

Prairie Partner News

A publication for and about Blackland Prairie Texas Master Naturalists

PR-JUN 2018

As I write, trees are budding and blooming. The redbuds' deep lavender buds stand out from the drab, leafless woods and Mexican plums are beginning to show their snowy and fragrant blossoms. If you take a close look at the monochromatic grey brown remnants of prairie, you will see deep green plant foliage unfurling amidst the clumps, stalks and canes of the dried out weeds, grasses and flowers.

Despite a few bitter cold snaps, it was a rather mild winter. The heavy rains in February helped moisten the ground and perhaps provided some additional wet areas for insects and amphibians to breed. I have seen quite a few raptors this winter and suspect that many of the sightings now could be immature birds making their way out into the new world. Bobcats have been common sights all winter long and show themselves at all hours of the day. Small flocks of cedar waxwings continue to work their way around the neighborhoods as they have since last December, but I imagine they are getting restless and will soon depart for more northerly breeding areas. These are just one of the many species that are on the move.

March is a period of transition from winter's chill and a time of rebirth, growth and movement. Likewise, our Chapter renews itself this time of year as the activity levels rise to a fever pitch and members of the Class of 2018 are well on their way to becoming part of the Texas Master Naturalist team. The time has come to renew our zeal for our roles as Texas Master Naturalists and get involved in one of the many volunteer opportunities that we have available to us. It's time to lace up the boots, get outside, get moving, and see the natural world around us awake from its winter slumber!



Little Bluestem in its coppery wintry hue, contrasts with the gray winter foliage, meanwhile green shoots push their way skyward from below the black clay.

A Poetic reflection on the beginning of our Chapter

March 2005

A comment and a question

Led to a steering committee collection

Of folks who gave authorization

For a new Chapter creation.

There were several areas of investigation

Such as where to meet – a point of congregation.

Mr. LeRoy obtained the Allen Fire Station.

Sharon and Mary did secretarial stuff; Sally did education;

Ed did 501c3 and all the treasury transactions;

Donna supervised the whole administration.

Mr. T and Mr. M provided sponsor supervision!

And so it was with great anticipation

That February 9, 2006, 21 people were in position

To receive the first summarization

Of the Master Naturalist's lessons in Texas conservation.

Thus began the Blackland Prairie Chapter organization -SALLY EVANS



Blackland Prairie Master Naturalist Chapter/ the beginnings

It started with a simple question – “Why isn’t there a Master Naturalist Chapter in Collin County?”

The North Texas Master Naturalist Chapter was hosting a workshop for landowners at TAMU on Coit Road in Richardson. LeRoy Thompson was one of the host attendees and began talking with the folks at the registration table. Three of those people were Donna Cole, Mary Lou Cole (not related), and Ed Ellerbe from the North Texas Chapter. Mr. Thompson asked them why there was not a Collin County chapter as there were so many folks from that county in the Dallas area chapter. They told him that as chapters grow they can split off to new chapters but that there had to be a TPWD and Agri-Life sponsor. His next question was, “Can a game warden be a sponsor?”. If that was feasible then why not do it now? He would be willing to be one of the sponsors.

Donna Cole tells this part of the story. “We started investigating what would be needed, and spoke to a few other members that lived in Collin County or the outer areas. Tara Still was out in Hunt county; Mary Lou was far north Dallas; Ed Ellerbe was in Plano as was Sharon Meines; and I was in The Colony but spent a lot of time in Plano with my daughter’s dance lessons. I remember meeting at a restaurant over by Collin Creek Mall, and we agreed to start the process. Sharon and Mary Lou did the secretarial stuff, Ed was the 501c3 guy, Sally Evans agreed to handle the Education segment and I was president. I think Tara was the VP. LeRoy found us a place to hold classes at the Allen fire Station and Rick Maxwell agreed to be our Agri-Life sponsor, providing us office support.

The Red River Chapter had Hunt, Fannin and Grayson counties but was happy to cede them to us as it was at the outer edge of their boundaries. NTMN agreed (somewhat reluctantly) to cede Collin County to us. We found kindred spirits in the fledgling (pun intended) Blackland Prairie Raptor Center who were among the members of our first class and that relationship has been amazing for all involved. Our first class was successful but it was tough with so few projects around – but we persevered. Our second class brought us some of our finest members and we have been moving and grooving ever since.”

Mr. Thompson was a part of that first class and has worked with us until his retirement in 2017. We anticipate that he will be a part of our chapter in certain future endeavors. Dr. Rick Maxwell has moved to another AgriLife office in another county. Tara had to drop out when she became a mother and a full time job holder. Sharon had to handle some medical problems and Mary Lou moved to Arizona. Donna, Sally and Ed are still an active part of the chapter.

Donna Cole was the first president followed by David Powell, Clyde Camp, Deb Canterbury, and now, Mike Roomes. The education chairs have been Sally Evans, Lu Ann Ray, and now Greg Hayden. There have been a total of twelve classes. The first class numbered twenty one and the largest was forty one. The number is now limited to 35. Many of our instructors are repeat teachers as they enjoy our classes and our mission plus we enjoy having them and their expertise.

A few years ago we helped develop a chapter in Fannin County in Bonham. It is the Bois d’Arc chapter. By SALLY EVANS





HONORARY TEXAS MASTER NATURALIST- Leroy Thompson, Jr.

Blackland Prairie Chapter TMN Emeritus-

Sally Evans and David Powell

Blackland Prairie Chapter TMN Presidents Past and Present

Donna Cole, David Powell, Clyde Camp, Deborah Canterbury and Mike Roome



At the Chapter Meeting in March, Patti Tuck shared a very powerful demonstration of the water available to us on Bioship Earth. These are some key bullet points for using this approach to educating others about the importance of water conservation and being sensitive to the impact man has on this precious resource.

1. The Quantity of water is constant. WE cannot create more!

2. If we remove 1 drop of water from the gallon jug on the right, that represents all of the water in Earth's atmosphere

3. 7 tablespoons removed represents all the fresh-water on the planet, or 2.5% of total water.

4. After removing the 7 tablespoons and 1 drop of water from the jug, the remaining water represents all of the saltwater in the Oceans.

5. If we set aside 5 of the 7 tablespoons we have removed, that represents the water locked in glaciers, ice caps and snow.

6. Now we have 2 tablespoons left.

7. 2 drops of our remaining 2 tablespoons represents the water in our rivers and lakes

8. The 2 table spoons less 2 drops is our ground water

9. Our potable water supply is estimated to be the equivalent of about 7 drops of our fresh water sources

“DILUTION IS NOT THE SOLUTION TO POLLUTION!”



All “Bugs” are Insects, but not all Insects are “Bugs” by Greg Tonian

This is the second in a series of articles to help readers learn more about Insects which will help them better identify and explain them as they are encountered and discussed in the field. Please look back at the Jan-March issue for an overview of the Beetles. In this issue we look at the so-called “True Bugs”, the official bugs of the Insect World.

Phylum Arthropoda/Class Insecta or Hexapoda/ ORDER HEMIPTERA

Entomologists will encourage us to use the term bug only when appropriate. We should apply the term when we observe a Hemipteran or one of our guests or companions draws one to our attention. As Master Naturalists we can use the knowledge of the characteristics of a given insect to better discipline our identification skills and also enhance our observation abilities to use it in teaching moments that occur in the class or the field. A good example of this was when we learned that a “lady bug” is actually a “lady beetle”. Now we can correctively identify a true bug, such as a stink bug, which is, in fact a Hemipteran!

Now that we know that the members of the order Hemiptera are the official bugs of the insect world, what are their distinguishing characteristics? A key identifier is the presence of sucking, piercing mouth parts that fold into a cleft at the front and beneath the head when not in use. Metamorphosis is incomplete, unlike beetles for example. There is an egg which produces an immature nymph stage that transitions to the adult form by passing through several instars or intermediate developmental stages. A pupal stage is omitted. Another typical feature is the presence of a pair of wings with the forewings being hardened at the base and membranous at the tips, a “half wing”. These forewings sit flat and may cross slightly, closely covering the pair of membranous wings below.

Members of the Suborder Heteroptera, the original “true bugs” are the best examples of this morphology. This group includes many species commonly seen in our area such as stink bugs, milkweed bugs and the leaf-footed bugs. They are often mistaken for beetles, but a close inspection of the flat wing configuration and somewhat angular “shoulders of these insects is an indicator that they are true bugs.

Other important members of the Suborder Heteroptera include water striders, water boatmen, back swimmers and giant water bugs. One member of this group that I hope you do not encounter is the bed bug. Their piercing mouthparts are used to feed on human blood. The so-called assassin bugs use their piercing mouth parts to stab their insect prey and feed on them. They can also cause a painful “bite” in self-defense if they pierce the skin of someone who picks them up.

Another familiar group of Hemipterans are members of the Suborder Auchenorrhyncha, better known as the Cicadas, leafhoppers, tree hoppers, plant hoppers, sharpshooters, spittlebugs and kin. The wings in this group are conspicuous and in the case of the Cicada a marvel of insect engineering that can be easily examined. The Cicada is also an example of a sound-producing insect, with males being the producers of the characteristic droning we hear on hot summer afternoons when nothing else is moving about. Leaf hoppers and their relatives are smaller and come in a variety of colors and patterns and easily found with closer inspection of plants and flowers. Spittle bug spit bubble nests are commonly found on plant stalks and the insect that lives inside can be found by gently picking up the spit blob and poking the bubbles away to reveal a nymph-like insect within. It is a fun insect to share with children young and old.

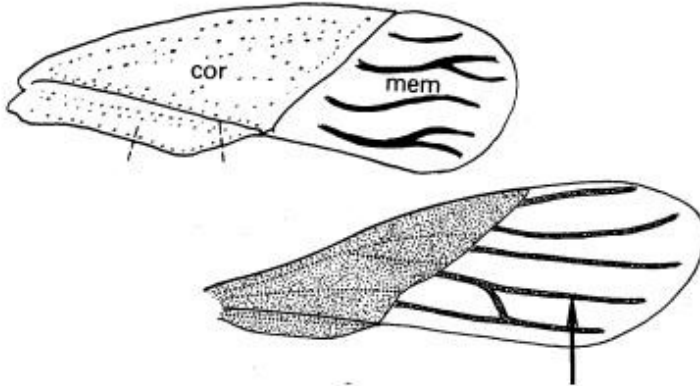
A third Suborder of Hemipterans includes the aphids, mealy bugs and the unusual scale bugs. This is a morphologically diverse group and may not be the best examples of the prototypical “bug”, but it is important to know that they are in the order Hemiptera. The sucking mouthparts are significant as these insects are plant pests and parasites. One scale insect of note is the cochineal scale which forms fluffy white patches on prickly pear cacti and other related species. These insects produce a defensive chemical known as carnitic acid. This substance was used to produce a red dye by drying and crushing the insects. The red color of the British red coats was derived from this substance.



Hemiptera: **Lygaeidae**

(lye-JEE-id-dee)

**seed bugs, chinch bug,
milkweed bugs**



- membranous portion of wing with **4 or 5 veins**
- 4-segmented antennae, **ocelli present**, 4-segmented beak, 3-segmented tarsi
- **antennae arise below a line drawn through the eyes**



Cicadidae: *Tibicen
superba*



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Future Texas Master Naturalist! Photo taken at Erwin Park

The Heard has obtained a new fossil acquisition. The turtle/tortoise was found in the Sulfur River and may actually be a new species. Master Naturalists working in the Paleo lab are:

Karleen Hoffmann , Deborah Canterbury, Patti Tuck, Jim Dulian and Susan Smith. Not pictured: Beverly Carpenter



Chapter Members and a Future Member at information booth at McKinney Garden Show in March

This was posted on Allen Image Magazine's Facebook feed
 Learn more about attracting butterflies to your house and their critical role to the food web and ecosystems in a free program at 2 p.m., Saturday, April 14, at the library. Melanie Schuhart will share how colorful butterflies can adorn your yard as they meander through native plants.

Making Jelly with American Beautyberries

American Beautyberry, *Callicarpa americana*, is also known as French Mulberry although I've never heard it called that in the Dallas area. In Texas, you can find it all over East Texas and in bottomlands with moist rich soil in the cross timbers and central Texas areas. It can grow 3-6 feet high and just as wide. It's most striking characteristic are the purple berries that appear in the fall that grow in bunches along the stems. They are enjoyed by birds and other wildlife in the fall. For additional information, reference the NPSOT Article. <http://npsot.org/wp/story/2010/1276/>

Over and over I have heard that you can make Jelly out of many types of fruits and berries of which many of these are native such as the American Beautyberry. Finally, after listening to the presentation: "The Urban Harvest: Foraging in the City" by Daniel Cunningham in October, I got the motivation to give it a try. Maybe it was due to his enthusiasm or maybe it was because I had been cooking more and had more confidence in making things from scratch. I had a beautiful beautyberry tree that I had planted on the southside of my house and this was the month that it looked the best. I had planted it there several years ago on a small mound of dirt and with trees finally giving it some shade, it was very happy. Over the years it had developed into a great specimen that was covered with thousands of berries in the fall. I had watched the Mockingbirds protect it and try to keep all the berries for themselves, but now was my chance. I would be moving next year and this was the last year I would have the opportunity to use these berries for myself.

I had always wanted to make jelly. My grandmother made jelly from the plums in her yard in East Texas and to this day this is my favorite Jelly. I had dreams of making my own plum jelly, but lack of space for plum trees in my yard kept that dream at bay at least for now.

After researching the internet for the process for picking, cleaning and canning, I decided to give it a try. I figured if it didn't work, I would only be out less than a few dollars for the gelling mixture.

Here is the recipe that I used that was halved from the original.

Ingredients:

- 3 cups of Beautyberries
- 4 cups of water
- 1/2 envelope of sure-jell

2 1/4 cups of sugar

Directions:

1. Wash the berries and remove any stems, leaves or bugs.
2. Boil in water for 20 minutes. Stirring occasionally.
3. Crush berries in the pan using a potato masher or bottom of a drinking glass.
4. Strain the liquid removing the pulp. You need something very fine to strain out very small particles. You could use a wire mesh colander or cheesecloth.
5. Place 1 1/2 cups of the liquid back in the pan add the sure jell, and the sugar.
6. Boil this mixture for two minutes.
7. Skim off foam.

Pour Jelly in a jar and let set for several hours. I put mine in the refrigerator.

The Jelly turned out beautiful bright purple and was very good. It wasn't overly fruity but had a nice berry taste. Even my husband like it so I felt that was a good sign. My only issue with it was I was shocked how much sugar was in jelly. While I knew jelly had a lot of sugar, there is nothing like actually pouring in cups into the mixture. I've been trying to reduce the sugar in my diet lately so I decided that the next time I make this, I will use the lower sugar gel solution and see how that works but that will be another story.

In Summary, if you have an American beautyberry bush, take time to taste the berries and why not make some jelly. While the berries are edible, they make a delicious purple Jelly that will surprise you.

BY MELANIE SHUCHART



iNaturalist has opened my world to all the creatures living on this earth and connected me with others that share my same passion. It is hard for me to document the joy I get out of doing this but I will give it a try.

While on the surface iNaturalist is a recording tool, it really is much more than that. Once you start documenting nature around you, you really start seeing and understanding that there are a lot of creatures living with us that go unnoticed each day. As my focus was on anything in my yard, I came to really appreciate all the insects that live there and their interactions with the plants in the yard. I was able over time to know which insects favored different plants and when they would show up each year.

Besides improving my knowledge, iNaturalist has connected me to other people with the same interest. We get together to do bioblitz's (attempt to record all living species) in the area and even travel to other parts of Texas to spend days documenting nature and share our knowledge as we develop new friendships. I've been to the Big Thicket, Pat Mayes Refuge in East Texas and am planning a trip to Del Rio in April with my other fellow naturalists. These trips are open to anyone interested.

Another facet that I'm delving into is the documentation of our threatened or unknown species. I've been able to add 2 species to Dr. Rich Nelson's Collin County guide on plants although both are invasive: Alligator Weed and Broomrape. I've found a Butternut Woolly worm at the Heard which was not recording in Texas in bugguide, With the focus on finding the threatened Frosted Elfin this year, I will use it to document any butterflies I might find. I was also able to see that other people had documented this rare butterfly in other counties south of here using the search feature as well as identify where their host plant (*Baptisia australis*) was located to give me additional places to search.

My pictures have been used by a mason bee website and my robberfly was used by the Indian Chapter of master naturalist for their newsletter.

I have grown my knowledge of the living world tremendously by using iNaturalist and it has now given me my life list of everything I've seen. It is now my own personal field guide for me to use when I see something new and can't remember what it was. It allows me and others to educate each other by identifying what others are seeing.

So if you think you are interested, join up for the City Nature Challenge which will be upcoming in April (27-30). This is a great way to get started by adding pictures that you see and contributing it to the DFW Metroplex list that will be competing internationally with 65 other cities this year to find and document the most species. We won the North American challenge last year identifying 2238 species so we have a lot to prove. (Photo: Frosted Elfin taken by Laurie Sheppard)

by..Melanie Schuchart



Have you changed your email address? Moved? New phone number? Be sure to go into VMS and click on the Edit My Profile link at the bottom left of the Dashboard. We need to keep your information current.

When Rachel Carson wrote Silent Spring, her warnings and conclusions were based on her own observations and those by others. It's important for scientists, master naturalists, and other interested people to identify the flora and fauna in their local environment. It is why we document our observations in iNaturalist and other places. However, a single observation of a particular species is merely showing they were present at a specific point in time and their continued presence cannot be extrapolated to next week, next month, or next year. For that, continuous, on-going documentation of the presence of a species over time is necessary.

Every Tuesday morning, a group of birders gathers at Hagerman NWR to take a census of all the birds they can find in the next 5-6 hours. Every single week. The birding group is led by Jack Chiles, a Texas Master Naturalist with the Bluestem Chapter and he is joined by other volunteers, including Blackland Prairie TMN's Mike Petrick. The refuge supplies a van and although the route they take varies slightly each week, they are able to find and identify most bird species in the area at that time.

Records for the weekly bird census are maintained on eBird.org; there are records of this census going back to the middle of the twentieth century. These data can be used to identify detailed information such as when the first specimen of a bird is found on the refuge. For example, the earliest documented sighting of a Common Gallinule at Hagerman was October 14, 1946. The most recent "new" bird at the refuge was a Glaucous Gull, first seen on February 4, 2018. Other information that can be gleaned from the eBird data is whether numbers of a resident species are diminishing or whether migrating birds are arriving earlier or later year after year. This citizen science is critical to understanding changes in the environment.

In 2015, the Friends of Hagerman broke ground on a large Butterfly Garden. Beginning the following year, random lists of butterflies visiting the garden were collected, but more reliable information is needed. This year several of the Butterfly Docents will undertake a more formal census program, ensuring that at least one list of butterfly species present in the garden will be documented each week. Collecting and distributing this information will help visitors by providing a list of what is on the wing that week in the Texoma area, similar to the list on the Dallas County Lepidopterist Society's web site. Over time, it will also help the docents identify when to expect a particular butterfly to emerge and whether a specific butterfly is rare or common in our area. Maintaining a regular census will also enable the garden managers to correlate butterfly species to plants that are blooming and determine the needs for additional host and nectar plants.

As always, Hagerman NWR relies on and benefits from Texas Master Naturalists and other volunteers to provide information, education, and public outreach regarding the flora and fauna on the refuge. Visitors and volunteers are always welcome.



Hagerman National Wildlife Refuge sightings: American Pipit (Top Left) and Northern Pearly Eye Butterfly. Article and photos submitted by Laurie Sheppard

Painted Buntings are “weird”! By Greg Tonian

At the Prairies and Timbers Audubon Society meeting on Tuesday, March 27th, Dr. Wayne Meyer Austin College Biology professor addressed a topic that related to one of our more conspicuous birds, the Painted Bunting. They will return to our region at the end of April, beginning of May and will awe us with their iridescent plumage, distinctive warbling and yes, their weirdness, according to Dr. Meyer, like Monarchs, these birds spend the winter months South of the border and return each Spring to mate. The males sport a tri-colored coat of deep purple, hot red and a bold yellow-green. The females remain all green and frankly are not only inconspicuous, but rarely spotted. They also do all of the work from nest building to feeding insects to the young. One of the key weird traits of this species is the fact that the first year males will retain a green plumage and do not take on the breeding plumage of the older males. Dr. Meyer shared with attendees of the meeting some of the possible theories as to why this species would develop this unusual strategy of keeping the first year males out of the gene pool. Some theories were shared including: The young, green males, mimic females and perhaps are able to expend less energy battling breeders and may get to breed anyway. Or, the yearling males have an advantage in that they expend less energy by not molting. Another theory is that the young males need more practice singing their mating calls. The green plumage may offer more protection for the first year males. The jury is still out. Dr. Meyer also revealed that the singing capabilities of painted buntings make them one of the more talented vocalizers. An individual bird will actually have a repertoire of multiple songs. Though the songs of painted buntings all seem quite similar, ornithologists like Dr. Meyer use sonograms which allow comparison in a visual graphical representation. This is how it became clear that Painted Buntings have “playlists” which they use in attracting mates, but also in interactions between males, whether neighbor or stranger. These interplays continue to be studied by Dr. Meyer and his students. Painted buntings set up small territories and the male will serenade from the top of a tree in side that territory. Painted bunting males do not share songs with their neighbors, however, Dr. Meyer revealed that neighboring Painted Buntings are less hostile to their neighbors than strangers that wander into their territory. The males leave the area around August 20th and head west to Western New Mexico and Eastern Arizona to refuel on insects hatched during the summer monsoons in those areas before heading down to Mexico. The females, however, may linger into October and even December before flying directly to Mexico. Weird but Wonderful!

I am issuing a challenge to chapter members for a photo of a female bunting and/or a first year green male bunting as well as a photo of a female bunting on her nest. -Greg Tonian



Learning More about Texas Geology by Richard Zartler

Some simple generalizations about the local geological conditions:

The first few thousand feet of rocks in North Texas are sedimentary rocks, deposited in a marine environment between 66 and 115 million years ago, either in deep water, shallow water, swamps or along shoreline. As a result, the rocks underfoot are limestones (calcium carbonate from shells), sandstone from beaches, shales from swamp residue, and marls, a mixture of limestones and clays (which locally consist of very fine volcanic produced minerals).

After our surface rocks were laid down horizontally, the Gulf of Mexico basin opened, and our local surface rocks sank towards the Gulf at a slope of about 40 ft per mile. and the exposed surfaces eroded to an undulating prairie whose younger rocks are to our east and the older rocks are to our west. No dinosaur tracks in Canton, but plenty near Glen Rose.

Do not expect to see local surface deposits of lava, granite rocks or hard rock minerals like gold, and silver. There are always exceptions: east Texas has iron ore deposits and near Vernon were copper mines!

For the last 10,000 years at least, North, West and South Texas were primarily Prairie. Range fires, lit by first nation people or lightning, burned our prairies areas at least once a decade. Trees only survived along stream and river beds where the humidity was high, and profiles were low. That is why, in north Texas, our largest trees are stream side.

One exception to our prairies, and a bane to westward travelers, was the "Eastern Cross Timbers, "a dense forest of oaks +/-10 miles thick running north/south from Oklahoma to the Brazos at Waco. The cross timbers sit atop of the outcrops woodbine sandstone. See map of 1838 below.

We had no natural lakes, other than ox-bow lakes, (abandoned streams beds), Caddo Lake on the Texas-Louisiana border formed by a beaver dam, and the ephemeral playa lakes of the Llano Estacado. The underlying sedimentary rocks are not very porous so man-made lakes do not have a lot of ground losses. Evaporation and usage drain our lakes.

The last volcanos in the area ran from Austin to El Paso , over 40 million years ago, but their residue ash, momorillonite, is ever present and provides the ingredient that makes our Blackland Prairie clay soils so difficult to work.

Average rainfall is 46.6 inches in Tyler, 37.6 inches in Dallas and 14.6 inches in Midland, greatly affecting the erosion of surface rocks and the creator of soils depth in these areas. Not many visible surface rocks on road cuts in East Texas . (CONT'D NEXT PAGE...)

Your best place to look for exposed rocks are in stream beds. Look for change in erosion rates, seeps, colors, and textures to hint at what you are seeing.

Some handy resources to easily increase your knowledge of Texas and local geology:

Roadside Geology of Texas, soft cover. This is not a literary masterpiece and is a bit redundant, but it is an easy reference for our overall geological history and the geology you encounter on almost any road trip from DFW. Read while someone else drives.

Dallas Paleontological Society Geology of Dallas and Tarrant Counties: <https://dps.wildapricot.org/Surface> Good discussions of formations and strata. I learn something every time I read it.

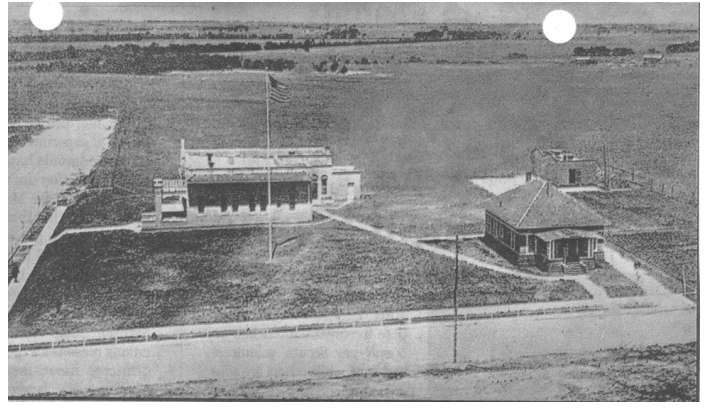
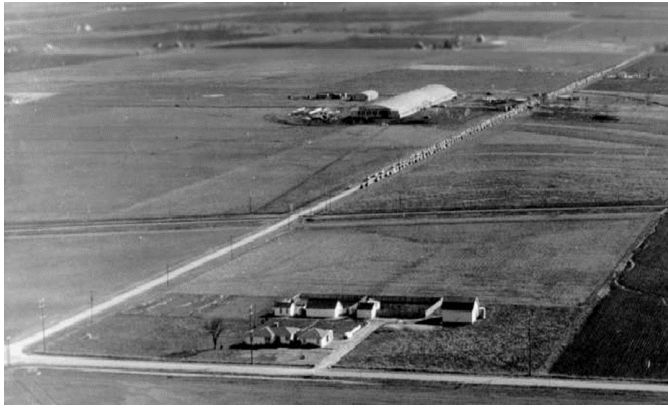
northtexasfossils.com/maps.htm. If you are planning to hike along the west side of Lavon Lake or fish on the banks of Lake Ray Roberts, this link and the links it contains will tell you exactly what is under your feet, but you will have to look up the full name of formation in the Key. Most geological maps have Kau for Austin chalk for example.

<http://www.nhnct.org/geology/geo2.htm> Fabulous link!

https://en.wikipedia.org/wiki/Geology_of_the_Dallas-Fort_Worth_Metroplex. A great link.

(Photo: Dick Zartler leading a Geology Walk at Arbor Hills nature Preserve 3/10/2018)





Upper Left: NE Dallas during WWII; Upper Right : Downtown Highland Park in 1910 was Prairie with no trees; Map Below is Texas in 1838



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by
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email newsletter@bptmn.org.

Past issues can be found on our website at:
http://bptmn.org/_BOARD_FTP/newsletter/

Other BPTMN communications are at:

Smugmug - <http://bptmn.smugmug.com/>
Facebook - <https://www.facebook.com/bptmnforum.bptmn.org>

The Mission of the Texas Master Naturalist program is to develop a corps of well-informed volunteers to provide education, outreach and service dedicated to the beneficial management of natural resources and natural areas within their communities for the State of Texas.

The Texas Master Naturalist program is a partnership between the Texas AgriLife Extension Service, Texas Parks & Wildlife and other local partners.



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Upcoming BPTMN Meetings **2nd Tuesday, 7 p.m.,** **Heard Museum Science Center**

April 10: "Citizen Science"

Marsh May, TX PWD Biologist with Texas Nature Tracker Program. For 17 years. BS Wildlife Science TX A&M and master Aquatic Science SW Texas State University. Birds and Freshwater Mussels are her special interest.

May 8 "Fundamentals of Forest Ecology"

Chris Ebling, Chapter Member, will discuss energy flow, nutrient cycling, forest structure and Texas Forest Systems. He has a BS in Forestry from U. Michigan and a Master of Science in Resource Interpretation from Stephen F. Austin U. Owns and manages a 15 acre wetland in Fannin Co.

Websites of Interest...

All About Birds:

<https://academy.allaboutbirds.org/features/birdanatomy/>

Blackland Prairie Texas Master Naturalist Calendar <http://bptmn.org/calendar/>

Cornell Lab of Ornithology -

<http://www.birds.cornell.edu/Page.aspx?pid=1478>

Earthkind Landscaping

<http://aggie-horticulture.tamu.edu/earthkind/>

Green Source DFW

<http://www.greensourcedfw.org/>

Ladybird Johnson Wildlife Center

<https://www.wildflower.org/>

Texas Aggie Horticulture

<http://aggie-horticulture.tamu.edu/>

Texas Parks & Wildlife Updates

<https://tpwd.texas.gov/>

Texas Smartscape <http://www.txsmartscape.com/>

Texas Superstar Plants <http://www.texassuperstar.com/plants/>