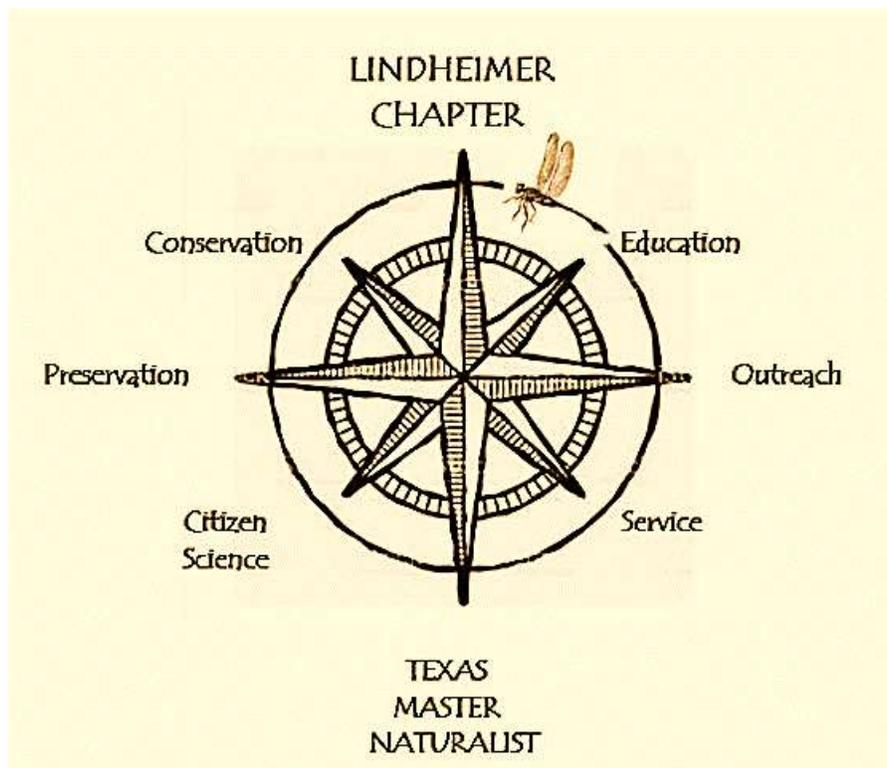


LINDHEIMER CHAPTER 2017

Not all who wander are lost – some are Master Naturalists at work!

The compass rose illustrates the strong sense of direction of the Lindheimer Chapter Master Naturalists and the activities and projects for which we volunteer.

Whether we are active in one area or many, our volunteerism reflects our commitment and passion to the mission of the Texas Master Naturalist Program for **education, outreach and service**, and to the principles of **conservation, preservation and citizen science**.



TEXAS MASTER NATURALIST PROGRAM

Mission: 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.

Need: Many communities and organizations rely on such citizen volunteers for implementing youth education programs; for operating parks, nature centers, and natural areas; and for providing leadership in local natural resource conservation efforts. In fact, a short supply of dedicated and well-informed volunteers is often cited as a limiting factor for community-based conservation efforts.

TMN provides volunteers with 40 hours of initial training, including field and classroom instruction and 8 hours of advanced training annually

customized to meet the needs of local environmental issues. Certified Master Naturalist Volunteers then give a minimum 40 hours of community service annually.



Sponsors: The Texas Master Naturalist Program exists to make a positive difference in the quality of the environment in Texas. Texas Parks & Wildlife Department along with Texas A&M AgriLife Extension serve as sponsors for the program.

Together they provide education, outreach and service to their community with an emphasis on how to manage Texas' natural resources.





Texas Master Naturalist



Welcome to the 2017 Scrapbook, which documents a very active and productive year for the Lindheimer Chapter. The talented, creative and motivated members of the chapter have made a difference in many areas and on many projects important to the Hill Country.

We have volunteered for service projects such as trail building, removal of invasive species, butterfly & bird surveys, wildlife rescue; outreach & education at Guadalupe River State Park, docents for Canyon Lake Gorge, and the Bracken Bat Preserve. We participated in festivals such as the Folk Fest,

Wein & Sangerfest, New Braunfels Science Fest, Comal County Fair; in new programs such as Texas Waters Specialists. We were educated about birds, bees, butterflies, water management, community projects, climate change and bio-diversity, oak wilt and more. We graduated the N2 Nature Class, a great group of new Master Naturalists, produced an Earth Day event that was a resounding success, and provided education and outreach at many festivals and events, where we reached thousands of people with the message of conservation, preservation and citizen science.

I hope you enjoy reviewing our chapter's 2017 activities and accomplishments. An electronic issue will be available on our chapter website early in 2018. Please be sure to take a look at the photographs our members contributed that document our activities and demonstrate the beauty, wonder and diversity of the Texas Hill Country.

Thank you to our members for your invaluable contributions.

Joel Dunnington

President, Lindheimer Chapter

LINDHEIMER CHAPTER



The Lindheimer Chapter of the Texas Master Naturalist Program was established in 2000. Located in Comal County in the Texas Hill Country, we are an active, vibrant and growing organization of volunteers committed to preserving the natural resources of the Texas Hill Country for current and future generations.

Our chapter is named after Ferdinand Jacob Lindheimer (1801 – 1879), who is called the “Father of Texas Botany.” He immigrated from Germany in his early thirties, travelled all over Texas discovering and documenting Texas flora, and found a permanent home on the banks of the Comal River in 1844, when New Braunfels was founded. Lindheimer collected 1500 botanic species in Texas over a period of thirteen years (more than thirty species are named after him).

He is the author of *A Life Among the Texas Flora*. His home in New Braunfels is now a museum which draws many visitors annually.



Lindheimer's Senna
Senna lindheimeriana
Comal County, Texas
©Carmen Horn
Submission to TMN State Contest
(Plant Photo)

LINDHEIMER CHAPTER

2017 OFFICERS AND BOARD OF DIRECTORS



President: Joel Dunnington
Vice President: Art Williams
Secretary: Kim Wright
Treasurer: Rich Nielsen
Past President/TMN State Rep: Jim Teeling

COMMITTEES/CHAIRS

Outreach: Darlene Varga
Membership & Records: Cheryl Trock
Projects & Opportunities: Jeanie Springer
Education: Sara Riggs, Debbie Kyrouac
Hospitality: Joyce Doyle
Communication: Marie Miller



SUBCOMMITTEES

Website – Marie Miller
Out and About - Sara Riggs
Social Media: Jennifer Hendren
Newsletter: Carmen Horn
Photography: William Suddith
Publicity: Karen Lillard
Historian: MJ McFarland

LINDHEIMER CHAPTER ADVISORS

Craig Hensley, Master Interpreter/Ranger, TPWD
Troy Luepke, Texas A&M AgriLife Extension Service
Florence Oxley, Austin Community College

From Us, For Us

It is the beauty of the natural world and our desire to preserve it that draws us to volunteer as Master Naturalists. We educate ourselves and the public, reach out to others to promote conservation and preservation, and serve in many different roles, from trail builders to citizen scientists to wildlife rescuers to docents to educators and many more roles.



"Hill Country Early Morning" ©Sara Riggs

Featured throughout the scrapbook are photographs submitted by LMN members. These photos capture the wonder of our natural world & remind us why we are Master Naturalists. There is no place more beautiful, or beautifully diverse, than the Texas Hill Country. It is about as close to heaven as you will find on earth and *we have the photographs to prove it!*



"Purple Prairie Nymphs in Clover"

Prairie Nymphs: Herbertia lahue

Comal County, Texas

©Nancy Hammack

Submission to TMN State Contest (Plant Photo)



©Nancy Hammack





LINDHEIMER CHAPTER VOLUNTEER PROJECTS
WE MAKE A DIFFERENCE!



Green Dragonfly © Brian Trock

PROJECT: THE SUSAN BOGLE BUTTERFLY GARDEN



One of our most prominent projects is the Susan Bogle Butterfly Garden at Tye Preston Memorial Library. The garden is carefully laid out and protected from the deer by fencing and includes a nature trail and informational signage on the plants. The garden is certified as a Monarch

Butterfly Waystation and a wildlife habitat, and butterfly surveys are conducted routinely. The site is lovely with its hilltop view and natural surroundings, with nature trails and whimsical items such as an iron tree sculpture and a seat shaped like a butterfly. **We maintain the Butterfly Garden year round.**



©Sara Riggs



Tye Preston Memorial Library is a past recipient of Lindheimer Chapter Community Naturalist Award for giving the residents of Canyon Lake a place to learn and be involved with nature.



*Spring and Summer
in the Garden*

“Lantana For Lunch”
Eastern Tiger Swallowtail:
Papilio glaucus
Comal County, Texas
©Jeanie Springer
Submission to TMN State
Contest (Wildlife Photo)



“Mellow Yellow”
Eastern Tiger Swallowtail –
Papilio glaucus
Comal County, Texas
© Jane Schnell
Submission to TMN State Meeting Contest
(Wildlife Photo)



©Sara Riggs



“The Bumble Bee & The Butterfly”
Bumblebee – *Bombus pennsylvanicus* 🐝 **Juniper Hairstreak** – *Callophrys gryneus*
Comal County, Texas
©Brian Trock
Submission to TMN State Contest (Wildlife Photo)



©Brian Trock

"Perfection"

Selah, Bamberger Ranch Preserve, Blanco County

©William Suddith

Submission to TMN State Contest (Scenic Photo)



PROJECT: TPML NATURE TRAILS & GROUNDS



“Reader Weeders”

There are many trails and garden areas around the grounds of the Tye Preston Memorial Library. “Reader Weeders” are volunteers who maintain an assigned “patch” of the grounds. The cultivated areas are kept weeded, while the natural areas are kept as natural as possible, removing invasive plants and providing unobtrusive weeding and pruning.



“Never doubt that a small group of thoughtful, committed citizens can change the world. Indeed it’s the only thing that ever has.”

-Margaret Mead



“Waiting”
Summer Tanager – Piranga rubra
Comal County, Texas
©Teresa Turko
Submission to TMN State Contest
(Wildlife photo)



“Delicious!”
Grey Hairstreak Butterfly – Strymon melinus
Comal County, Texas
©John Davis
Submission to TMN State Contest
(Wildlife Photo)

PROJECT: GUADALUPE-BLANCO RIVER AUTHORITY (GBRA)



This project involves trail work for GBRA between the Gorge and Tye Preston Memorial Library. In 2017, from February to May, Lindheimer Chapter volunteers completed an extension of a trail at the Guadalupe-Blanco River Authority Environmental Learning Center. Sponsored by Cinde Thomas-Jiminez, GBRA's Environmental Education Supervisor, the trail-building began in February with the cleaning of slash from the area. Then a trail was cleared and lined with stone, followed by the placing of a bench along the trail, and is now a beautiful, peaceful area from which to immerse yourself in the natural world. Trail builders included Jim Jameson, Art Williams, Brian Trock, Ron Butts, Gloria Glass, Al Seeger and Dan Madden.



The trail is aptly named
“The Lindheimer Lair”.



©Brian Trock

PROJECT: CANYON LAKE GORGE A Natural Wonder of Texas

The Canyon Lake Gorge is a beautiful, natural window into the geologic and hydrologic dynamics of the Glen Rose limestone found in the Canyon Lake area. The Gorge was created or “cut” when massive floodwaters escaped for the first time over the Canyon Lake Dam Spillway during the disastrous flood of 2002. It is a geologist’s paradise and a great tool for learning about the dynamic of the limestone, faults, fossils and tracks, rock formations and above all, the power of water. Our Lindheimer Chapter works in close association

with the Canyon Lake Gorge Preservation Society, a grassroots organization dedicated to developing long term plans for the Gorge and to protecting the Gorge as it was created. We serve as **guides, docents and administrative leaders**. We provide trail maintenance and development, help preserve natural features, and assist in designing educational & tour materials.



©Sara Riggs



©Brian Trock

Above: Volunteers washing the “ripples”; top: Susan James explains the day’s activities to students; Right – Guides conduct Gorge Tours.



©Brian Trock

“Serenity”
Guadalupe River, New Braunfels, Texas
©Nancy Hammack
Submission to TMN State Meeting
(Scenic Photo)



PROJECT: BRACKEN BAT PRESERVE

A Natural Wonder of the World

“The mission of Bat Conservation International is to conserve the world’s bats and their ecosystems to ensure a healthy planet.” www.batcon.org

There are 1300+ species of bats around the world. The largest colony of Mexican free-tailed Bats (*Tadarida brasiliensis*) in the world (!) is located at the Bracken Bat Preserve, Comal County, Texas - a “sinkhole” cave with an annual bat population of 20 million. Lindheimer Master Naturalists support the mission of BCI



BCI Outreach with Don & Edith Bergquist

through education and outreach as trained docents, and service through maintenance of the habitat and paths of the preserve. The importance of bats to agricultural communities can’t be overestimated. Every night during the growing season, bats eat 140 tons (*300,000 pounds!*) of bugs that are primarily agricultural pests, providing unequalled pest suppression unequalled by any other method. It takes approximately four hours for all the bats to exit the cave, starting orderly in front and proceeding to the rear. Emergence is so dense it is seen on radar! All is reversed at the end of the night.



“Supper Time!”

Free-Tailed Bats – Tadarida brasiliensis

Bracken Bat Preserve, Texas

©Sara Riggs

Submission to TMN State Contest (Wildlife Photo)



“Newest Bat Cave Docent”
Rio Grande Turkey –
Melegaris gallopavo intermedia
Bracken Bat Preserve, Texas
©Edith Bergquist
Submission to TMN State Contest
(Wildlife Photo)

This beautiful bird shows up at the Bat Cave & hangs around for the tours.
No one knows why. It’s a mystery.



“Shake Your Tailfeathers”
Rio Grande Turkey –
Melegaris gallopavo intermedia
Bracken Bat Preserve, Texas
©Don Bergquist
Submission to TMN State Contest
(Wildlife Photo)



PROJECT: WILDLIFE RESCUE & REHABILITATION (WRR)

One of the approved LMN volunteer projects is Wildlife Rescue & Rehabilitation (WRR) with sanctuaries in Kendalia and San Antonio. WRR rescues over 7,000 animals per year, and operates 24/7/365. Currently, there are 1,433 volunteers from all walks of life who provide hundreds of thousands of volunteer hours annually.

- ❖ Mission: "To rescue, rehabilitate, and release native wildlife and to provide sanctuary, individualized care, and a voice for other animals in need."
- ❖ Vision: "That humans come to see that we are members of a vast life community, that we experience the proper gratitude and respect for this community, and that we live in a more appropriate and compassionate manner in relation to the whole."



"Where's my mom?"
Orphaned opossum awaiting transport



Injured fawn awaiting
transport from rescue site



At the WRR Animal
Hospital in Kendalia

GUADALUPE RIVER STATE PARK (GRSP)

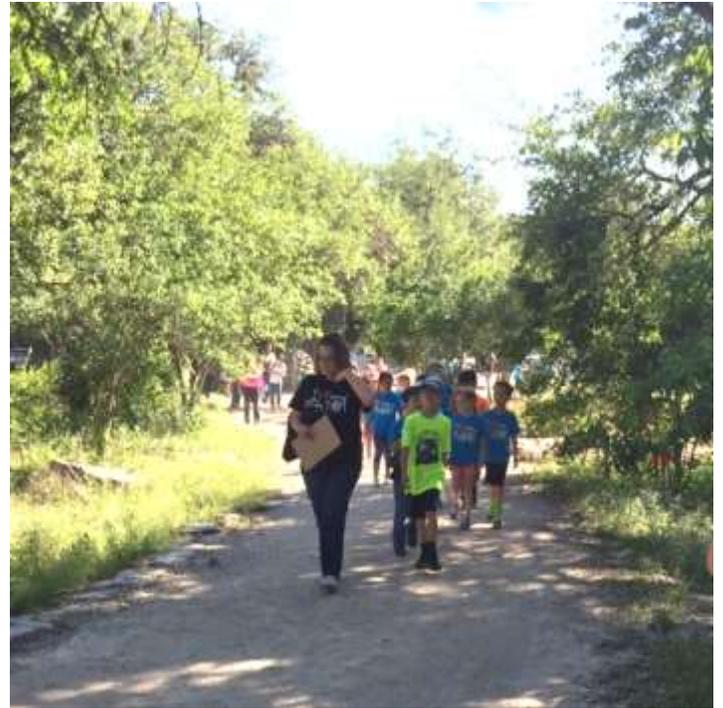
**Education, Outreach, Service, Conservation, Preservation & Citizen Science –
One Person at a Time!**



We provide education, outreach and service to GRSP through the Discovery Center, Honey Creek Guided Walks, Butterfly Surveys, Wildlife Education, Bird Blind Maintenance, Nature Educational Programs, and Campfire Programs.



Clockwise from top: 1) Peggy Haley; 2) Faith Ray, Darlene Varga & Deb Kyrouac; 3) Darlene & center visitors; 4) Harry & Gretchen Ferrell with a group of interested kids. All staff the Discovery Center and help the visitors learn about the natural world around them.



Clockwise from top: 1) The Bird Blind maintained by LMNs; 2) students on a field trip; 3) students having fun in Guadalupe River; 4) Ranger Hensley shows how to hold a bird; 5) Ranger Hensley in the Discovery Center Amphitheater with a slideshow "Slitherin' Snakes Alive!".

OUTREACH: FOLK FEST

Lindheimer Chapter Certified Texas Master Naturalists attend festivals, educational events, projects and presentations as part of the outreach and education on conservation and preservation of our natural world and resources.

Folk Fest is an annual celebration of early Texans held at the Museum of Texas Handmade Furniture in New Braunfels. The LMN display was very popular with the crowd! Thank you to our volunteers!

Left to right: President Joel Dunnington, Past President Jim Teeling, and Sara Riggs, Education and Out & About.



Joe Finneran, N2Nature class member, talks dinosaurs & fossils to an interested group.



Sara Riggs & Jim Teeling stayed busy. The LMN display was very well attended!

“Time for a Drink”

Grey Fox – Urocyon cinereoargenteus

Comal County, Texas

©Nancy Hammack

Submission to TMN State Contest (Wildlife Photo)



OUTREACH: WEIN and SAENGERFEST

Lindheimer Chapter Certified Master Naturalists members Rich Nielson (event coordinator), Evelyn Nielson, Judy Brupbacher, Barry Brupbacher, Pat Gonser, Jane Finneran, Joe Finneran, and MJ McFarland provided the public with information on wildlife, geology and venomous snakes at a very popular annual festival in Comal County. LMN members were kept very busy throughout the day!





“Feeding Frenzy”
Monarch Butterfly - Danaus plexippus
Comal County, Texas
©William Suddith
Submission to TMN State Contest
(Wildlife Photo)



“On Fire”
Rayless Gallardia – Gallardia suavis
Comal County, Texas
©John Davis
Submission to TMN State Contest
(Plant Photo)



“Symmetry”
Antelope Horn Milkweed-Asclepius asperula
Canyon Lake, Texas
©MJ McFarland
Submission to TMN State Contest (Plant Photo)
2ND Place – Plant Category

“Buckeye Blooming”
Mexican Buckeye Tree – Ungnadia speciosa
Guadalupe River State Park
©Dottie Green
Submission to TMN State Meeting Contest
(Plant Photo)



OUTREACH & EDUCATION: COMAL COUNTY FAIR September 28 – October 1, 2017

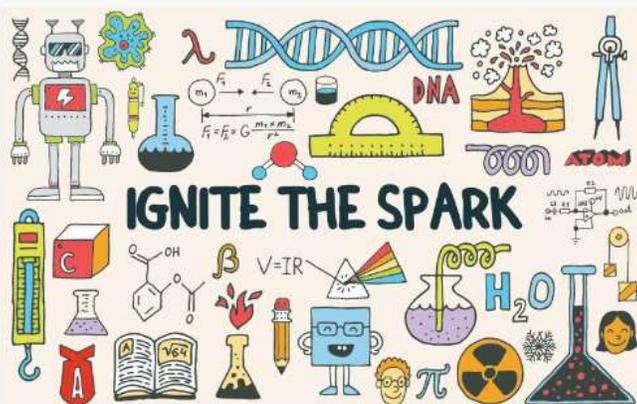


We took our trunks on the road to the Comal County Fair for the Kids Zone. Despite rainy weather, over the four days we exhibited, we had 600 folks come to our displays to learn about Snakes - on Thursday with Marilyn McFarland, Holly Emrie & Marietta Diehl; and Skins & Skulls - on Friday, Saturday and Sunday with Pat Gonser, Pat & Jane Schnell, Jim & Joyce Doyle, Darlene Varga & Susan James. Many thanks to our volunteers!



OUTREACH & EDUCATION: NEW BRAUNFELS SCIENCE FEST October 8, 2017

From the Herald-Zeitung on October 11: "Sunday's inaugural New Braunfels Science Fest brought out the best and brightest thirsty for knowledge in science, technology, engineering and math (STEM) programs during a four-hour event at New Braunfels Farmers Market."



NEW BRAUNFELS SCIENCE FEST

Sunday, October 8, 3pm-7pm
Farmers Market Grounds

Explosive entertainment by Mad Science!
Groovy tunes from Otter Space Band!
Hands on science, technology, engineering,
and math exploration for the curious of all ages!
FREE ADMISSION for the whole family!

"It was fantastic — we had a great turnout," said Whitney Mitchell of the affair, sponsored by New Braunfels Science Education Foundation. "We estimate 2,500 folks appeared and everybody had a lot of fun."

Lindheimer Chapter was well represented by Darlene Varga, Debbie Kyrouac, Susan James, Sara Riggs and Marilyn McFarland. This was one of the largest events, and our grand total of visitors to our displays was 950 - 439 adults and 511 children! It was pretty much non-stop for four hours!



LMN Volunteers in Action

PROJECT: RAIN GARDEN AT AGRILIFE

Most Lindheimer Chapter projects don't involve heavy equipment, but the Rain Garden at the AgriLife Building needed a lot of dirt rearranged!



The drain, which slopes downhill, was dug and lined with rocks. Rainwater rushes down the drain and into the pool. The end result is prevention of flooding, and collection of rainwater. Plants around the pool will have access to water and not require additional watering. It's a win-win!



Clockwise from top: 1) Moving some earth; 2) the gravel drain; 3) empty pool; 4) full pool after storm; 5) hardworking volunteers perfect the pool shape (wow, this ecological science stuff really works!); 6) chapter advisor, Travis Luepke, on site.

ove



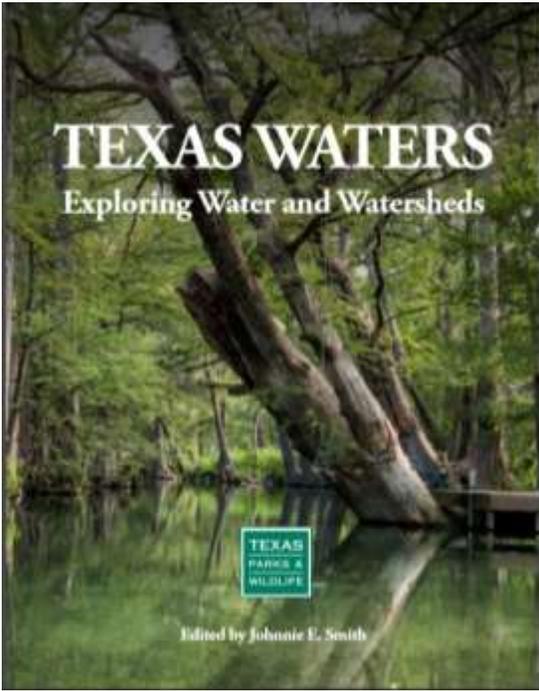
“Bright-Eyed & Bushy-Tailed”

Grey Fox – Urocyon cinereoargenteus

Comal County, Texas

©Glenna Dunnington

Submission to TMN State Contest (Wildlife Photo)



PROJECT: Texas Waters Specialist Certification

Through a new program, Texas Waters Specialist, Texas Parks and Wildlife is developing a corps of well-informed volunteer specialists who provide education, outreach, and service dedicated to the beneficial management of aquatic resources and aquatic habitats within their communities for the state of Texas. Requirements: 1) Obtain 8 hours of Advanced Training utilizing the Texas Waters curriculum; 2) Participate in at least one approved volunteer service project ; 3) Contribute 10 hours of volunteer service annually in the area of water & watersheds.

A chapter study group met monthly to review the curriculum and attended four webinars hosted by TPWD. They will select specific water field research projects involving water to earn the 10 volunteer hours required annually to recertify.

PROJECT - Christmas Bird Count: A Citizen Science Project for 117 Years

The Christmas Bird Count (CBC) is the oldest and largest citizen science project in the US. The data collected from CBC's is used to assess the health of the bird population and to help guide conservation efforts. Access to the data and more information about how the data is used can be found on the Audubon Society website www.audubon.org. The most recent CBC's counted 31,158,392 birds in 1273 counts, according to National Audubon, but data are still coming in. A list of 114 CBCs in Texas, and the contact details, is on Houston Audubon's web page. There are 24 CBCs in Central Texas, including our own New Braunfels Count. Birders of all expertise are welcome; all you need is a pair of binoculars and the desire to see birds. The Christmas Bird Count period begins on December 14th and runs through January 5th. There is no fee for joining a count. Each count area is described by a 15-mile circle. Christmas Bird Counts were begun to deter people from the traditional bird hunting, which led to a widespread slaughter of birds. The passenger pigeon was a favorite target, which led to its extinction in 1914. -- Excerpted from an article by Coco Brennan



LINDHEIMER CHAPTER

2017 Re-certifications & Volunteer Hour Milestones

THANK YOU!

JANUARY 2017

Recertifications

Susan Bogle, John Davis, Joel Dunnington, James Jameson, Mary Ann Richey

Milestones

500 Hours: James Jameson

FEBRUARY 2017

Re-certifications

Ron Butts, Julie Crouch, Mary Mathey, Lois Rici, Brian Trock, Art Williams

Milestones

500 Hours: Tom Mathey

MARCH 2017

Re-certifications

Ellen Anderson, Don Berquist, Edith Berquist, Rich Bradley, Pete Bryant, Caroline Carpenter, Patricia Gonser, Dottie Green, Jennifer Hendren, Debra Kyrouac, Valerie Lefebvre, Dan Madden, Lisa Marler, Thomas Mathey, Marilyn McFarland, Sara Riggs, Jeanie Springer, Darlene Varga

Milestones

1,000 Hours: Patricia Gonser

250 Hours: Carol Ingham,
Laird Ingham, Susan James



2016 Volunteer Hours

Active Members – 133

Volunteer Hours – 19,153

Advanced Training Hours – 2,180

Total Hours Since 2000

Volunteer – 125,587

Advanced Training – 13,934



APRIL 2017

Re-certifications

Marlin Brendsel, Marietta Diehl, Jim Doyle, Joyce Doyle, Henry Hahn, Carmen Horn, Jane Miller, Cathy Oberkamp, Bill Sewell, Carol Wilson, Kim Wright

Milestones

1,000 Hours: Ellen Anderson
250 Hours: Glenna Dunnington

MAY 2017

Re-certifications

Judy Brupbacher, Earl Dittman, Glenna Dunnington, Don Epps, Ed Finger, Don Fletcher, Pat Fletcher, Laird Ingham, James Teeling, Cheryl Trock, Teresa Turko

Milestones

1,000 Hours: John Davis, Janet Hahn
500 Hours: Dottie Green, Bill Sewell, James Teeling
250 Hours: Cathy Oberkamp, Marilyn McFarland



JUNE 2017

Re-certifications

Janet Hahn, Beth Jameson, Marie Miller, Denise Miner-Williams, Ben Pfeiffer, David Reel, Sherry Reel

Milestones

1,000 Hours: Barbara Brunson
500 Hours: Deborah Kyrouac
250 Hours: Marietta Diehl

JULY 2017
Re-certifications

Bob Gray
Jensie Madden
Al Steger

Milestones

2,500 Hours: Brian Trock



AUGUST 2017
Re-certifications

Gloria Glass
Carol Ingham

Milestones

250 Hours: Holly Emrie, Mark Henderson



Laird Ingham
500 Hours

SEPTEMBER 2017
Re-certifications

Andrew Cummings
Holly Emrie
Lynn McLemore
Irene Newhall
Jane Schnell

N2 Nature Double Certification: Stephen Jones

Milestones

250 Hours: Beth Jameson
500 Hours: Laird Ingham

October 2017



Re-certifications

Barbara Brunson, Elizabeth Bowerman, Barry Brupbacher, Susan James, Sandy McLemore, Evelyn Neilson, Rich Neilson, Dave Wright (not all are pictured)

N2 Nature Double-Certification:

Marilyn Garrison, Mike Hammack

Milestones

250 Hours: Pat Fletcher, Jane Schnell

1,000 Hours: Jeanie Springer



Jeanie Springer
1,000 Hours

Out with the old and in with the new...pin, that is.
2018 is the Ocelot!



Re-certifications

Frank Stile, Nancy Fitzpatrick, Nancy Gray, Debbie Subke, James McCullough, Sue Dittman, Bill Suddith, Coco Brennan (not all are pictured)

Milestones

250 hours: Bill Suddith



November 2017

December 2017



Recertifications

Melissa Skasik

N2Nature Double Certification

Cynthia Dewitt, Harry Ferrell

Volunteer Milestones

250 Hours - James Doyle



TEXAS MASTER NATURALIST, LINDHEIMER CHAPTER 2017 MEMBERSHIP REPORT

Submitted by Brian Trock, Membership Director
February 25, 2018

Active Members

161 (155 members submitted hours to in VMS)
N2 Nature, Master Naturalist-in-Training Class: 20 Graduates

Master Naturalists-in-Training for 2018

Mud Daubers - 34 trainees

2017 Hours

Advance Training Hours: 2,541
Volunteer Hours: 19,309

2017 Recertification Total

Re-Certifications: 90
(includes 5 Double Certifications by Mud Daubers)

2017 Service Hours Milestones

250 Service Hours: 14
500 Service Hours: 7
1,000 Service Hours: 1
2,500 Service Hours: 1

Lifetime Hours

Advanced Training Hours: 16,674
Volunteer Hours: 149,553



“Ruffled Elegance”

Catalpa Tree - Catalpa speciosa

Canyon Lake Gorge, Texas

©Mark Henderson

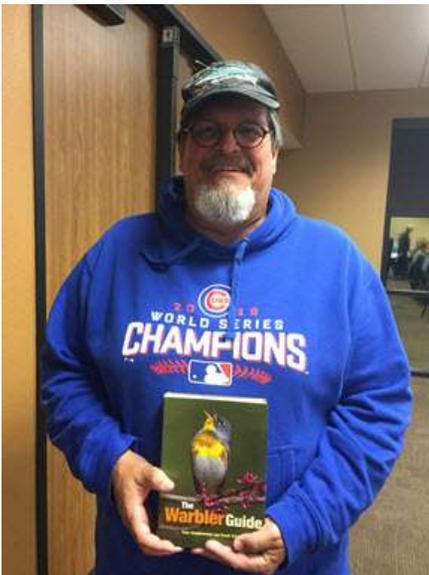
Submission to TMN State Contest (Plant Photo)



LINDHEIMER CHAPTER MEETINGS

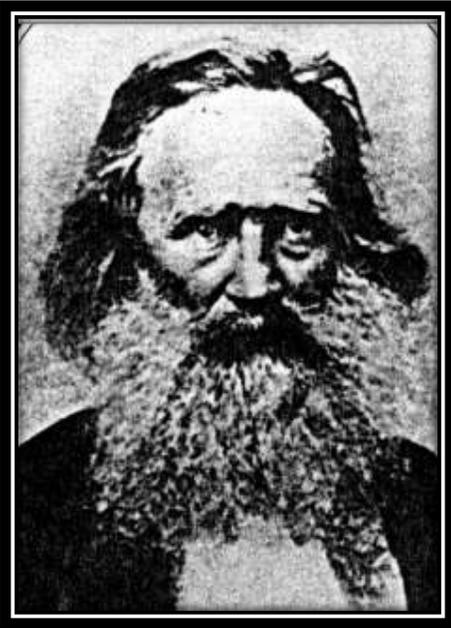
January 19, 2017 Butterfly Surveys *Craig Hensley*

Park Ranger and Interpreter, Craig Hensley, provided an informative program on the Guadalupe River State Park's Butterfly Surveys at the first meeting in 2017 of Lindheimer Master Naturalists. He explained that the regularly conducted surveys of types and numbers of butterflies at Guadalupe River State Park are unique in Texas. The surveys began in 2012 and over the years more than 40 volunteers have participated. To date 94 species have been counted. Hensley said that Fall 2016 was "an amazing Fall for butterflies!" with the top six butterflies counted being the Monarch, Clouded Sulfur, Common Mestra, Queen, American Snout and Orange Sulfur. Some rare butterflies were also catalogued, including the Tailed Orange, Mexican Yellow, Mimosa Yellow Tropical Leafwing, Zebra Longwing, Sickie Winged Skipper, Long Tailed Skipper, White Patched Skipper, Angled Sulpher and the Coyote Cloudy Wing.



February 16, 2017 Spring Warblers *Craig Hensley*

Following up his January talk on Hill Country butterflies, Park Ranger and Interpreter Craig Hensley treated the LMN group of about 65 members to a thorough (and thoroughly enjoyable) discussion of the small, colorful Spring Warblers. Many spring warblers are transients in the Hill Country, but the Northern Parula, Black-&-White, Golden-cheeked, Louisiana water thrush, Yellow-throated, and the Yellow-breasted Chat are considered nesting species. Forty-six species regularly occur in Texas, with another eight species discovered but considered vagrants - more than any other state. There is no overlap between breeding and wintering areas. Because warblers are small, and present for such a short time, it can be difficult to accurately identify them. He explained how to do so using eye rings, eye arcs, color and color distribution, caps, tail feathers, head marks, stripe patterns, songs, back color, rumps ("butter butt") and more. We also learned that warblers are mostly insectivorous, but will eat fruits and nectar. They have various eating behaviors: Bark gleaning, leaf turning, leaf gleaning, flycatching or "sallying", slow & methodical, and intensive. After the lecture, we had a short "test" identifying warblers as Craig flashed them up on the screen. It was a great primer for spring warbler watching.



March 16, 2017 Ferdinand Lindheimer *Susan James*

Susan James, LMN member, gave a fascinating talk about Ferdinand Lindheimer (1801-1879), called the “Father of Texas Botany”, for whom our chapter is named. To give context to Lindheimer’s life, Susan described the period of time in which he grew up – the Romantic Period (1800 – 1850) when there was an emphasis on art, poetry and music. Lindheimer, born in 1801 in Frankfurt, Germany, spent his early years in study of languages at universities in Wiesbaden, Jena, and Bonn, immersed in the idea that man could achieve perfection.

Lindheimer migrated to the US as a result of some unpopular political activities. He settled initially in Illinois, then joined a German group in Vera Cruz, Mexico, where he began his fascination with botany. In 1836 he came to Texas and joined the Texas army during the Revolution. He stayed in Texas because it was “too cold in Illinois” and began collecting plants for two botanists, George Englemann of Missouri Botanic Gardens

and Asa Gray of Harvard University. For nine years he traveled with his dogs and a cart throughout the Texas coast and hill country areas in search of plants, which he dried and pressed and sent on to the two botanists. In 1844, he assisted Prince Karl of Solms-Braunfels in locating an area for a German settlement (which became New Braunfels) and was given property on the Comal River. His home and garden are a National Historical Site. From the Handbook of Texas Online: “Lindheimer is credited with the discovery of several hundred plant species, among them a milkweed, a loco weed, a mimosa, a prickly pear and a rock daisy. In addition his name is used to designate forty-eight species and subspecies of plants” which are Lindheimer’s “scientific children.”



April 20, 2017: Headwaters at the Comal *Nancy Pappas*

Headwaters at the Comal, an ecological restoration project initiated by New Braunfels Utilities was the subject of the April 20th presentation by Nancy Pappas, Headwaters Managing Director. Ms. Pappas explained that the redevelopment will restore 16 acres of the NBU Klingemann Warehouse property at the headwaters of the Comal Springs to its natural environment. The vision for the Center is to create an area that establishes a relationship between the community and the environment by demonstrating the regeneration and protection of water and ecological resources.

www.nbutexas.com/Headwaters

May 18, 2017: Development Trends in Comal County ***Judge Sherman Krause & Engineer Tom Hornseth***



Judge Sherman Krause

Approximately 60 members attended the May chapter meeting to learn about trends in residential and business development, and their impact on Comal County. Comal County Judge Sherman Krause began the presentation with county population statistics. The group learned that the 1960 census showed about 20,000 folks. By 2016, that number had increased to about 135,000. Today, Comal County is the sixth fastest growing county in the US. Two other Texas counties, Hays and Kendall - which border Comal, are also in the top ten.



County Engineer Tom Hornseth

June 15, 2017: **The Unforeseen Impact of Meddling with Nature** ***Mark de Kiewiet, Master Beekeeper***

Mark de Kiewiet, Master Beekeeper, provided about 55 members gathered at the AgriLife building a fascinating, fact-filled presentation on honeybees, including examples of “meddling” with nature that has put these important little marvels in danger. He began his talk with some basic facts about the European honeybee, their class based society, the roles of queen, worker and drone bees; life cycles & span; the phenomenon of swarming; bee bread (a superfood that alone could sustain a human), mating practice, diseases & pests, and colony collapse disease (CCD).



July 20, 2017: Groundwater Conservation District ***Jensie Madden***

Jensie Madden, N2Nature member, explained to a large group of very interested members that the Comal Trinity Groundwater Conservation District (CTGCD) was created to help Comal County residents conserve, preserve, recharge, protect, and prevent waste of groundwater from the Trinity Aquifer which underlies all of Comal County. The Comal Trinity GCD was created during the 2015 84th Texas Legislature with the enrollment of House Bill 2407 and became effective 17 June 2015. The bill provides the GCD the authority to issue bonds; and impose assessments, fees, or surcharges. The Comal Trinity Groundwater Conservation District does not currently have rules regarding Drought Restrictions in place, but encourages users to utilize our shared resource in a conservation-minded manner.



August 17, 2017: Climate, Biodiversity, Poverty & Everything Else Michael Huston, PhD

Why does extreme poverty exist in the tropics, Central Africa and Southeast Asia – and not in Poland?! This and other timely questions were addressed when Dr. Michael Huston, MS, PhD. Texas State University, at the August 17th meeting of Lindheimer Master Naturalists. Dr. Huston explained that biodiversity and poverty are inversely related, and that there is also a relationship between the size and vigor of the species – with the species farther away from the equator being larger, more vigorous and (in humans) wealthier. Farther away from the equator there are fewer species - with 23.5 degrees latitude being the apparent “cut-off” point.

Dr. Huston also spoke on climate change and showed the effects on the planet and its inhabitants that the biological and chemical processes have. He also introduced many of us to Svante Arrhenius (1859-1927) who understood and predicted climate change over 100 years ago. In 1896, in his study of previous ice ages, Arrhenius is said to have been the first to use the basic principles of physical chemistry to calculate estimates of the extent to which increases in atmospheric carbon dioxide (CO₂) will increase Earth's surface through the greenhouse effect and concluded that human caused CO₂ emissions, from fossil-fuel burning and other combustion processes, are large enough to cause global warming. Dr. Huston presented “Win-Win Solutions” for the problems that human beings as a species, face today. He included concentrating agriculture on the “best soils”, reserving vast areas of poor soils for conservation of biodiversity and ecosystem services including our water supply and carbon sequestration. He ended his talk by ensuring this is all possible on a global scale, but only if we have international cooperation.



September 21, 2017 Oak Wilt Identification & Management

Robert Edmundson, Biologist III, ISA Certified Arborist

The Oak Wilt fungus, *Ceratocystis fagacearum*, is one of the most destructive tree diseases in Texas, killing thousands of acres of oaks. Oak wilt fungus is a primary vascular pathogen, which means it invades the water conducting vessels of the sapwood through fresh wounds or by root grafts formed between diseased and healthy trees, and begins to block the water conducting tissue, stopping the flow of water and nutrients from the roots to the foliage, causing the leaves to wilt and die. Oak wilt is not an air-borne disease, but moves from diseased to healthy trees in two ways: through root grafts formed between trees and through fresh wounds via sap-feeding insects, such those of the Nitidulidae family. Oak wilt spores, produced on fungus mats formed beneath the bark of wilt-killed trees, rely on the insects to spread the sticky microscopic spores to trees. Those with fresh wounds which are dripping sap are vulnerable from February to June. Where trees are growing close to one another, their root systems often become intertwined, and these root grafts serve as a highway for the oak wilt fungus to spread. Oak wilt travels along a root graft at approximately 50 to 75 feet annually. Mr. Edmundson explained that there is no cure for oak wilt, but there are management actions which can be taken: 1) Prevention – Don't trim



limbs between February to June; if necessary, treat IMMEDIATELY with wound sealant. Don't transport infected firewood; 2) Diversity Planting – Maintain a diversity of native tree species in the landscape, monitor for tree health, and treat oak wilt infections early as they are detected; 3) Trenching – Sever roots by trenching at least 4 feet deep to break any root grafts; 4) Fungicide – Propiconazole (Alamo™) is the only proven effective preventative treatment. Oak wilt can be confused with other problems such as anthracnose, construction damage (including soil compaction), changes in the soil grade or water table, lightning damage, nutritional disorders, insect & animal injuries, chemical damage & root decay, so be sure to have your problem diagnosed by a certified arborist. For more information on oak wilt go to www.texasoakwilt.org and www.tfsweb.tamu.edu.

October 19, 2017: N2Nature Class Graduation



CONGRATULATIONS!

Back Row: Don Matthews, Jane Finneran, Joe Finneran, Steve Jones

Middle Row: Holly McCoy, Peggy Haley, Amber Garcia, Harry Ferrell, Gretchen Ferrell, Midge Baugh, Anita (Salty) Brady, Betty Keese.

Front Row: Ron Stoeck, Brenda Stoeck, Mike Hammack, Nancy Hammack, Marilyn Garrison, Wendy Matthews



YUM!

Deb Kyrouac & Sara Riggs open the thank you gifts from the class for their work as Class Educators.

November 16 , 2017: Landscaping with Native Plants



David Will, local landscaper and President of the Lindheimer Native Plant Society of Texas, gave a very educational lecture on the use of native plants for landscaping. Native plants occur naturally in a region in which they evolved and are the ecological basis upon which life in that region depends, especially birds. By planting native plants, you will use less fertilizer, fewer pesticides, less water, provide shelter and food for wildlife, support pollinators, promote biodiversity and develop stewardship of our natural heritage. Native plants require much less time to maintain, are much hardier than non-native plants and are drought resistant. Going native is a win-win!

Thank you, David!

For more information on using native plants in your landscape, go to the NPSOT website www.npsot.org



Texas Master Naturalist

Lindheimer Chapter

2017

Community Naturalist Award

is hereby awarded to

New Braunfels Parks and Recreation- Fischer Park

This award is in recognition of the City of New Braunfels and the New Braunfels Parks and Recreation Department for their development of Fischer Park. This 62 acre park was planned and developed with a native Blackland Prairie, a wonderful educational nature center, a butterfly garden, wetlands, and the first solar panel array of any New Braunfels city park.

Joel Dunnington MD

September 21, 2017





December 14, 2017: Chapter Elections

On December 14th, the Lindheimer Master Naturalists meeting featured the Annual Holiday Feast and Festivities followed by Election of Officers for 2018 and business meeting. We extend our thanks to Joyce Doyle, Hospitality Chair and her Committee for the artistic decorations and food preparation and service. LMN members gave Naturalists and guests a chance to sample their home cooking by bringing favorite dishes to share. What a bounty it was! The Feast was followed by a gift swap which was very merry and members enjoyed sharing appropriate 'naturalist' gifts. The business meeting was led by outgoing President Joel Dunnington. We are looking forward to another great year in 2018 at the Lindheimer Master Naturalist Chapter!

Lindheimer Master Naturalist 2018 Officers and Directors

President-Rich Nielson
Vice President-Jim Doyle
Secretary-Kim Wright
Treasurer-Evelyn Nielson
Past President/ TMN Representative-Joel Dunnington

Committees

Communications- Marilyn McFarland

Publicity Chair-Vacant

Website-Marie Miller

Newsletter-Carmen Horn, Marilyn McFarland

Social Media-Jennifer Hendren

Historian/Scrapbook-Marilyn McFarland, Peggy Haley

Photographers-Bill Suddith, Marilyn McFarland, Carmen Horn

Out and About Calendar-Sara Riggs

Outreach-Darlene Varga

Traveling Trunks-Darlene Varga

Membership-Brian Trock

Hospitality-Joyce Doyle, Salty Brady

Projects Committee-Jeanie Springer, Chair

Coco Brennan, Janet Hahn, Joyce Doyle, Mary Mathey

Education Committee- Sara Riggs

Coco Brennan, Val Lefebvre, Darlene Varga, Debbie Kyrouac, Mike Hammack

Class Educators - Debbie Kyrouac, Mike Hammack

Chapter Advisors

Craig Hensley, Troy Luepke



And then it was time for food and fun!



The gift exchange was a lot of fun! Many thanks to Joyce Doyle for illustrating the difference between right & left 😊.



Many Thanks to the Holiday Party Elves
Hospitality Head: Joyce Doyle
Planning: Elizabeth Bowerman & Salty Brady
Set-Up: Elizabeth Bowerman, Salty Brady,
Glenna Dunnington
Decorations: Salty Brady,
Turkey: Salty Brady Ham: Jim Doyle
Slideshow: Marilyn McFarland

“Panther Canyon: After the Rain”
Comal County, Texas
©John Davis
Submission to
TMN State Meeting
(Scenic Photo)



“Pretty in Pink”
Musk Thistle – Carduus nutans
Comal County, Texas
©Sara Riggs
Submission to TMN State Meeting
(Plant Photo)



"Falling Rock Grotto"
Canyon Lake, Texas
©MJ McFarland
Submission to TMN State Contest (Scenic Photo)

MASTER NATURALISTS-in-TRAINING

N2Nature – Lindheimer Class of 2017

The Lindheimer Chapter of Texas Master Naturalist Class of 2017, N2Nature, began in October of 2016 with an orientation meeting. Since then, class members have really gotten “N2 LMN” in a big way! The class is made up of more than 20 social and energetic individuals with varied and impressive backgrounds. Some folks are employed; some retired. We’re so lucky to have people with scientific & technical backgrounds as well as teachers!



N2Nature TRAINING CLASSES 6pm – 9pm, AgriLife Classroom

11/1/2016	Ecological Concepts
12/6/2016	Archeology
1/3/2017	Water Resources
2/7/2017	Geology
3/7/2017	Ichthyology
4/11/2017	Ornithology
5/2/2017	Weather/Climate
5/16/2017	Botany/Taxonomy
7/11/2017	Entomology
8/1/2017	Management
9/9/2017	Mammology
10/3/2017	Herpetology
10/19/2017	GRADUATION!
CONGRATULATIONS!	

“Those who contemplate the beauty of the earth find reserves of strength that will endure as long as life lasts. There is something infinitely healing in the repeated refrains of nature – the assurance that dawn comes after night, and spring after winter.”

- Rachel Carson, *Silent Spring*



N2Nature Class & EARTH DAY 2017: A Great Success!

N2Nature, the Lindheimer Master Naturalist Class of 2017, has chalked up another Master Naturalist experience with the completion of their class project, the 2017 Earth Day Celebration April 22 at Tye Preston Memorial Library (TPML). In partnership with TPML, the class did all of the oversight, planning and preparation for the event as well as all of the coordination on the day of the event. From the early stages of planning exhibit placement, to the publicity, to the recruitment of exhibitors and volunteers, to the pounding in of stakes for placing of signs, to manning exhibits, to preparing and bringing of snacks for volunteers, and much, much more, the Master Naturalists-in-Training class members were an efficient and effective team. This year's Earth Day was held April 22 from 10am to 2pm; chapter & community participation



Above: Cheryl Trock & Brian Trock, Certified Texas Master Naturalists, staff the TMN Lindheimer Chapter table.

was excellent. Despite the cold, blustery weather, there were 176 visitors who signed in at two welcome stations. Visitors included **106 adults and 70 children!** Since some visitors may have stayed in the library children's craft area (planned and staffed by Betty Keese) there were probably more visitors than were tallied. In addition, 38 LMN members signed in Saturday as volunteers for all or part of the day. According to exhibitor-relations committee chairman, Wendy Mathews, there were 30 exhibitors.



Above: Betty Keese, N2Nature class, helps a child with an activity in the Children's Craft Area.

Under the leadership of class president and Earth Day project chairman, Mike Hammack, things went off mostly according to plan. Though at first it looked as though Mother Nature was not all that delighted with the event honoring her earth based on the weather she sent that day, the site planning and lay-out committee, with chairman Marilyn Garrison, changed gears as the cold winds came in. They managed to move exhibits around to adjust for the weather.

In addition to earlier posting and publicity, LMN member Darlene Varga posted an Earth Day notice on the “Next Door” neighbor website and the response below was received the next day: **“Went and took 4 of our grandchildren (ages 7-10). Enjoyed it tremendously. Thanks for posting this and a huge thanks to all the volunteers who made it possible. GREAT job.”**



Above: Friends of TPML President Val Lefebvre and member Mary Gottshalk provided information on conservation & library resources, as well as interactive activities such as Sprout Houses and owl bookmarks.

education coordinators, Debbie Kyrouac and Sara Riggs agreed that the event was a resounding success. **“Our chapter can be proud of the outstanding event put on by the class with the help of Tye Preston staff,”** said Debbie. **“Thanks to everyone for the hard work.”**

Mike Hammack says he attributes the success of the event to the initiative and competence of the various committee chairpersons. Even after the event site was clean and empty, he was continuing work on the project by writing notes to those involved and by drafting an Earth Day 2017 Lessons Learned report before he headed to Minnesota to see a new grandson! LMN

N2Nature Class Earth Day

Project Coordinator	Mike Hammack *
Committee:	Betty Keese *
	Ron Stoeck
	Nancy Hammack
Exhibitor Relations	Wendy Mathews *
	Don Mathews
	Holly McCoy
	Midge Baugh
Volunteer Coordinator	Peggy Haley *
	Cyndi DeWitt
	Amber Garcia
Advertising and Promotion	Jane Finneran *
	Joe Finneran *
	Steve Jones
Site Planning and Lay-Out	Marilyn Garrison *
	Billie Conway
	Salty Brady
	Brenda Stoeck
	Gretchen Ferrell
	Harry Ferrell

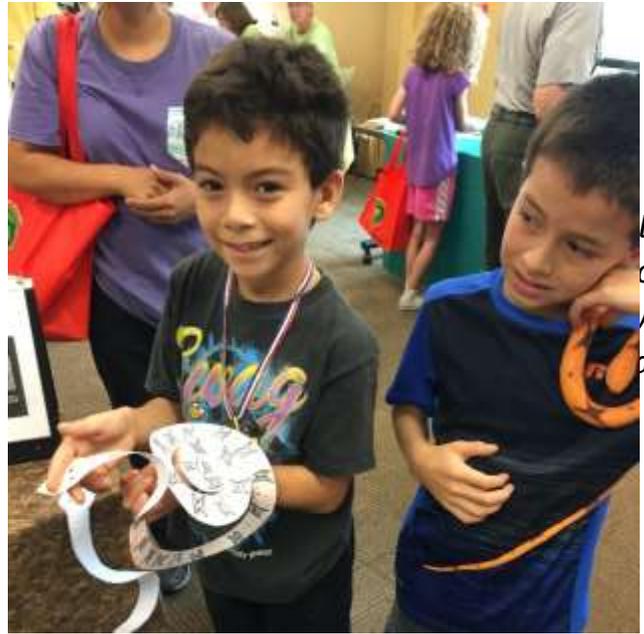




The LMN Venomous Snakes of Texas Exhibit had information on rattlesnakes, cottonmouths, copperheads and coral snakes, snake safety, how to snake proof your property, and the environmental impact of snakes.



Below: Two young attendees had fun completing the spiral snake activity & playing with the plastic snakes!



Class
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Left: One young man was very interested in the Skulls, Skins and Scat Exhibit staffed by Pat Gonser, but wasn't quite sure about getting closer, especially to the skunk. He decided to keep his distance and just look!



Right: Bass Casting with Brenda Stoeck was a very popular & fun event for the children (and the adults) attending Earth Day, even though it was quite windy and cool.





Left: Ron Stoeck, N2Nature class, was designated “official taster” of the snacks brought for the volunteers. In between bites, he officially pronounced them “YUMMY!” (that’s the rumor). Thanks to the volunteers who brought the treats (and to Ron for lending his expertise). 😊

Right: Ben Pfeiffer, Certified Texas Master Naturalist-Lindheimer Chapter, provided information on one of our favorite bugs...FIREFLIES!!!



Right: Don and Edith Berquist volunteer with Bat Conservation International and provided lots of information on what bats do for us humans – for one, they eat lots of mosquitoes! WE LOVE BATS!





“Hill Country Sunrise”
Comal County, Texas
©Sara Riggs
Submission to TMN State Contest
(Scenic Photo)

N2Nature Class Field Trip: Selah, Bamberger Ranch Preserve



In 1969 J. David Bamberger bought the “worst 3000 acres of ranchland in the Texas Hill Country” with the intention of restoring it back to functional health. Over several years, he acquired more land that had become barren of topsoil, was overgrown with Ashe Juniper and unfit for grazing. During the next 45 years, Selah, Bamberger Ranch Preserve, located in Blanco County, has become one of the largest habitat restoration projects in the state.

N2Nature Class enjoys a hike on the Ranch.



Jared Holmes, biologist, explains the usefulness of Ashe Juniper – in moderation.

On May 22, members of the LMN N2Nature Class were escorted through the Ranch/Preserve by Steve Fulton, Ranch Manager, and witnessed firsthand the model of habitat restoration, land stewardship and preservation of water resources. Sponsors Sara Riggs and Debbie Kyrouac arranged for the trip and participated along with

other LMN members as space would allow. The story of the Ranch and Mr. Bamberger are quite remarkable. From the purchase of the land, to the selective removal of the Ashe Juniper and the replanting of native grasses, long absent springs are now constantly flowing. The major spring produces an average of 3 gallons per minute and furnishes all the water used by the ranch, including housing for the ranch employees and agricultural usage. Overflow from the spring and other, smaller springs, produce the headwaters of Miller Creek, which

flows into the Pedernales River, which then flows into the Colorado River, the surface supply for the City of Austin. There is significant biodiversity on the Ranch with many different varieties of flora and fauna flourishing. When an area is primarily a cedar brake, it is only one



Headwaters of Millers Creek flowing into the Pedernales River.

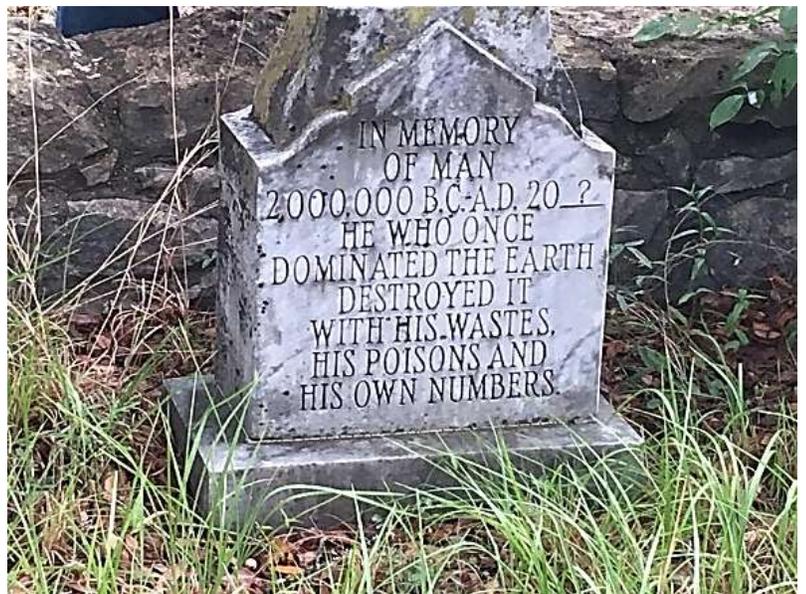
type of habitat: forest. When some of the timber is cleared and grasses are added the habitat range is expanded to greater diversity; forest, grassland, riparian and “edge” habitat. With bird populations being a good indicator of diversity, a 45-year-old survey showed 50 species of birds; current studies indicate up to 213 species on the Preserve! The primary mission of the Ranch is to **“teach ethical land stewardship – by example and outreach”**. The

Preserve offers seminars for landowners and serves as a research lab for botanists, zoologists and other scientists, as well as serving as a hands-on classroom for school children. Public tours and workshops attract birdwatchers, photographers, native plant and animal enthusiasts.

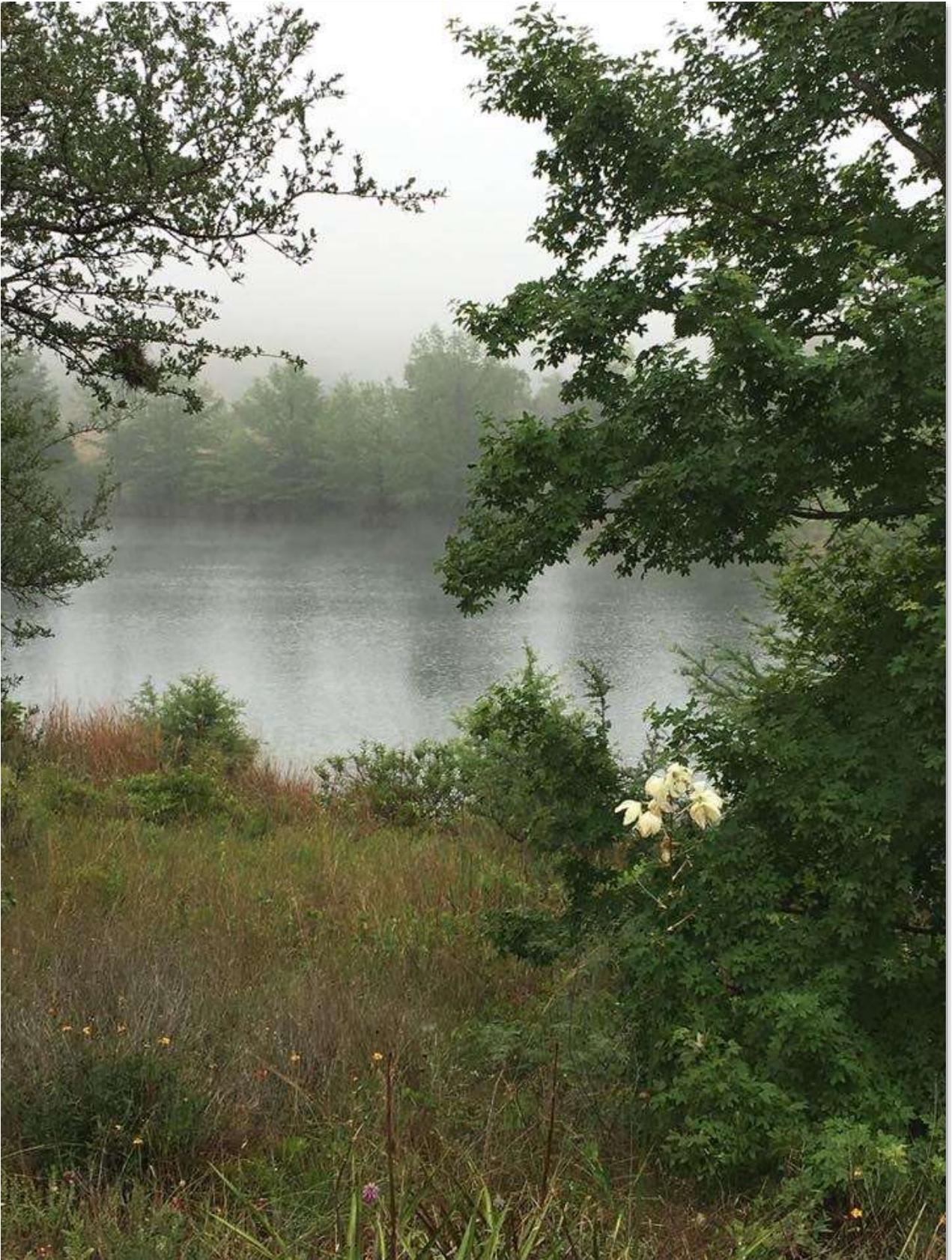
One of Mr. Bamberger’s goals for the Ranch is:

“To inspire visitors with a vision of harmony with the land. Given the chance, Nature can heal itself. Nature can heal us.”

A powerful warning on the “Headstone to the Memory of Man” at Bamberger Ranch if we fail to protect our Earth & its resources.



Photos ©Carmen Horn



"Misty Morning on Miller's Creek"
Selah, Bamberger Ranch Preserve, Texas
©Carmen Horn
Submission to TMN State Contest (Scenic Photo)



“Just sittin’ on the edge of the ledge...”
Modest Grasshopper – Agroecotettix modestus
Seminole Canyon State Park
©MJ McFarland
Submission to TMN State Contest
(Wildlife Photo)



“Demolition Derby”
Dark Flower Beetle – Euphoria sepulcralis
Comal County, Texas
©Joel Dunnington
Submission to TMN
State Meeting Contest
(Wildlife Photo)

*"Volunteers are not paid
-- not because they are
worthless, but because
they are priceless."*

Many, many thanks to our scrapbook & contest photo contributors:

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