitat caves provide for bats and other species.

Stephen Garmon, interpreter and guide at Pedernales SP, led the group through Cretaceous strata (~100 million year old) and more recent river terraces and deposits to the falls and rocks formed from ~300 million year old marine sediments. The group

observed the fossilized remains of long-extinct bottom dwelling crinoids and learned about the fluvial process of pothole formation. The trip concluded with a local geologist and Master Naturalist-led private tour of Canyon Lake Gorge. In 2002, 34 inches of rain in the Upper Guadalupe River watershed over several days resulted in Canyon Lake overflowing the spillway for the first time since the reservoir was filled in 1964. Over 67,000 cubic feet per second flowed approximately 7 feet above the spillway and carved a 50-foot gorge in the Glen Rose Limestone below the dam. The group learned about the effects of catastrophic floods and observed previously unseen strata bearing dinosaur tracks and newly created habitats, including spring-fed areas.



Tour leader Mike Poffenberger provides scale for the newly carved Canyon Lake Gorge.

Overall, the field trip offered new perspectives on the fundamental role geology and geologic processes play in the evolution of landscapes. One field tripper's comment "I'll never look at rocks the same way again!" says it all.

Feather Fest 2022

By Wendy M. Moore

Photos by Gary Marks

March 26, 2022, was a beautiful warm day with just a hint of a breeze – a perfect day for Feather Fest. For the last three years, the event had been cancelled due to weather and then COVID. Everyone was ready to get outdoors and enjoy nature.

Our 41 chapter volunteers worked the children's craft booths making pinecone bird feeders, binoculars from toilet paper rolls, and leading the newly debuted nest game. They face-painted Liza Nelsons beautiful bird designs. They taught the public about bird beak adaptations, migration, native fish, and how birds evolved from dinosaurs. They helped the "artists" both young and old create 2 community art projects. They represented our chapter booth, parked hundreds of vehicles, setup and broke down tents, and hauled tables and supplies. There was even a booth for the toddler age children. Billy Teels gave 2 very popular wildflower walks, and Gary Marks took the great pictures.



Our event also had 30 participants from Friends of Dinosaur Valley State Park who worked jointly with chapter member Kristina del Pino Borgstrom and members of the Texas Master Naturalist, Prairie Oaks Chapter. The Prairie Oaks Chapter had three booths, including one about the Lights Out Texas program that works jointly with the two master naturalist chapters. Additionally, there were booths from Dinosaur Valley State Park, Wildlife Rehabilitation Services, Blackland Prairie Raptor Center, Prairie Rose Native Plant Society, and Fort Worth Audubon Society and Mark Pyle with native fish. There were 256 members of the public who showed up to enjoy the festival and Acton Nature Center and to learn all about birds.

We can't thank everyone enough for making a beautiful day a perfect day!



S.M. Tracy Herbarium Updating Plant Species in Somervell County

By Robert Walker

On February 19, 2022, the Curator of the S.M. Tracy Herbarium, Dale Kruse, presented a lecture to 40 Texas Master Naturalist and Native Plant Society of Texas members at Little L Ranch. The purpose of the lecture was to train a group of volunteers in the art of collecting and pressing plant samples suitable for presentation to the S.M. Tracy and other herbariums.

Dale plans to make two to three trips to the ranch annually with a team from Texas A&M over the next two to three years. The purpose of the visit is to collect plant specimens to update the species count in Somervell County. Between Dale's trips to the ranch, those that attended the lecture will be collecting bryophytes (Dale's specialty), forbs, grasses, shrubs, and tree samples. These samples will be pressed, dried, and mailed to the herbarium to be properly identified and mounted as herbarium vouchers, and to prepare and share samples with other herbariums around the world.

The collecting of plant samples for herbariums is important for the study of plant taxonomy, as well as understanding the distribution of plants not only now, but to determine how those plant distributions change over the years. This role is becoming increasingly essential as human influences move plant species to locations far from where they evolved. Additionally, with the influence of climate change and habitat destruction, regional changes in families of plants have a direct influence on migration patterns and suitable habitat for the survival of many animals.



Chalk Mountain

By: Alan Robertson

Amber Arseneaux, chapter member and North Texas staff member of Texas Land Conservancy (TLC), invited members of our chapter to join her for a day in the field Tuesday, April 5, at TLC's Chalk Mountain Preserve in Somervell County just outside of Glen Rose. This is a privately-owned property that is permanently protected with a conservation easement held by [Texas Land Conservancy](https://www.texaslandconservancy.org/). Amber conducted her annual monitoring visit, which is required for protected properties. Amber took us on a walk of the property with the landowner while discussing any changes that have taken place over the last year and plans that he has for the future of the property.

The landowner has removed cattle from the property and has restored native grasses. There is an extensive flora survey on iNaturalist if you would like to look. - <https://www.inaturalist.org/projects/snakard-ranch>.

This is a privately-owned property that is not normally open to the public, but that is vitally important to our native wildlife and plant communities, as more and more of our area is being chopped up by encroaching development.

Many thanks to Amber and the landowners for inviting us to share a day in the field and to understand the important relationship between TLC and private landowners to protect properties.



Friends and Partners

Friends of Dinosaur of Dinosaur Valley State Park

By: Kristina del Pino Borgstrom

This year, the Friends of Dinosaur Valley State Park are helping the park rangers maintain trails for visitors to enjoy. As an organization, we are adopting the Cedar Brake Outer Loop trail. We held our first group workday on February 28. Sixteen eager volunteers and park staff joined us on the trail. We got to see sections of the trail previously armored by school volunteers as we worked on trimming back tree branches to ensure hikers and bikers could easily get through. In all, we covered 0.85 miles in our first work session. To celebrate our hard work, Ranger Asa Vermeulen and his family hiked out a delicious pulled pork sandwich lunch for us to reenergize on. Additional trail maintenance work will be scheduled throughout the summer. Email us at friendsofdvsp@gmail.com if you would like to join in on the fun.



Wing Ding at Dinosaur Valley State Park

by Wendy Moore

Wing Ding is an annual event held at Dinosaur Valley State Park on the third Saturday in April. This year the event was on April 16, 2022, from 10:00-2:00. There were booths and activities about anything with wings. This year was the first full-fledged event since the pandemic and quite a success. The Rio Brazos Chapter of the Texas Master Naturalist program and the Friends of Dinosaur Valley State Park (started by our chapter) were invited to participate.

Sara and Chris Paulsen and Jen Adams set up a booth about the Monarch life cycle. Jen found a larva in the Monarch Larva Monitoring Plot. Courtney Reeves and her daughter Hannah worked in a booth supplied by the park.



They had the attendees make milkweed seed balls. Dave and Wendy Moore brought information on feathered dinosaurs which was a big hit with children. Kristina del Pino Borgstrom and Janis McCormick represented the Friends of Dinosaur Valley State Park with a bird beak buffet activity. Liza Nelson, with the help of her husband, had a face painting booth. Our chapter booth was represented by Nancy Haubert, Cynthia Walker, and Dagmar Higgins. Gary Marks was there documenting the fun day with his great photos.

In addition to all these booths and activities, there was a booth about owls that was staffed with members of the Prairie Oaks Chapter of the Texas Master Naturalist program. Regional Interpretive Specialist Annie had a raptor education table and displayed our chapter's wingspan banner. Fossil Rim Wildlife Center brought their Attwater Prairie Chicken table, and DVSP staff had a bluebird box building site, a bird migration obstacle course, a binocular craft table, and a warbler activity.

Thanks so much for a great turnout from our chapter to help with Wing Ding. The park said there were between 450-500 attendees, so we had lots of opportunities to educate the public about winged creatures. Perhaps at next year's event we can try adding booths about flying pollinators, dragonflies, and bats. Come join the fun next time!

Thanks to all of those who volunteered!



Nature

Bignoniaceae – Catalpa or Trumpet Vine Family

By Billy Teels

The Bignoniaceae is a small but important plant family in our area because of several spectacular species that are planted as ornamentals. Although all the species treated here are native to Texas, it is quite possible that none were found in our three-county area at the time of European settlement. Most, if not all, have been planted or escaped cultivation and have become naturalized. All our species are woody and deciduous. They are represented by an assortment of growth forms, including both small and large trees, a shrub, and two vines. All display large, attractive, trumpet-shaped flowers that characterize the family and often cover the plant for most of the growing season, making them ideal for landscapes and gardens.

Bignoniaceae Photos and Captions

All photos taken in Hood County by Billy Teels



The native range of *Esperanza* covers much of tropical North and South America; however, the variety *Tecoma stans* var. *angustata* is found in west Texas and is much better suited for planting in this area.



A native of the southeastern states, *Crossvine* is becoming more and more popular as an ornamental. Check out the one in front of Babe's in Granbury.



Northern catalpa was once a commonly planted specimen and shade tree in parks and yards throughout the region. There are still a few old trees left in our towns. This one is located along Highway 4 on the north side of Granbury. Here it is blooming during the first week of May.



Catalpa's long, linear seed pods are responsible for the tree's other common name—cigar tree.



Although the plant is very aggressive and hard to contain, trumpet creeper is a primary food source for the Ruby-Throated Hummingbird and depends heavily upon it for pollination.



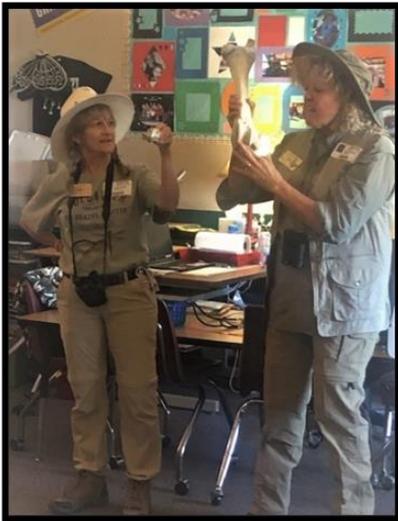
Its narrow leaves give desert willow its common name, although it is completely unrelated to the willow family. If you look closely, you can see the nectar guides that lead insects past the male and female flower parts to the nectar-filled flower base.

Educational Services to the Community

Animal adaptations – Nature-Learning Fun at Mambrino Elementary School, Granbury

By Cindy Davis

Volunteers of Texas Master Naturalist, Rio Brazos Chapter were excited to fulfill an education request from Mambrino Elementary in Granbury for second graders. Our team – Andrea Ruiz, Kristina del Pina Borgstrom, Sara Paulsen, Cindy Davis, and Tim Eschbach – were prepared with education trunks and materials to present hands-on lessons for “Animal Adaptations and Environmental Survival”. They were equipped with bird beaks, feathers, a snake, a turtle, skulls, scat, and safari animal goodies to entertain and inform these little learners. We all had a “roaring” good time, thanks to these enthusiastic educators! We hope to have more education requests in the coming year (2022-2023).



Acton Nature Center Homeschool Composting Project

By Kristina del Pino Borgstrom

May 1-7, 2022, is International Compost Awareness Week. Now that springtime has arrived, you may be busy cleaning up your garden, mowing the lawn, and wondering what to do with all the leaves that fell off over the winter. Instead of piling up these materials in garbage bags, they can be recycled in a simple backyard compost pile or taken to your local waste stations. As part of the 2021-2022 homeschool curriculum, students got to work with Master Naturalist Kristina del Pino Borgstrom to set up a new compost bin at the Acton Nature Center in November of 2021. In celebration of International Compost Awareness Week, the students excitedly removed their first finished compost from the bin. This fine new humus was complete with isopods, millipedes, and even a rough earth snake.



During the November class, students learned all about backyard composting and how to divert waste going into landfills. Students had a fun-filled morning sorting out materials into piles that could be recycled, composted or placed in a landfill. In this activity, they learned that over 70% of the materials we place in our trash bin could actually be recycled or composted if not reused.

There are many different types of materials that can be composted. We break these up into two categories called “greens” and “browns”. These terms do not refer to the color of each item, but rather the amount of nitrogen (green) and carbon (brown) content in them. A compost pile will typically have 33% nitrogen-rich to 66% carbon-rich materials. There are other items that can be added to compost piles that do not fall into these groups, such as egg shell, wood ash, and dust from cleaning.

Compost piles are living ecosystems that supply a home for a wealth of organisms. Homeschool students got to learn all about micro- and macro-organisms by investigating compost samples brought in from Fossil Rim Wildlife

Center. They were asked to feel and smell the different stages and see what critters they could find. Who knew rhino and giraffe poop could be so fun! Fresh materials in a compost pile are very pungent smelling and have larger particles sizes. But over time these particles break down as they are digested by lots of organisms into a fine humus that smells like fresh earth. Microorganisms in compost piles include various fungi and bacteria. You normally see this as mushrooms sprouting or a white fuzz in your compost. Macro-organisms are the critters a little easier to see by eye. They include organisms such as isopods, snails, worms, millipedes, springtails, fly larvae, amoeba, beetles, and much more. There are even predators of these decomposers that love to hang out in compost piles, such as ants, mites, centipedes, and earth snakes.



After learning about the compost ecosystem, the students were off to the butterfly garden to construct their pile. To make a healthy habitat, they layered their materials starting and ending with brown items. We constructed our pile in a simple wooden box built by the Friends of the Acton Nature Center. There are many different systems available to use based on the space available and how much you have to compost. Backyard compost piles work most efficiently if they are 3x3x3 feet in size. The students broke up the materials to create chunks under 5 inches. After building our pile, the students gave it a healthy dose of water to create a damp, but not soggy, consistency.



As part of the homeschool classes, students would help monitor this pile each month. A compost pile will progress with little maintenance, but to help speed it up and encourage our decomposers, we worked our pile on a weekly to biweekly basis. To start, students took the temperature of their pile. A very active compost pile should reach an internal temperature of 130-140°F. Our pile was a bit on the smaller side, so it typically was a temperature slightly above ambient temps for that day. After checking the temperature, we monitored the moisture level. If the materials felt dry, we added some water before starting to turn the materials over. Each session, we would rotate our pile, flipping the top layer to the bottom and adding a little more water as needed. Rotating the pile ensures there are air pockets for organisms to breath and to have

moving spaces. Students would also add their lunch scraps to the middle of the pile while turning it.

Six months later, we were able to remove our finished compost. Average composting time ranges between three and six months. This substrate can now be used in the butterfly garden. Since the program has started, we have two other compost piles in the works. Visitors of Acton Nature Center are welcome to toss in fruit and vegetable scraps, and our garden volunteers will be adding in the weeds they pull. The compost system can be found along the edge of the butterfly garden near the restrooms. Come and check it out the next time you are at Acton Nature Center. We hope to continue this project with future homeschool students.

Make Your Own Compost

A Recipe For Success



Homeschool End-of-Season Class, May 2022

The Homeschool Program at Acton Nature Center finished strong in May with a large group of children and parents. Dave Moore finished the season with the ever-popular class on “Orienteering”! We had a successful year, considering the winter weather months. The homeschool group was able to complete the “Pollinator Hotel” with the help of Dave Moore and Tim Eschbach and the invaluable technical and educational support of Valerie Taber. The group had a great start on the composting bin with the help of Kristina del Pino Borgstrom.



Langdon Ag Day

Photos by Valerie Taber

Beekeeping at AG Day — Cathy Crocker (far right) brought along a demonstration hive body, frames, and bee keeping tools to explain how she manages her hives of honeybees. Amber Arseneaux (in the bee veil) and Maryann Mathews (center) assist.



Karen Langdon's pet snake, Rosie, is an important part of the discussion when learning about the animal "good guys" in our environment! Valerie Taber says it's a pleasure to handle such a calm reptile. Students learn that snakes are NOT slimy and provide an important ecosystem service of rodent and pest control. They also learn that Rosie is non-venomous and kills her prey by squeezing or constricting.

Billy Teels discussed river organisms and other freshwater creatures.



Local Partners

The Rio Brazos Chapter has a number of local partners in addition to state partners, Texas Parks and Wildlife and Texas A&M AgriLife Extension. Chapter members serve as volunteers to assist local partners in carrying out various projects and activities that meet the goals of both the Texas Master Naturalist program and partner organizations.

The Rio Brazos Chapter recognizes and thanks our local partners and their efforts in maintaining Texas natural areas and landscapes.

- Acton Nature Center
- Botanical Research Institute of Texas
- Camp El Tesoro
- City of Burleson Parks & Recreation Department
- Cleburne State Park and Friends of Cleburne State Park (Facebook group)
- Dinosaur Valley State Park
- Fossil Rim Wildlife Center
- Native Plant Society of Texas, Prairie Rose Chapter
- Sunset Hill Tree Farm

Coming together is a beginning, staying together is progress, and working together is success." – Henry Ford
