



**Sessions Agenda & Descriptions
Updated Monday, July 29, 2024**

Please Note:

All items on the agenda are tentative and subject to change prior to event registration and the final event agenda.

Please consider the environment before printing this 60+ page agenda.

T E X A S



OUR 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.

Program State Sponsoring Agencies:



About the 2024 Annual Meeting

*Welcome to San Marcos, Texas! This year marks our 25th Annual Meeting and the 26th year of the Texas Master Naturalist Program. We have scheduled **over 200** different presentations and field sessions with a variety of topics and speakers from around the state. Outside of the classroom, we also have plenty of opportunities to meet new friends and old friends alike, beautiful artwork and photos entered into our annual contest, and a wide variety of chapter projects on display in the Project Fair. Enjoy this weekend of comradery and learning! Thank you for being here with us to celebrate another year of incredible conservation impacts on the land!*

KEY for Agenda

Field Session

Advanced Training Session

Meal

Wednesday October 23rd, 2024

7:30am - 12:00pm

Hill Country Views, a Native Prairie, and the Colorado River – Meet and Explore Commons Ford Ranch Metropolitan Park

○ *Shelia Hargis, Capital Area Master Naturalists*

Field Session

Commons Ford Ranch Metropolitan Park is located west of Austin along the banks of Lake Austin, a section of the Colorado River. The park is 215-acres of mostly natural habitat including juniper-oak woodlands, riparian woodlands, and a 40-acre native prairie. This habitat diversity plays a huge role in Commons Ford being one of the top birding locations in Austin and Travis County. During this field trip, we'll explore several areas of the park focusing on birds and their behavior, and will very likely get distracted by other flora and fauna along the way. We'll get a close-up view of the native prairie that was transitioned from a field of non-native grasses to over 70 species of native grasses and forbs. Check out the eBird page for the park at <https://ebird.org/hotspot/L486383?yr=cur> and the iNaturalist page at <https://www.inaturalist.org/places/commons-ford-ranch-metropolitan-park> to see how spectacular this little piece of the Hill Country is. The walk will be led by Shelia Hargis, a member of the Texas Master Naturalist Capital Area Chapter and a long-time member of and volunteer for Travis Audubon. Shelia regularly leads walks at Commons Ford and teaches bird identification and bird behavior classes for Travis Audubon. Birders, or soon-to-be birders, of all skill levels are welcome on this walk. Sturdy shoes, binoculars, a hat, and water are recommended. The walk will be about 1.5 miles long on mostly level or gently sloping ground. There are two short sections of the path that are somewhat steep. The trail is mostly exposed with some areas of shade along the river. Porta-potties and a composting toilet are available.

9:00am - 5:00pm

Shield Ranch: Conservation Project & Campsite at Shield Ranch

○ *Grant Lawrence, Shield Land Stewardship Group; Chad Timmons, Shield Ranch Foundation*

Field Session

We invite Texas Master Naturalists to join us at Shield Ranch Barton Creek for a habitat restoration project and to learn about the work of the Shield Land Stewardship Group and Shield Ranch Foundation—including our approaches to our core values of stewardship, sanctuary, and community. Shield Ranch Barton Creek is 6,400 acres located in Southwest Travis County and makes up approximately 10% of the Barton Creek watershed. Since 1998, Shield Ranch Barton Creek has been protected in perpetuity by two conservation easements held by The Nature Conservancy and the City of Austin. The easements preclude commercial development while allowing traditional agricultural and recreational activities and limited development within strict parameters. Shield Ranch supports a diverse ecosystem consisting of over 450 species of native grasses, forbs, shrubs and trees that provide habitat for numerous wildlife

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species, including vertebrate and invertebrate pollinator species. Our management practices promote healthy flora and fauna, excellent water quality and ecosystem services for Central Texas. A conscious effort is made to protect riparian areas, restore soil health and control feral and exotic species. The Ranch has received numerous awards (including the Texas Parks and Wildlife Department Statewide Lone Star Land Steward Award) and has been widely recognized for its commitment to land stewardship, water quality, ecological diversity, outreach and education. Participants will also have the opportunity to tour the innovative, sustainable Campsite at Shield Ranch (22 miles from downtown Austin). The facility operates 100% off-grid by relying on rainwater collection and solar power, and serves as a learning laboratory for conservation. In 2019, 131-acres of Shield Ranch were donated by the Shield Ayres family to the Shield Ranch Foundation for community use. The Campsite at Shield Ranch is where we host Camp El Ranchito every Spring Break and Summer, along with other community groups throughout the year. Established in 2007 in collaboration with El Buen Samaritano and Westcave Outdoor Discovery Center, Camp El Ranchito's mission is to connect children with the natural world by providing an extraordinarily fun and inspiring nature-immersion experience. It offers a unique camp experience that gives youth, who may not otherwise have access, opportunities to form strong bonds with nature and one another in the community.

1:00pm - 5:00pm

Biodiversity and Land Stewardship at Bamberger Ranch Preserve

- *April Sansom, Bamberger Ranch Preserve; Patty Harrell, Highland Lakes Chapter*

Field Session

Join us for an exploration of a 55-year (and counting) journey of restoration and stewardship at one of Texas' most beloved private nature preserves. The nonprofit mission of Bamberger Ranch Preserve is to teach sound land stewardship through education and outreach. During this field session, our top-notch staff will share their knowledge of our conservation-oriented land stewardship practices with visitors. Highlights of the visit include discovering the importance of managing for biodiversity reflecting on the power of private land stewardship Join to take a deep look into our restoration journey and sharable lessons, creation of habitat for native species, protection and conservation of endangered species and much more! We'll share information about research activities on the preserve and how our research can inform natural resource management decision-making in Central Texas. We'll travel in our ranch transportation around the 5,500-acre property in order to provide visitors with a full history of our leadership in land stewardship and a deep dive into the beacon of hope that is Selah, Bamberger Ranch Preserve.

1:00pm - 5:00pm

Blanco River Conservation Demonstration Site Tour

- *Ryan McGillicuddy, Texas Parks and Wildlife Department*

Field Session

Participants will travel to a riparian restoration demonstration site in Wimberley designed and implemented by the Lady Bird Johnson Wildflower Center and TPWD

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following a catastrophic flood event. The site serves as an example of how the use and enjoyment of a streamside landscape can coexist with a diverse and functioning riparian ecosystem. Restoration strategies employed on the site include riparian plantings, bioswales, native seeding, strategic retention of woody debris, spring/seep remediation, invasive species management and the establishment of grow zones and targeted access points.

1:00pm - 5:00pm

Habitat Restoration for the Houston Toad

- *Laurie Mason, Pines and Prairies Land Trust; Melanie Pavlas, Pines and Prairies Land Trust*

Field Session

Play a part in Houston toad habitat restoration at Pines and Prairies Land Trust's most unique and magical preserve! PPLT has been restoring habitat at its 302-acre, Yegua Knobbs Preserve near McDade for the past 3 years, and this fall we will be preparing for an upcoming prescribed burn by hand clearing understory brush to protect sensitive features from the fire. You'll also learn about the toad's ecology and restoration efforts, as well as the special features at this preserve—including unique geology, rare plants, a spring-fed bog and cultural resources. Bring loppers (if you can), binoculars and a picnic lunch for a combination work day and educational experience.

1:00pm - 5:00pm

Migration and Overwintering Grounds of the Golden-Cheeked Warbler

- *Scott Rowin, Balcones Canyonlands National Wildlife Refuge, US Fish & Wildlife Service; Stephanie Jones, Balcones Canyonlands National Wildlife Refuge, US Fish & Wildlife Service*

Field Session

Scott Rowin, Biologist for the Balcones Canyonlands National Wildlife Refuge, will give a presentation on October 23, 2024. Of the nearly 360 bird species in Texas, the golden-cheeked warbler is the only one that exclusively nests in Texas. This field session will focus on the latest groundbreaking research conducted on the migration and overwintering grounds of the endangered golden-cheeked warbler. The study we will discuss, conducted from 2017 to 2021, involved capturing 309 golden-cheeked warblers in mist nets and placing small geolocators on the birds' backs to track their movement. Each year the birds were recaptured, and the devices were recovered to reveal many new and exciting facts about where the golden-cheeked warbler spends the winter, what migration routes they take and important migratory stopover locations. Come learn about how this exciting new information can help ensure the full lifecycle of the endangered golden-cheeked warbler is protected. Balcones Canyonlands NWR will offer different guided hikes at Doeskin Ranch after the presentation. These hikes will be available to sign up at <https://www.friendsofbalcones.org/Events>. If you're not interested in a guided hike, all trailheads will be open to hike on your own.

1:00pm - 5:00pm

Wild Medicinal Plant Walk - NOT Advanced Training

Wednesday October 23, 2024

○ *Ginger Webb, Sacred Journey School of Herbalism*

Field Session

Join herbalist Ginger Webb on a medicinal plant walk as she shares her expertise using wild plants as medicine in the Central Texas bioregions. Ginger draws from her vast experience working in several capacities as an herbal teacher, medicine-maker, herbal clinician and field botanist. Her focus will be on contemporary uses and will shed light on the living herbal traditions practiced today among the growing network of herbalists all over Central Texas. **Note - this session is not advanced training for Master Naturalists.*

Thursday October 24th, 2024

8:00am - 12:00pm

Great Bat Bridge Survey Training

- *Wendy Anderson, Texas Parks and Wildlife Department; Samantha Leivers, Texas Parks and Wildlife Department; Noah Ray, Texas Parks and Wildlife Department*

Field Session

Is the lack of data on Texas Bats driving you batty? Texas Nature Trackers is debuting a new citizen science project and wants you to be involved! Texas Nature Trackers is recruiting Texas Master Naturalists from Central Texas to survey for bats in bridges. During this field session, we will go over the importance of the project, the goals and how to conduct bat bridge surveys. Volunteers will be trained on how to use the Survey123 app, learn the protocol and learn how their work will improve the conservation of our state's bats. Training is limited to 50 participants. We will meet in the room at the Convention Center for a presentation, then meet in San Marcos at the San Marcos Lions Club Tube Rental. We will proceed on foot.

8:00am - 11:00am

Field Environmental Philosophy As An Approach Towards Mindfulness and Reconnection With Freshwater Ecosystems (repeated session 1 of 2)

- *Dr. Justin Williams, Texas State University; Rob Dussler, The Meadows Center for Water and the Environment; Jeff Gessas, Texas State University*

Field Session

Field Environmental Philosophy (FEP) is a new approach to environmental philosophy and environmental education that brings us into direct contact with what we are studying. FEP integrates theoretical and applied ecological research with environmental ethics into the theory and practice of biocultural education and conservation. Pioneered at the Omora Ethnobotanical Park in the Cape Horn Biosphere Reserve in Chile by researchers with the Sub-Antarctic Biocultural Conservation Program, FEP is now used at research sites and in courses in Asia, North and South America and the Middle East. As a pedagogy, FEP takes students and practitioners outdoors to observe their ecological communities and experience nature. It is a peripatetic approach to the philosophical observation of our habits, habitats and community of co-inhabitants. As a transdisciplinary methodology, FEP integrates a four-step cycle to develop collaborative interdisciplinary research, compose and communicate new metaphors and narratives, co-create ecological and ethical experiences and develop in-situ conservation areas. FEP is perfectly suited for a biocultural ethical approach to education and ecotourism for sustainability. FEP also intersects with mindfulness and nature experience practices being explored at the Meadows Center for Water and the Environment at Texas State University. Nature experiences are reliably linked to physiological and psychological health benefits and are a popular way to spend leisure time and reconnect with some of the deepest senses of who we are. This field session will showcase the relationship between field environmental philosophy, leisure programming and nature experiences

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as pathways towards more mindfulness and connection with our local sense of place. Students and practitioners will have the opportunity to learn about biophilic human responses to nature, Eco-phenomenology, nature-based pedagogy and other constructs that will help improve their ability to facilitate and interpret nature experiences at their home sites.

8:00am - 11:00am

Tour of Travis Audubon's Chaetura Canyon Sanctuary

- *Georgan Kyle, Chimney Swift Conservation Association; Paul Kyle, Chimney Swift Conservation Association*

Field Session

Join us from 8 to 11 a.m. for a leisurely hike of the Chaetura Canyon Sanctuary with emphasis on the history of Chaetura Canyon, plants, geology, birds, habitat restoration and (of course) Chimney Swifts!

The trails are well-developed but moderately strenuous. Some of the lower ones are steep with many steps down and then back up again—Not recommended for people with balance or breathing problems, pacemakers or children under seven years of age. Sturdy shoes or boots are required for the tour (no sandals, flip-flops or flats!). A walking stick, binoculars, notebook and a water bottle are recommended. Walking sticks are available for loan. Cameras are also welcome, but we do ask that you put your cell phones on “vibrate” while on the trails.

Note cards, T-shirts, native plants, limited edition prints by Georgan Kyle and other merchandise will be available for purchase. All fees, donations and purchases benefit the maintenance of Chaetura Canyon. Registrants will receive directions to the property and more info via email the week of the event.

The fee for the event is \$10 per person and includes snacks, water, coffee, tea and other beverages as well as some breakfast sweets from Georgan's kitchen.

The morning event is limited to 10 participants, so register ASAP!

8:00am - 4:00pm

Use of Prescribed Burning as a Land Management Tool

- *Blake Hendon, Texas Parks & Wildlife Department; Chris Schenck, Texas Parks & Wildlife Department; Greg Pleasant, Texas Parks & Wildlife Department; Derrick Wolter, Texas Parks & Wildlife Department; Steve Janda, Hays County Chapter*

Field Session

This workshop is designed for both TMN volunteers and resource professionals with limited exposure to prescribed fire. To make this workshop more effective, Texas Parks and Wildlife Department (TPWD) will partner with two local parks. Paired with a classroom discussion on the tools, techniques and safety factors, the plan is to conduct an actual prescribed fire, pending good burning conditions. Participants will be encouraged to be participants and not just spectators; each to be placed into groups, or squads, led by an experienced TPWD employee. Depending on the final location of the burn, weather conditions and timing, the classroom session will either proceed or follow the burn demonstration. “Sometimes in Fire, you get the test before you get the lesson.” If the weather is not in fair conditions, like any good fire practitioner, there will be an alternate plan. Participants will be requested to have a pre-disposition to the general

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themes of burning through some suggested pre-work video watching shared with final registration.

8:00am - 12:00pm

Blunn Creek Nature Preserve Walking Tour

o *Max Woodfin, Divine Canines*

Field Session

See the results of volunteer work and activism in a beautiful natural, inner-city setting. The land that is now the Blunn Creek Nature Preserve was once a dairy farm. When the farm was closed, invasive species took over. The tract was slated to be sold for development, but a coalition of neighbors, a neighborhood association and parks advocates convinced the Austin City Council to include its purchase in a bond election. Since approximately 2010, volunteers have successfully restored much of the 38.5-acres to what it must have looked like in its natural state.

8:00am - 12:00pm

Westcave Preserve- A Hidden Gem in the Texas Hill Country

o *Meagan Whitehouse, Westcave Outdoor Discovery Center (Westcave Preserve)*

Field Session

Westcave Preserve is a 501(c)3 non-profit nature preserve located adjacent to the Pedernales River in Southwest Travis County. Westcave is a natural treasure of the Texas Hill Country, rich with majestic beauty and ecological diversity that has been preserved and offered to the public since 1976.

A trail starting at the award-winning LEED Warren Skarren Environmental Learning Center invites visitors on an otherworldly journey hiking from a Live Oak/Ashe Juniper Savannah, through a limestone crevice and into the Riparian Woodland of our cool sheltered canyon. This canyon was created over 100,000 years ago by the collapse of an immense limestone cave. At the head of the canyon, a sparkling waterfall drips 40 feet over fern-covered travertine columns into a vivid emerald pool. Visitors are guided behind the artesian spring-fed waterfall into a one-chamber limestone cave, examining cave formations and lush plant life seen in few other places in Texas.

Come explore Westcave on a guided hike and learn firsthand about how groundwater becomes surface water at our natural spring-fed, dripping waterfall and about the story of Westcave's ecological redemption to the lush spring seen today. This hike serves as hope and inspiration for students on field trips in the Austin area that the Earth can recover with stewardship and time. All guests, from adults to students, are given the opportunity to listen and relax to the sounds of our waterfall.

8:00am - 4:00pm

Become a Nature Superstar!

o *Paula Glover, Hays County Chapter of the Texas Master Naturalist program*

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Field Session

Attendees will use the Texas Master Naturalist Hays County Chapter's award-winning children's book, BEAUTIFUL HAYS COUNTY, to take a self-guided tour of the 11 sites around Hays County showcased in the book. The coloring and activity book is filled with nature lessons and activities that educate and delight children and their families. With the book and map in hand, attendees will drive to each site and explore the unique natural features. They may go to as many as they choose. The Nature Superstar program was one of the project's activities to support the book by bringing the book to life at the sites for children and their families. Stickers and a certificate are awarded to those who visit the sites during those programs. This session will be patterned after that program. A docent will be at each site to guide visitors and answer questions during the 4-hour session window. They will also award the beautiful Nature Superstar stickers at each site. Visit all of the sites and you too will become a Nature Superstar!

8:00am - 12:00pm

The Stengl Herbarium: A Plant Mounting Party & ID Walk at Stengl Lost Pines Biological Station

o *Kathy McAleese, UT Stengl Biological Research Station*

Field Session

The Lost Pines Chapter invites you to join us at the UT Stengl Biological Research Station near Smithville. On arrival, participants will be given a brief history of the Stengl Research Station, a tour of the herbarium (a museum-quality collection of dried and mounted plants), followed by a "Plant Mounting Party." Participants will have the opportunity to mount some of the dried plants to create new "vouchers" for the herbarium. Experienced members of the Lost Pines Chapter will be available to help. Guests need to only bring their best arts and crafts skills...and be ready to get glue on their fingers! The mounting parties generally include lots of laughter and a chance to get to know each other. Since mounting plants is part of the process for the herbarium project, the "party" can be considered as volunteer time. Later, while the glue is drying, the group will take a walk around the property, visit some favorite spots for botanizing, and discuss the Post Oak Savannah/Loblolly Pine ecosystem. Plants encountered along the way will be identified, if possible. There should be several species of grasses and flowering plants to enjoy and, of course, everyone will have the opportunity to do some iNaturalist observations. Upon returning to the lab after the walk, the mounted plants will be "unstacked" (the plants are stacked up with a little weight on top while the glue dries). Everyone can take a moment to admire the beautiful completed vouchers which are now ready to spend many years contributing to science and the understanding of plants.

8:00am - 12:00pm

A Tour of Prehistoric Texas

o *Skip Beard, Texas Museum of Science and Natural History*

Field Session

Take a tour of the flora and fauna of prehistoric Texas. The Texas Science and Natural History Museum was the first natural history museum in Texas. Opened in 1939, its mission was to preserve specimens from Texas and tell the story of Texas prehistoric

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and contemporary natural history. Specimens tell the history of Texas from the pre-Cambrian through the Pleistocene eras. See the iconic Dimetrodon from the Permian 'redbeds' of North Texas and the giant armadillo (Glyptodont) found in San Patricio County. Learn about the Onion Creek Mosasaur which swam in the Western Interior Seaway when Texas was mostly ocean. The largest animal to ever fly? Naturally, it's from Texas. Mosses that are fifty meters tall? You'll see them too. The museum tells the story of Texas in prehistory but also includes dioramas and mounts of current animals. The focus will be on the sweep of the evolutionary change of life in Texas and the geology that defines it. The tour will take a chronological approach, walking you through four billion years of life on Earth in a couple of hours.

8:00am - 12:00pm

Purgatory Creek Birding Hike and Nature Walk

o *Joseph Plappert, Texas Parks and Wildlife Department*

Field Session

Purgatory Creek Natural Area is a 1000+ acre greenspace located in western San Marcos off Wonder World Dr. and Hunter Rd. The access from the lower Purgatory Creek trailhead offers a variety of habitats to explore from oak/juniper woodlands to open grasslands and riparian corridors. This makes the natural area a haven for migratory and resident bird communities. We can expect to see most of the usual Central Texas birds such as Black-crested Titmice and White-eyed Vireos. We may also have opportunities to see Canyon Wrens, various Warbler species, and Verdins. We plan to hike for about 2.5 miles on moderate-difficulty trails with some elevation change. While the hike will be bird-centric, there are plenty of opportunities to get distracted by other wildlife along the way! Make sure to bring binoculars, cameras, good shoes, sunscreen and water.

9:30am – 12:30pm

A Guided Walk through Honey Creek State Natural Area

o *Mary Habib, Guadalupe River State Park/Honey Creek State Natural Area*

Field Session

Pristine Waterway - Imagine the Texas Hill Country of 100 years ago: Now, you can see it for yourself at Honey Creek State Natural Area. This protected piece of land harbors plants and animals nurtured by a 2.5+ mile spring-fed creek. Access to Honey Creek is by guided tour only.

Honey Creek Volunteer Interpretive Guides will lead a tour of about two and one-half miles. On the tour, you'll hear about the history, geology, plants, culture and animals of this very special and beautiful place.

There are escarpment live oaks, post oaks, savannah areas and cedar breaks, a riparian ecosystem with towering bald cypress and elms, and fantastic geological and empirical examples of the area as it changed over millions of years!

The tour culminates in a walk by the pristine and peaceful creek—this is a National Geographic front page beauty! Then, you will have a short, moderately challenging uphill hike over rocks on a well-maintained trail.

No pets - service animals only.

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The adjacent Guadalupe River State Park has four miles of the Guadalupe River and offers camping, hiking, swimming and more!

8:00am - 12:00pm

After the KR: Hidden Treasures

○ *Susan Bogle, Lindheimer Chapter; Susan Sommer, Lindheimer Chapter*
Field Session

When asked by WORD, a state agency that manages local public parks, if our Texas Master Naturalist Lindheimer Chapter wanted to partner with them to create a pollinator habitat in a decades-abandoned Loran (Long Range Navigation) Station, we looked at the fully-fenced (no deer predation!) 2-acre field and said, "Maybe." Then they proposed adding irrigation and we couldn't refuse. We were in obvious denial about the thick blanket of King Ranch Bluestem, the small number of volunteers and the unrelenting Texas sun that combined to create a special challenge. After 3 years with record heat, 2 droughts and 2 severe winters, the garden has blossomed in ways we absolutely didn't plan but are intensely grateful for. This successful project is a study in planning flexibility, agile response, persistence of effort, volunteer development and knowing when you are lucky. Shaped like a butterfly, with the addition of the surprising "Lindheimer Loop" trail, the garden has become a popular destination and retreat for both locals and tourists. A LOT of management was involved, specifically KR Bluestem removal, but Mother Nature rewarded our efforts. How many times did we see something wonderful and say, "Wait, we didn't plant that!" Not to worry, the abundant seed bed was apparently just waiting for its moment to respond. Likewise, realizing the drought was the new normal, we introduced suitably hardy native species. This garden stands as an example to the public of the restoration process, the benefits of native plants and the results of managing invasive species. This pollinator garden, MTPG for short, is located within Canyon Park, on the North side of Canyon Lake. It is buzzing with pollinators and boasts a wide variety of flora. Works in progress: firefly habitat and bird blind/water feature. It is accessed by a short but rigorous trail, which then continues about 7 miles, in case anyone needs to get more steps.

9:00am - 12:00pm

Site visit, Blair Woods Preserve

○ *Mark Wilson, Travis Audubon; Flo Rice, Travis Audubon*
Field Session

Visit a unique 10-acre urban nature preserve owned by Travis Audubon. Gifted to Audubon in 1985 by Dr. J Frank Blair and his wife Fern, this sanctuary provides an accessible-friendly green space just miles from downtown Austin. Coordinated by the Blair Core Team, Travis Audubon volunteers and the Texas Master Naturalist Capital Area Chapter have worked for years removing invasive non-native plants and restoring the natural habitat of the tract. Access has been a priority, Over the last year, an appx 1 mile accessible friendly trail was built according to US Forest Service Wilderness trail specifications. The trail provides a model for improved access using alternatives to cement and non-porous surfaces. Recently approved as a stop on the National Park Service El Camino Real de Los Tejas NHT, the preserve has a rich history going back to the early days of Texas. Archeology work has uncovered evidence of the 1836 Fort Colorado, adjacent to Coleman Springs, which continues to flow. The preserve contains

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a 1900s-era restored dairy barn used by a 1st generation Swedish family, and the home of Dr Blair, Professor Emeritus Biology at University of Texas. The site visit will focus on the team's efforts to improve accessibility and its role as an outdoor educational site for school children of all capabilities. In addition, we will walk through the history of the preserve, discuss the work of the Blair Core team in habitat restoration and visit other preserve projects including a pollinator garden, solar-powered water stream, bird blind and restored historical structures.

11:00am - 2:00pm

Chapter Leadership Luncheon - Veramendi EF

- *Michelle Haggerty, Texas Master Naturalist Program; Mary Pearl Meuth, Texas Master Naturalist Program; Hannah Ferguson, Texas Master Naturalist Program*

Advanced Training Session

This session is for Chapter Presidents, Chapter Advisors or the Chapter President Designee to attend and hear about statewide initiatives, program updates and accomplishments. There is also usually time for an open-format forum.

12:00pm - 5:00pm

Texas Stream Team Standard Core Training Session

- *Adam Berglund, Texas Stream Team; Nicky Vermeersch, Texas Stream Team*

Field Session

Texas Stream Team Standard Core training session to become a Certified Community Scientist in Water Quality Monitoring. This hands-on training session will teach participants information about water quality parameters and train them in the Standard Core monitoring curriculum used by Texas Stream Team. Standard Core monitoring involves performing tests for parameters of conductivity, dissolved oxygen, pH, total depth, water and air temperature and water transparency using a chemical Standard Core kit and conducting observations while in the field. After successfully completing this training, you will be able to conduct water quality monitoring and submit data to this community scientist program. We will learn indoors, outdoors and along shorelines, so please come prepared for the environment and weather! Training locations are generally accessible but may require participants to move over dirt tracks, gravel trails and stabilized shorelines. You will NOT enter the water.

1:00pm - 4:00pm

Lockhart State Park: Plant Identification Walk

- *Allen Guisinger, LPMN; Lauren Hartwick, Texas Parks & Wildlife Department*

Field Session

Learn to identify plants in the Blackland Prairie Ecoregion of Texas! In this field session, you'll join Ranger Lauren at Lockhart State Park for a primer on native plants in the area. On this fun hike, you'll learn to identify plants and discover how the forest can be your pharmacy and source of wild treats. In addition to plant

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identification, you'll learn about beneficial uses, understand plants' healing properties and even delve into ethnobotany! Free samples will be provided. After the hike, lunch (on your own) is available in nearby Lockhart, the official "Barbecue Capital of Texas."

1:00pm - 5:00pm

Austin Nature from Alligators to Astronomy

○ *Emily Hansen, Austin Nature and Science Center*

Field Session

The Austin Nature and Science Center offers visitors the chance to experience the native wildlife and wild spaces of Central Texas. Participants will take a hike through the 77-acre Zilker Nature Preserve, visit with some of our program animals, experience the night sky in our inflatable planetarium and see what a day at our onsite Nature's Way Preschool looks like. Bring a nature item to exchange at our Trade Counter, and learn about the school and public programs we offer. Participants should be prepared to walk on an uneven trail, hike up a steep hill and sit on the floor for 20 minutes or so. Parking is free, but we encourage carpooling from San Marcos. We will provide snacks.

2:00pm - 4:00pm

Friends of TMN: An Introduction

○ *Donna Cole, Carolyn Langlinais, David Powell*

Advanced Training Session

The Texas Master Naturalist program will be garnering additional assistance to implement and advance their mission through the nascent Friends of TMN program. Visit with us, ask questions, meet the executive board of the Friends!

7:00pm - 9:00pm

Blacklighting and nocturnal insect surveys

○ *Sam Kieschnick, Texas Parks and Wildlife*

Field Session

Yay! Let's blacklight and see what sort of bugs show up! We'll document what we see using iNaturalist as part of our nocturnal insect survey.

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Friday October 25th, 2024

8:00am - 12:00pm

Let's Go Bioblitzing!

- *Craig Hensley, Texas Parks and Wildlife Department; Wendy Anderson, Texas Parks and Wildlife Department*

Field Session

Master Naturalists are invited to join Texas Nature Trackers Biologists Wendy Anderson and Craig Hensley for a bioblitz at a local natural area. We will gather at the site at 8 a.m. to explore the area and document the flora and fauna. We'll split into teams for the morning and head out on the trails using our iNaturalist and eBird apps. Whether you are a first-time bioblitzer or a seasoned "pro," your participation will be welcomed and valuable. Be sure to bring a fully charged phone with the iNaturalist app downloaded and an account created, as well as water. Be sure to dress for the outdoors including a hat and sturdy shoes or boots.

8:00am - 12:00pm

Canyon Lake Gorge Tour

- *Stephanie Regets, Director, GBRA – Canyon Lake Gorge; Josie Gonzales*

Field Session

During one week in the summer of 2002, more than 34 inches of rain fell in the upper watershed of the Guadalupe River, setting off a torrent of floodwater that carved a perfectly fascinating geological wonder – the Canyon Lake Gorge – out of the earth. The historic flood sliced open the ground below the spillway, creating a gigantic 64-acre Gorge and exposing ancient, cretaceous limestone, fossils and even dinosaur footprints 110 million years old.

It is a textbook example highlighting Hill Country geology and the exposed Trinity Aquifer, clearly showing faults, fractures and seeps in the limestone. Limestone layers created from an ancient sea are visible, and visitors admire waterfalls and springs where the aquifer is exposed.

8:00am - 12:00pm

Lockhart State Park - Our Outreach Game Plan Relies on Good Hikes

- *Allen Guisinger, LPMN; Lauren Hartwick, Texas Parks & Wildlife Department*

Field Session

Learn about Master Naturalist projects and Interpretive Hikes at Lockhart State Park! Lockhart State Park is the stomping grounds of the Texas Master Naturalist Lost Pines Chapter, who have supported a wide variety of projects and events at the park. This field session will include an overview of LPMN volunteer projects—petrified wood display, monarch waystation, bridges, bird houses and more—to illustrate ways Master Naturalists can get involved. Education is a key component of our service, and in addition to helping with park events, Master Naturalists run an interpretive hike program at the park. This field session will include advanced training on interpretive hikes, as well as a hike to show principles of interpretation in action.

Friday October 25, 2024

8:00am - 12:00pm

Native Tree ID Walk and Seed Swap

- *Meghan Smith, Seed to Tree Partnership; Colleen Dieter, Central Texas Seed Savers; Ali Baucom*

Field Session

Central Texas Seed Savers will demonstrate the process developed by the Seed to Tree Partnership to identify, collect, document and process tree seeds from local native trees for the TreeFolks Seeds to Tree Native Nursery. Attendees will learn the history behind the Seed to Tree Partnership and participate in a native tree ID walk featuring their tree ID curriculum. Join us in learning to identify native woody species, document them and collect their seeds for processing and submission to TreeFolks Native Nursery. Following the tree ID walk, participants can swap native seeds at the Central Texas Seed Savers seed swap table. Participants are welcome to bring seeds to share and come ready to browse seeds. Even if participants don't have seeds to share, you are still welcome to get seeds at this event. Leftover seeds from the swap will be donated to Central Texas Seed Savers and distributed to the greater Travis, Hays and Williamson County communities via seed libraries. Wear close-toed shoes and bring your ethically-collected seeds and curiosity for native trees!

8:00am - 12:00pm

Hands-on Youth Education of the Texas Wildlife Association (TWA)

- *Gene Cooper, Texas Wildlife Association; Taylor Heard, Texas Wildlife Association; Kassi Scheffer-Geeslin, Texas Wildlife Association; Chris Mitchell, Texas Wildlife Association*

Field Session

The Texas Wildlife Association (TWA) is a statewide membership organization whose mission is, "serving Texas wildlife and its habitat, while protecting property rights, hunting heritage, and the conservation efforts of those who value and steward wildlife resources." Several TWA programs depend on landowners opening their gates and topic specialists (both agency professionals and individuals) to facilitate successful natural resource education or hunting opportunities. Join our session at the Texas Wildlife Association headquarters in New Braunfels to learn about the Hunting Heritage Programs (specifically the Texas Youth Hunting Program) and Youth Education Programs (specifically Student Land, Water & Wildlife Expeditions) and how you as a Texas Master Naturalist can lend your expertise. The session will take place inside our headquarters building along with field components on our 7-acres.

Youth Education Activities: Get a sneak peek of an Expedition Field Day on our property! Visit the hands-on stations we set up on a typical student field day and learn about what topics and station presenters we are looking for! Stations during the conference session and during a student field day may cover topics such as soils, succession, rainfall simulator, plant ID using the Seek app, predator/prey game, quail nest predation, scent stations, macroinvertebrates and water chemistry.

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Hunting Heritage Activities: Participants will be introduced to the TWA's Hunting Heritage Education Programs, their purpose, methods and benefits to participants. Classroom instruction and mutually supportive field demonstration will provide participants with valuable knowledge on conservation tools used daily by wildlife professionals and volunteer educators.

- Hunter Education: Understand Hunter Education by learning, (1) What is Hunter Education?, (2) Why is it necessary?, (3) What are the benefits of Hunter Education?

- Firearm Safety: Learn a major component of every Hunter Education Class: firearm safety. The short presentation will include firearm actions, firearm safeties and the "big four" in firearm handling.

- Aging and Scoring Animals: An introduction to the terminology and techniques used by hunters and wildlife professionals to evaluate wildlife maturity, health and their links to habitat quality, and learn the regulatory link to the need for aging wildlife and its application to novice and seasoned hunters.

- Skills Trail: Demonstrates the techniques used to provide Hunter Education students with hands-on scenarios to learn safe, legal and ethical hunting practices.

- Air Rifle Range: Provides the opportunity to put into practice what you've learned in the classroom about firearm handling. Students under the supervision of Master Hunter Education Instructors, will learn range safety, shooting fundamentals and engage reactive targets.

8:00am - 11:00am

Field Environmental Philosophy As An Approach Towards Mindfulness and Reconnection With Freshwater Ecosystems (repeated session 2 of 2)

- *Dr. Justin Williams, Texas State University; Rob Dussler, The Meadows Center for Water and the Environment; Jeff Gessas, Texas State University*

Field Session

Field Environmental Philosophy (FEP) is a new approach to environmental philosophy and environmental education that brings us into direct contact with what we are studying. FEP integrates theoretical and applied ecological research with environmental ethics into the theory and practice of biocultural education and conservation. Pioneered at the Omora Ethnobotanical Park in the Cape Horn Biosphere Reserve in Chile by researchers with the Sub-Antarctic Biocultural Conservation Program, FEP is now used at research sites and in courses in Asia, North and South America, and the Middle East. As a pedagogy, FEP takes students and practitioners outdoors to observe their ecological communities and experience nature. It is a peripatetic approach to the philosophical observation of our habits, habitats and community of co-inhabitants. As a transdisciplinary methodology, FEP integrates a four-step cycle to develop collaborative interdisciplinary research, compose and communicate new metaphors and narratives, co-create ecological and ethical experiences, and develop in-situ conservation areas. FEP is perfectly suited for a biocultural ethical approach to education and ecotourism for sustainability. FEP also intersects with mindfulness and nature experience practices being explored at the Meadows Center for Water and the Environment at Texas State University. Nature experiences are reliably linked to physiological and psychological

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health benefits and are a popular way to spend leisure time and reconnect with some of the deepest senses of who we are. This field session will showcase the relationship between field environmental philosophy, leisure programming, and nature experiences as pathways towards more mindfulness and connection with our local sense of place. Students and practitioners will have the opportunity to learn about biophilic human responses to nature, Eco-phenomenology, nature-based pedagogy and other constructs that will help improve their ability to facilitate and interpret nature experiences at their home sites.

8:00am - 12:30pm

Going Beyond Bird ID to the Really Cool Stuff: Bird

Behavior - Burleson

○ *Shelia Hargis, Capital Area Master Naturalists*

Advanced Training Session

Many bird walks focus on seeing as many species as possible. There's nothing wrong with that, but there is so much more to explore and ponder about birds than just what species it is. Birds live amazing and interesting lives. This presentation will cover some of those cool behaviors such as flight, communication, maintenance, breeding and migration. It will give you tools to determine what is likely going on with the birds you see. This approach to bird watching will expand your understanding of birds and deepen your connection to them. It will also prepare you to potentially fill in some of the gaps we have in our understanding of birds. You will be able to apply your new knowledge wherever you are—in your backyard, in the HEB parking lot (grackles engage in very interesting behavior!) or off in some faraway country. This classroom session includes a presentation and then a bird walk to observe behavior and practice interpreting the behavior.

8:00am - 9:00am

Lights Out: Why the Natural World Needs Light Cycles -

Chautauqua A

○ *LOREN STEFFY, Hays County Friends of the Night Sky*

Advanced Training Session

Almost every living thing on our planet uses the cycle of light and dark to trigger life processes. So, how does our artificial light at night affect fauna and flora? This session helps us understand the effects of artificial light on living things and how we can reduce the negative effects of our lights. Participants will learn how light affects wildlife mating cycles, how plants depend on light cycles, how light pollution reduces food for predators and how to reduce light pollution and improve wildlife habitats.

8:00am - 9:00am

Fireflies of Texas: Glowing, Glowing, Gone - Chautauqua B

○ *Ben Pfeiffer, Firefly Conservation & Research*

Advanced Training Session

This highly educational and fun talk will discuss the types of fireflies (Lampyridae) found in Texas and across the US. Join Ben for a captivating exploration of Texas' enchanting fireflies, where you'll discover the diverse species that light up the Lone Star

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State's wild landscapes. Ben will present his research on Texas firefly taxa, highlighting the fascinating species found in nearby river basins and riparian areas. He will show you how to identify common firefly species and learn their flash patterns so you can recognize them in the wild. You'll also discover why fireflies flash and how they use light to attract mates. Additionally, he will discuss specific threats that are causing fireflies to disappear in many areas of the United States. Ben will also explain how to certify your property as a firefly habitat, suggest native plants you can grow to help them, and share other ways you can contribute to saving these iconic insects.

8:00am - 10:10am

Restoring Native Prairie Habitat on Public Land - Placido

○ *David Powell, Heard Natural Science Museum and Wildlife Sanctuary*
Advanced Training Session

Learn how we have worked with cities to restore the habitat in Wylie and Erwin Park in McKinney. This session includes a PowerPoint to look at what is growing at both sites along with a discussion of how it is being done and the challenges to be dealt with.

8:00am - 9:00am

Seeing All the Parks - San Marcos River A

○ *Dale Blasingame, Texas State University*
Advanced Training Session

This panel tells the story of how heartbreak led a social media professor to hike every state park in Texas and find his best friend along the way. Attendees will (hopefully) gain inspiration to use the outdoors to cope and change their lives for the better.

8:00am - 9:00am

Interpreting our Backyards: Influencing People with Regards to the Wildlife in their Backyards and Surrounding Areas - San Marcos River B

○ *Jerrel Geisler, Heartwood Master Naturalist & Harris County Precinct 3*
Advanced Training Session

We will present and discuss ways of presenting backyard wildlife to local citizens by giving them an understanding of what lives in and around their area. We will use examples from personal experience and social media platforms to discuss these issues. We will discuss how to present these topics to the public and discuss how they should perceive things they might find in their backyards.

8:00am - 10:10am

Native your Urban: How the City of Lewisville Transformed Successful Progress to Include Native Texas Blue-Green Spaces Around Town - Veramendi A

○ *Dr. Jaime Baxter-Slye, University of North Texas; TJ Gilmore, City of Lewisville*

Advanced Training Session

Urbanization is a driver of global change due to habitat loss, rapid biodiversity decline and loss of ecosystem services. There is a need for unified solutions that allow for
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municipal progress yet include natural resource rejuvenation. This shift in policy and management is critical for the survival of Earth's biodiversity health. How can we manage municipal land areas more effectively for the inclusion of native blue-green infrastructure to promote local biodiversity? How can these improvements benefit the community members of cities? The City of Lewisville's Mayor, T.J. Gilmore, will present Lewisville's award-winning Green Centerpiece, Extending the Green, and Roots for Wings initiatives. He will provide a unique perspective on how Lewisville is creating a path toward progress AND native habitat inclusion for their community. Dr. Jaime Baxter-Slye will engage in discussion about community outreach, specifics on plant choices and how to measure the success of native installations.

8:00am - 11:20am

Planet of the Insects - Veramendi B

o *Tristan Kubik, Colorado Natural Heritage Program*

Advanced Training Session

Insects outnumber humans a billion to one. In terms of biodiversity, insects constitute more than 85% of all known animal species. Some estimates put the total number of insect species in the ballpark of 10-50 million. Such overwhelming diversity poses some very intriguing questions! Where did the insects come from and why are there SO MANY INSECTS? In this talk, we will embark on one of the greatest adventures known to life on Earth. We will conduct a crash course on the broad strokes diversity of insects and explore their evolutionary story. Once upon a time 600 million years ago, a planet set poised for an epic takeover. Join Tristan Kubik as he tells the story of the Planet of the Insects!

8:00am - 9:00am

Fun with Nature of Naming - Veramendi C

o *Dr. Matthew McClure, Lamar State College- Orange*

Advanced Training Session

This presentation expands the basic curriculum on the Nature of Naming. An overview of the theory and practice of scientific names and naming will be discussed, along with a brief history of taxonomy and classification from the Two-Kingdom view of Linnaeus to the 3-Domain System of today. The rules of naming species are also included, along with the various ways that naturalists encounter scientific names in the literature. The process of discovering and describing new species and various ways to solve taxonomic discrepancies will be presented using zoological examples and popular analogies. Time permitting, we will also perform a taxonomy simulation and practice species identification using a dichotomous key. The importance of scientific naming not only provides a global standard for both the scientific community and naturalists, but avoids language barriers and the ambiguity of common names and regional naming discrepancies.

8:00am - 9:00am

Nature is an Essential Part of a Healthy Childhood -

Veramendi D

o *Sarah Coles, Texas Children in Nature Network*

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Advanced Training Session

We as an American society have been moving away from regularly spending time in nature, both as children and as adults. We are also seeing more and more research showing the critical need for play and education in nature—from physical child development to our mental health and performing better in school. We are increasingly seeing how important time in nature is for a healthy childhood, much like healthy food and regular doctor appointments. This session will discuss the latest research on the importance of nature for child development—physically, mentally and socially, as well as some initiatives Texas Children in Nature Network is working on to improve nature access and connection to children as a public health strategy—including OneHealth and Park Prescriptions.

8:00am - 9:00am

Mammals and their Adaptations to Survive - Veramendi G

o *Melissa Felty, Texas Parks and Wildlife Department*

Advanced Training Session

What are the purposes of a javelina's tusks? Why and where on their body do deer have "hollow" bones? Why do bobcats have short tails? By using skins, skulls, Replitracks™ and Repliscat™, join the discussion to share unique adaptations and survival tactics used by Texas mammals to survive in a variety of habitats. Whether attended last year or not, the conversation will include fun facts about different species. An update on TPWD educational loaner trunks will be provided.

8:00am - 10:10am

What Does Green and Clean Mean for Birds? A Look at Renewable Energy and Birds - Veramendi H

o *Dr. Tania Homayoun, Texas Parks and Wildlife Department*

Advanced Training Session

Texas, host to more than 650 species of birds, is the top energy-producing state in the nation with more than a quarter of that energy coming from wind and solar sources. While renewable energy is a key strategy for addressing climate change—one of the most pervasive global threats to bird biodiversity—solar and wind energy facilities pose their own unique challenges to birds and their habitats. This presentation will introduce the state of renewable energy in Texas, what we know of the potential threats to birds and mitigation strategies and areas where additional research is needed.

8:00am - 9:00am

Archeology and Ethnobotany in Texas Botanical Gardens & Native American Interpretive Center, Inc. How Native Plants Were Used by Ancient Hunter-Gatherers - Veramendi I

o *Susan Reynolds, Texas Botanical Gardens & Native American Interpretive Center, Inc.*

Advanced Training Session

How did the presence of native plants influence the lifestyles of indigenous hunter-gatherers in Central Texas thousands of years ago? Susan Reynolds, Executive Director of the Texas Botanical Gardens and Native American Interpretive Center, Inc., shares

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her insights on this subject through exhibits and information sourced directly from the garden. The sources for this information are Scooter Cheatham, the Texas Historical Commission, the National Museum of the American Indian and the Comanche Nation of Oklahoma.

8:00am - 12:30pm

Citizen Wildfire Ecology Program - Veramendi J

- *Wade Powell, TPWD State Parks – Wildland Fire and Habitat Management; Richard Gray, Texas Parks & Wildlife*

Advanced Training Session

This class educates citizens and professionals from fields outside of fire management on strategies to reduce a community's risk from wildfire in the Wildland Urban Interface (WUI). Participants will gain knowledge of fire's role in various ecosystems and habitats. The presenters will introduce concepts of fire physics to acquaint attendees with the threats and benefits of fire. Participants will learn how to assess hazards around their home and community and techniques that reduce wildfire impacts. Participants will learn strategies to Firewise their homes and concepts they can implement or support to mitigate destructive wildfires. Learn how to create or modify landscaping which aids in mitigating wildfire threat. Understand the benefits of an ecosystem in balance and the effects wildfire can have on plant, wildlife and soil communities. Become partners with your local firefighters and land managers to restore healthy ecosystems and reduce threats to your community.

9:10am - 12:30pm

Better Lights for Better Nights Workshop - Chautauqua A

- *Cindy Luongo Cassidy & Karen McGraw, DarkSky Texas*

Advanced Training Session

In this hands-on workshop which includes an outdoor inspection of local lighting, participants will learn how to reduce light pollution, protecting living things that depend on conservation of the natural night. The focus will be on identifying outdoor lighting to replace or alter & the characteristics of better lights to recommend. Participants will:

- Learn about light pollution, its creation, & how to apply standard principles of responsible lighting to reduce it.
- Explore types of outdoor lighting fixtures & learn how to critique them.
- Work in teams to inspect outdoor lighting at our location then apply what they have learned.
- Share findings with each other & discuss their recommendations.

Thru the workshop, they will also learn how to identify ways to save energy costs, reduce glare, increase safety, reduce light trespass, and create a more aesthetically pleasing nocturnal environment for humans. Take Home: A link to an electronic version of the lighting assessment worksheet suitable to assess outdoor lighting around their own home, non-profits, or business.

9:10am - 10:10am

Texas Land. Texas Water. And a Trailblazing Way to Protect it. - Chautauqua B

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- *Marjesca Brown, Great Springs Project*

Advanced Training Session

Texas is losing open space at the alarming rate of 20 football fields per hour. In Central Texas, wells and springs are running dry, treetops turn to rooftops in the blink of an eye and nature seems farther and farther away. Great Springs Project is addressing challenges posed by rapid urban development by conserving a national park-sized corridor of protected lands, connected by a 100+ mile recreational trail, between San Antonio and Austin. This presentation will provide an overview and history of the Great Springs Project and the social, environmental and economic benefits of open space preservation and recreational trails; explain how we accomplish our work; and describe current progress and successes to date.

9:10am - 11:20am

Event Photography to Support Chapter's Presence - San

Marcos River A

- *Scott Buckel, Galveston Bay Area*

Advanced Training Session

Our chapters use photographs of the various events we participate in to promote our projects and activities and educate others. Arguably, these may be the most important photos we capture. Many of us have experience photographing birds or some other natural history subject, but we spend little to no time photographing people—much less events. Our outreach groups and social media groups need photographs of the various activities we participate in to help support the projects and demonstrate what we do to get our messages out to the public. This class will discuss tips and tricks to photograph the various types of events chapter members participate in. We will discuss what to think about, creating a shot list, composition of event photos and creating a series of photographs that tell a story. A bit more knowledge about photographing events can significantly improve the impact of our efforts.

9:10am - 11:20am

Collecting Scientific Botanical (Herbarium) Specimens - San

Marcos River B

- *Kimberlie Sasan, Fort Worth Botanic Garden | Botanical Research Institute of Texas; Ashley Bales, Fort Worth Botanic Garden | Botanical Research Institute of Texas*

Advanced Training Session

Preserved plant specimens provide us with important information about plant diversity and distribution, and represent an observable, relatively permanent and verifiable form of evidence of a plant's existence in time and space. If these specimens are properly preserved and maintained, they can last for several hundred years. Join us in exploring the best practices for collecting scientific specimens, specifically for deposit in your local herbarium. We will discuss methods for vascular plants specifically but will briefly address some other special cases such as fungi, bryophytes and lichens. Participants will take home specimens they have pressed from material provided by instructors.

9:10am - 10:10am

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Plant Party - A Bonus, In-Person Fun Time! - Veramendi C

- *Dr. Megan Clayton, Texas A&M AgriLife Extension Service; Charles Kneuper, USDA-Natural Resources Conservation Service; Tim Siegmund, Texas Parks & Wildlife Department*

Advanced Training Session

Plant Party is a quarterly webinar program that provides advanced plant training for our professionals and volunteers with Texas A&M AgriLife Extension Service, Texas Parks & Wildlife Department and USDA-Natural Resources Conservation Service. This time, we're coming to you in-person for additional Plant Party fun! Join us for information about our upcoming events, to provide feedback on future Plant Parties and, most importantly, play plant-related games for PRIZES! We look forward to partying with you!

9:10am - 11:20am

A Taste of WILD - Veramendi D

- *Sara Jose, Texas Parks & Wildlife Department*

Advanced Training Session

Come learn about the variety of activities available in the Project WILD curriculum suite, a set of activity guides for educators and volunteers who work with young children and students. These activities balance indoor and outdoor learning to introduce others to wildlife and wildlife issues in the state of Texas. Master Naturalists often interact with these audiences during their volunteer work at nature centers, community gardens and outreach events. Come prepared to learn a few activities you can begin implementing in your area immediately and more information on becoming an official Project WILD educator through workshops.

9:10am - 11:20am

TMN VMS Review, Training and Roundtable Discussion-

Veramendi EF

- *Cheryl Foster, Dale Hughling, Michelle Haggerty, Bert Stipelcovitch and Brad James, TMN VMS Admin Team*

Advanced Training Session

During this session we will Review 2023 system reports and chapter audits. We will review changes and updates made to the VMS system so far through the system consolidation and upgrade with TPWD. We will provide training on the system updates as we know them to be in October. We'll also cover what we know is yet to come for the VMS re-design and upgrade. We'll review the VMS Admin's role in reviewing and approving LBE's and have a roundtable discussion to cover all of your remaining burning questions.

9:10am - 10:10am

Spotting the Skunks of Texas - Veramendi G

- *Dr. Dana Karelus, Texas Parks and Wildlife Department*

Advanced Training Session

Many Texans are surprised to learn that we have five different species of skunk in the state! The species are the hog-nosed skunk (*Conepatus leuconotus*), striped skunk

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(*Mephitis mephitis*), hooded skunk (*M. macroura*), western spotted skunk (*Spilogale gracilis*), and plains spotted skunk (*S. interrupta*). The plains spotted skunk is of particular interest to Texas Parks and Wildlife Department (TPWD), as they are a species of greatest conservation need (SGCN). They have experienced range-wide declines and data is lacking because they are generally rare. We will talk about the ecology and conservation status of each skunk species, including how to identify them and where they may be found in Texas. Additionally, we will discuss ways you can help TPWD better understand the status of our skunks, notably the plains spotted skunk, and potential future Texas Master Naturalist projects. Bring a clothespin for your nose and be ready for a stinkin' good time!

9:10am - 11:20am

Nurturing Nature: Understanding Ecological Grief and Its Impact - Veramendi I

- *Asst Cmdr Mike Mitchell, Texas Master Naturalist*

Advanced Training Session

A brand new program exploring the sense of loss that arises from experiencing or learning about environmental destruction or climate change. The program explores contributing factors, opposing forces and imposter syndrome. It offers suggestions for managing self, including when to say no, acts of self-preservation and avoiding burnout. It wraps up with Global One Health, offering suggestions and reading for learning more about this topic.

10:20am - 12:30pm

The Role of Master Naturalists in Protecting Texas

Habitats - Chautauqua B

- *Jeff Schwarz, Hill Country Master Naturalists Chapter; Jonathan Piper, Cibolo Center for Conservation; Brent Evans; John Freud, The Cibolo Center for Conservation*

Advanced Training Session

The mission of Texas Master Naturalists includes, "service dedicated to the beneficial management of natural resources and natural areas." For 36 years, our partnership with Master Naturalists at the Cibolo Center for Conservation in Boerne has persuaded the public, local government and landowners to invest in natural areas, parks, land restoration, water resource land, conservation easements and nature sanctuaries. We have even passed conservation bond elections. Master Naturalists help us understand habitats and possible use value—be they lands to save, a landowner assessing options (a donation or easement) or master plans for saved lands. Come find out how it works with examples from the partnership of your Texas Master Naturalist Hill Country Chapter with our Land Conservation activity. In addition, the new Texas A&M University Press book, *Replenishing Our Lands*, will showcase examples of preserved lands where you have applied your expertise. Come listen, share your examples and see whom you can partner with.

10:20am - 11:20am

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Can Urban Historic Cemeteries Help Restore Biodiversity?

- Placido

- *Julie Fineman, Friends of the Warren Ferris Cemetery; Monica Newbury, Oakland Cemetery Association*

Advanced Training Session

The Constellation of Living Memorials (CLM) is a project that blends sustainability, historic preservation and maintenance of historic cemeteries in Dallas' many neighborhoods. Historic cemeteries hold a unique cultural and ecological significance, yet many face neglect and degradation over time. Recognizing the importance of these sacred spaces, Constellation of Living Memorials has developed a groundbreaking approach to their rehabilitation. CLM's Initiatives:

- Revitalize Dallas' extensive network of historic cemeteries.
- Create balanced and sustainable ecosystems in cemeteries, as well as vibrant wildlife sanctuaries that honor the memories of those laid to rest.
- Enrich Dallas' natural environment and connect communities with their shared heritage.
- Create native biodiversity hubs to enhance ecology, create beauty, provide climate resiliency and support the health of Dallas.
- Activate a robust volunteer workforce and provide a range of science, culture and art education.

10:20am - 11:20am

Adopt-A-Loop Program - Great Texas Wildlife Trails -

Veramendi A

- *Shelly Plante, Texas Parks and Wildlife Department*

Advanced Training Session

Adopt-a-Loop is a citizen science project by the Texas Parks and Wildlife Department to provide regular site evaluation and to better understand the distribution of Texas' wildlife along the Great Texas Wildlife Trails (GTWT). By adopting a loop (or loops) on the GTWT, each TMN chapter will help collect data on our Species of Greatest Conservation Need (SGCN) and wildlife in general. TMN chapters and members will assist in ensuring that site information along the GTWT is updated and accurate while performing site surveys along their adopted loop(s) throughout the year. Volunteers in each chapter will sign up to visit sites where they will observe and record wildlife using iNaturalist, check and update site information with existing printed maps and online content, and make an overall assessment of the site and its condition. This information will be used in trail updates as well as to help inform visitors on what species to look for when they are at a particular site.

10:20am - 12:30pm

Native Pollinators - Veramendi C

- *Wizzie Brown, Texas A&M AgriLife Extension Service*

Advanced Training Session

Learn how to identify various pollinators that can be found in Texas from beetles to flies, to bees. Identification will go to the Family or Genus level (depending on the organism being covered).

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10:20am - 12:30pm

Swamp Rabbits of Central Texas - Veramendi G

○ *Mike Farley, Good Water Chapter*

Advanced Training Session

Exploring Western populations of *Sylvilagus aquaticus*. This presentation will discuss the ongoing comparison of the habitats of eight to ten populations in Central Texas. The goal is to understand how these dispersed populations compare to each other, through looking at genetics and the core habitats in the coastal plains and wetlands of East Texas and Louisiana. Learning what is acceptable habitat for these dispersed groups is the key to providing conservation in areas where habitat is under threat from population increase, fragmentation and general decline. Finally, we will discuss in the species should continue to be a concern throughout its Texas range or be removed from some counties where populations appear secure. Topics include Leporidae evolution, history, distribution sites, identification, research and conservation status.

10:20am - 11:20am

Songbird Migration and Stopover Ecology in Central Texas

- Veramendi H

○ *Dawn Houston, Texas State University*

Advanced Training Session

Bird migration is one of the most spectacular natural phenomena to occur globally. In the Americas, billions of birds take to the skies to fly hundreds, if not thousands, of miles to reach their breeding and wintering grounds. Many migrating birds flying through Central Texas must land to rest and find areas to refuel their energy stores before continuing their journey. These areas, known as stopover sites, vary in their ability to provide rich food sources and may differ across habitat types. Ph.D. candidate, Dawn Houston, will discuss the underlying mechanisms of songbird migration, the latest research in migration ecology and how land management practices may facilitate migratory success and help conserve avian populations beyond our state boundaries.

11:30am - 12:30pm

All Mushrooms are Magic - Placido

○ *Angel Schatz, Central Texas Mycological Society*

Advanced Training Session

Join Central Texas Mycological Society for a talk and presentation about the spooky, edible and fascinating mushrooms growing in Texas. We will learn how all mushrooms are magic and how fungi are entangled in all parts of our lives—from the beer we drink to the soil we walk on. We will cover the basics of mycology, how fungi benefit our entire ecosystem, our health and more.

11:30am - 12:30pm

Belonging: Critical Element of DEI Strategy – Private Dining 1

○ *Mohammed Nasrullah, Galveston Bay Area Chapter & Ruth Nasrullah Heartwood Chapter*

Advanced Training Session

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Many TMN chapters are working toward DEI goals. But what does that really mean and how can diversity-oriented efforts be implemented in a practical way? In this session, presenters will discuss:

- (1) What is “Belonging” in the DEI context and it’s importance.
- (2) “Belonging” as part of the DEI strategy.
- (3) Elements of “Belonging”.
- (4) Implementing “Belonging” in your chapter.
- (5) Measuring success.

The presenters will cover realistic assessments of inclusivity and how to increase your chapter's accessibility to people of diverse backgrounds. This session will go beyond common goals such as racial diversity and look at a broad strategy for making your chapter accessible, interesting and relevant to people of all backgrounds.

11:30am - 12:30pm

How to be a Photonaturalist - San Marcos River A

o *David Cook, Capital Area Master Naturalists*

Advanced Training Session

While we might have different definitions, most of us know what a naturalist is. We are Texas Master Naturalists after all. Most of us also know what a photojournalist does. They document the news in photographs. But what is a photonaturalist? It’s more than someone who documents nature in photographs. It’s someone whose photographic work is inspired by nature, but more importantly, it’s someone who learns more deeply about the natural world through photography. The Texas Master Naturalist Capital Area and Balcones Canyonlands Chapters co-sponsored Photonaturalist walks for members and the public. On our Photonaturalist walks, participants learn new things about the flora and fauna they observe, and how to effectively photograph them to tell better stories. As photographer and writer Guy Tal explains: it’s not just photographs “of” nature, but photographs “about” the natural world we all enjoy.

11:30am - 12:30pm

Mapping the Plants (specimens) of Texas - San Marcos River B

o *Kimberlie Sasan, Fort Worth Botanic Garden | Botanical Research*

Institute of Texas; Ashley Bales, Fort Worth Botanic Garden | Botanical Research Institute of Texas

Advanced Training Session

A wealth of data about the past distribution of plant species across Texas is provided by the location information stored on specimen labels found in herbaria around North America. Paired with modern observations like iNaturalist, these records enhance our understanding of plant distribution in our state. However, historical data often includes ambiguous, non-mappable text-only location descriptions. This workshop will cover spatial systems for mapping biodiversity data, interpreting geocoordinates and spatial data on specimen labels and best practices for recording geospatial data for biodiversity collections and observations. Attendees will also be introduced to online databases (TORCH, GBIF, iDigBio) for accessing plant distribution data and learn about a National Science Foundation grant project using GEOlocate to map Texas plants.

11:30am - 12:30pm

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Make an Impact Locally - Local Parks Grants - Veramendi A

- *Kara Escajeda, Texas Parks & Wildlife Department; Dan Reece, Texas Parks & Wildlife Department*

Advanced Training Session

The Texas Parks & Wildlife Local Park Grants program provides funding to local communities that can be leveraged to enhance the appeal of urban parks and encourage participation in outdoor activities. Through collaboration with groups such as Texas Master Naturalist Chapters, local communities can be actively engaged in fostering a deeper connection with nature and promoting healthy lifestyles. Studies have shown that spending time in green spaces can have a positive impact on mental and physical health. Research indicates that individuals who frequent parks experience lower rates of depression and high blood pressure, while also reporting an increased sense of social belonging and cohesion. This highlights the importance of investing in local parks and green spaces as essential resources for community well-being and quality of life. The presentation will cover nature-based project ideas for local parks and how volunteer hours can be leveraged to obtain funding.

11:30am - 12:30pm

Butterfly Survivor: Outwit, Outplay & Outlast - Veramendi B

- *Melanie Schuchart, Blackland Prairie*

Advanced Training Session

Butterflies already have it hard with disappearing habitat; even in a pristine or restored habitat, they are at the bottom of the food chain, providing food for many creatures such as birds, reptiles, wasps, assassin bugs, spiders, ants and the list goes on. With all that stacked against them, they have to come up with creative and interesting ways to survive. This talk explores various strategies that our local butterflies use to extend their lives so their species can survive year after year.

11:30am - 12:30pm

Texas State Parks Are Here For You - Veramendi D

- *BEN HORSTMANN, Texas State Parks - Region 2, TPWD*

Advanced Training Session

Texas State Parks and Texas Master Naturalists go hand in hand. In this presentation, we'll discuss the different ways State Parks can help you and your chapter, take a look at the State Parks that are nearest to you and give you contacts at those parks.

11:30am - 12:30pm

Wild About Turkeys! - Veramendi H

- *Dr. Megan Clayton, Texas A&M AgriLife Extension Service*

Advanced Training Session

Wild turkeys have an interesting history in Texas. Overharvesting decreased their numbers to critical levels, but restoration efforts began long ago and continue today to maintain this fascinating bird throughout the state. Come learn about their life history, strategies and habitat requirements and practice communicating like a turkey by

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mimicking their sounds with calls! This could get a little wild...just how we like our turkeys!

11:30am - 12:30pm

Wildlife Disease Ecology for Master Naturalists - Veramendi I

○ *Dr. Kelly Pierce, PHC Global*

Advanced Training Session

Wildlife disease ecology is a growing field of research aimed at increasing our understanding of how pathogenic microbes interact within ecosystems and impact the health of animals (including humans). As naturalists, we often focus on what we can see, hear, feel and smell; microbes can be easy to overlook! But the microbial world is vast and influential, and the more we understand about the complex interactions between wildlife and diseases, the more effectively we can steward and manage wild populations. This talk will overview a small subset of the pathogens of Central and East Texas (including the recently emerged avian influenza H5N1 in wild birds), tick- and mosquito-borne diseases (including the potential re-emergence of malaria) and chronic wasting disease in Texas white-tailed deer. We will discuss how the impacts of these microbes are made apparent in the flora and fauna we see around us, and how Master Naturalists can incorporate this information into their work.

1:00pm - 5:00pm

Restoring Wildlands to Protect Water on Austin's Water Quality Protection Lands

○ *Audrey Stewart, Austin Water Wildland Conservation; Karlee Taylor, Austin Water Wildland Conservation*

Field Session

Austin Water Wildland Conservation Division protects more than 40,000-acres of land, "the Wildlands," that are part of two programs: the Balcones Canyonlands Preserve, which protects endangered species habitat, and the Water Quality Protection Lands. For this field session, participants will tour the Water Quality Protection Lands' Onion Creek property and learn about native grassland savanna restoration and how efforts above ground have an impact on the water below. The Water Quality Protection Lands (WQPL) safeguard groundwater in the Barton Springs segment of the Edwards Aquifer through the conservation and restoration of large, connected natural areas. By restoring grassland savanna ecosystems and healthy riparian corridors, these lands not only supply high-quality water to recharge the aquifer, they also provide habitat for wildlife, protect cultural resources and support research to better understand the natural world protected by the Wildlands. On this tour, we'll visit a recharge feature ("swallet") in Onion Creek to make the connection between our land management and mission to protect the quality and quantity of water entering the aquifer. We will also visit grassland savanna sites undergoing restoration treatments to meet some of our native plants, discuss restoration goals and how prescribed fire, thinning, and seed-based restoration activities help us to achieve those goals. We will also tour our native plant nursery and seed storage area and learn about the role of volunteers in collecting, cleaning, and dispersing seeds to restore these lands. This tour will involve driving

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between sites on paved roads and limited walking on uneven ground and through tall vegetation.

2:00pm - 3:00pm

Recording Natural Landscapes Through Sketches and Photographs - Burleson

○ *Thomas Motley, T.D. Motley, Artist and Author*

Advanced Training Session

This presentation will enhance attendees' mindful experience of nature's visual displays. It will provide compositional tools to improve recording natural views through the use of sketches and photographs. 2D Sketches and photographs wind up being viewed on 2D paper surfaces or screen projection. Whether it's the shape of your sketchbook page or the shape of your viewfinder, it's normally a rectangular frame that provides the opportunity for you to isolate and emphasize perceived aspects of the awesome natural world before you. This presentation will help you practice positioning the shapes, colors and values within the frame of that 2D paper page or digital camera viewfinder so they will appear more convincing in their final 2D manifestations. It will help you select views in nature that best convey the sense of depth and ambiance of the actual natural space you are witnessing. Examples of landscape drawings and photographs illustrate the principles discussed.

2:00pm - 4:10pm

Lights Out, Texas! - Chautauqua A

○ *Azalia Rodriguez, Defenders of Wildlife; Chloe Crumley, Audubon Texas*

Advanced Training Session

Each spring and fall, 1 billion birds migrate through Texas at night. That is 1 in 3 to 1 in 4 of all birds migrating in the U.S. Most migratory birds travel at night. Unfortunately, light pollution can distract and disorient birds, causing them to land in urban areas where they face increased threats from predators and building collisions. Lights Out, Texas' mission is to educate, bring awareness and implement actionable steps to turn out lights during migration. One way we track this information is through collision monitoring in our communities. Join us to learn hands-on how to identify birds most often found during collisions, where the data goes and how your volunteer time and expertise can help us elevate Lights Out, Texas for real change in our state. Together, we can protect birds, which in turn benefit our community by eating pests, spreading seeds, bringing in tourism dollars and bringing joy.

2:00pm - 3:00pm

Native Grassland Restoration – How Plants Grow and How to Improve Them - Chautauqua B

○ *Ricky Linex, Retired, USDA Natural Resource Conservation Service*

Advanced Training Session

Presentation discusses how our native grasslands declined prior to 1900 and factors affecting the success of grass re-establishment, using Web Soil Survey to see what plants were native on your land, what is PLS (pure live seed) and why it is important when calculating a seeding mixture to restore grasslands, and conversion of exotic grasses to

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native grasses. Information provided will allow you to be more informed of the journey during restoration of native grasslands.

2:00pm - 4:10pm

Build It & They Will Come, A Restored Prairie and the Birds That Call It Home - Placido

o *Shelia Hargis, Capital Area Master Naturalists*

Advanced Training Session

In 2009, Ed Fair, an avid birder in the Austin area, learned that the “prairie” at Commons Ford Park didn’t provide much to the birds that visited the park because the field was full of non-native grasses. Ed led the effort to transform the prairie into an area with a diverse mix of native grasses and forbs. The transition took multiple years, but the wildlife responded quickly. The birds especially took to the native habitat. Fast forward fifteen years, and Commons Ford is now one of the top birding locations in Austin and Travis County. It is a vibrant and beautiful open area that meets the needs of many birds and other wildlife, and nourishes the souls of the humans who visit. Shelia Hargis will present on the process of restoring the native prairie. She will also delve into the lives of the birds that call the prairie home and explore how they use the prairie. Come learn about this special place!

2:00pm - 3:00pm

Cell Phone Video Production - San Marcos River A

o *Lee Smith, Texas Parks and Wildlife Department*

Advanced Training Session

This session will cover the use of a cell phone for high-quality video production. It will detail what phone settings to change and how to orient the phone for different distribution platforms. We will provide composition guidelines to provide coverage for a variety of shots, camera techniques that allow an editor to have a variety of choices and industry standards and guidelines for shooting interviews. We will discuss and demonstrate various accessories such as clip-on macro and wide-angle lenses, tripods, extensions, gimbals and Lavalier mic systems. Finally, we will consider various editing platforms available to complete a project.

2:00pm - 5:20pm

Texas Waters Day - San Marcos River B

o *Melissa Felty, Texas Parks and Wildlife Department*

Advanced Training Session

The Texas Waters Specialist (TWS) program develops a corps of well-informed volunteers dedicated to the beneficial management of aquatic resources and aquatic habitats. Advanced training and service opportunities are aligned to four categories: Conservation, Ecology, Education and Stewardship. Texas Water Specialists are fundamental to informing their communities of conservation issues specifically related to the need for fishable, swimmable and drinkable waterways for our state. At Texas Waters Day, attendees will participate in hands-on, aquatic/watershed-based activities. Activities are open to all who are certified, in-progress and newly curious about the program. Each Texas Waters Day offers different activities, so if you participated in the

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past, join again for continued learning. In addition, Texas Water Specialists will be recognized for their dedication to the TWS program, along with special awards to those who have gone above and beyond as ambassadors for Texas Waters.

2:00pm - 3:00pm

Influence Conservation Priorities in the State Wildlife

Action Plan - Veramendi A

o *Kelly Simon, Texas Parks and Wildlife Department*

Advanced Training Session

The State Wildlife Action Plan is required for Texas to be eligible for about \$3 million in State Wildlife Grants (SWG), which are used for the benefit of SGCN (Species of greatest conservation need) and their habitats. It will also be required to access funds if the Recovering America's Wildlife Act passes. While Texas administers the SWAP, it is a collaborative document and we want to ensure that the public and our stakeholders are engaged in the process of setting our conservation priorities. While our current plan is good until 2033, we are taking advantage of new technology and beginning a new revision to be completed one year from now. We've used objective criteria, habitat modeling and other methods to establish some preliminary priorities, and we want you and your chapter's help in refining them. Join the process today, and we hope you'll help us reach the folks in your community for their input too.

2:00pm - 4:10pm

Time to Restore: A Multi-State Citizen Science Project to Connect People, Plants and Pollinators!

- Veramendi B

o *David Gwin, USA National Phenology Network's "Time To Restore"*

Advanced Training Session

When planting to support pollinators, we need to know which native species to plant to provide nectar during critical seasonal periods, and how these plants will respond to changes in climate—including more variable weather conditions across time. A new and exciting project across the four states of Texas, New Mexico, Oklahoma and Louisiana, called Time to Restore, seeks to generate better information about nectar availability and ripe seed timing to help those working on pollinator restoration know what to plant and when to harvest seeds. In this presentation and training session, we will share background on the changes we are already seeing in the timing of native plant and pollinator activity in the south-central US and how this information can be used to support climate-smart plantings. Participants will receive training on how to collect data as part of this project and be ready to add their native garden, wildscape or favorite natural area to this multi-state effort.

2:00pm - 5:20pm

Eco-Importance of Native Landscaping - Part 1 Woody Plants

- Veramendi C

o *Roger Sanderson, Retired- Texas Discovery Gardens*

Advanced Training Session

Doug Tallamy has brilliantly elucidated the critical need for using native plants in our home gardens and landscapes. Most people concerned about the natural world are well

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aware that we need native plants to provide food for insects, which in turn are necessary to provide food for birds and other animals. They also provide fruits to feed them directly and flowers to maintain pollinator populations to ensure their reproduction. But each species is usually benefitting only a limited number of birds and bugs. So which trees, shrubs or wildflowers are more beneficial, and which ones provide the most uses to the most species of insects, birds or animals—especially the ones we most want to share our backyards with? This presentation will cover a wide variety of plants and what each provides. We will review which birds, bugs or other wildlife use them, what other advantages they provide to the home landscape and how they sustain the local ecology and a healthy environment.

2:00pm - 4:10pm

Not Just the Fluffy Bunnies - Veramendi D

o *Jamie Langham, Texas Parks and Wildlife*

Advanced Training Session

Nature conservationists and educators have the challenging task of both engaging and educating the audience, and sometimes this can be a balancing act. In order to impart our knowledge, one must first capture the attention of those seeking to learn, and we all know there are some subjects where this can be a little more challenging to do. While it might be tempting to stay with the “easy” topics and focus on subjects that are universally liked, as an Authority of the Resource, our time and efforts are better spent educating others on subjects they might not have previously been exposed to or are, in fact, actively avoiding. We have unique opportunities to help re-frame our audiences’ prejudices about the usually misunderstood flora and fauna at our sites. By focusing on these species in our programs, we can have more of an impact in positively influencing current and future generations to better appreciate all the living things that call our natural areas their home.

2:00pm - 4:10pm

Coyote Coexistence: Living in Harmony with America’s Song Dog - Veramendi G

o *Roberto Saucedo, Song Dog Watch; Karin Saucedo, Song Dog Watch*

Advanced Training Session

Coyotes are highly resilient creatures able to adapt to threats and acclimate themselves in almost every environment, including cities and suburbs. As a keystone carnivore, coyotes play a critical role in helping to maintain healthy ecosystems and species diversity. This presentation will look at the current challenges coyotes face in a rapidly evolving human-centric landscape. We’ll examine the coyotes’ seasonal behaviors that often influence increased sightings and dispel some of the most common myths. In conclusion, we’ll discuss proactive methods we can use to help avoid negative encounters with coyotes.

2:00pm - 3:00pm

Something to CROW About! - Veramendi H

o *Dr. Christina Lane, Blackland Prairie Master Naturalists*

Advanced Training Session

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Attendees will learn general information about crows and other corvids, with emphasis on our own American Crow (*Corvus brachyrhynchos*). Students will explore current research on crow intelligence, including tool use and building, facial recognition, intra- and inter-species communication, and imitation and use of language. Students will understand crow research techniques with an emphasis on functional brain imaging. Attendees will learn about a crow's "emotional intelligence" as demonstrated by the use of ritual, play and humor. Finally, students will understand the concept of the urbanization of crows and other non-human organisms. They will explore aspects of crow biology and behavior that assist crows in urbanizing. This ability will be compared and contrasted to other organisms, including ravens. Students will dabble in art and culture involving crows and maybe have a few laughs!

2:00pm - 3:00pm

Navigating Discourse: Addressing Controversial Topics -

Veramendi I

- *Asst Cmdr Mike Mitchell, Texas Master Naturalist*

Advanced Training Session

A brand new program exploring how leaders can take on controversial topics in public settings. It ties together the TMN mission statement in the context of today's highly charged world, offering solutions for how presenters might manage heated discussions. It closes with ten specific steps leaders may take in presenting information, with hopes that discomfort is a doorway to learning.

2:00pm - 4:10pm

Ecological Succession: From Grasslands to Forests -

Veramendi J

- *Cindy Howard, Galveston Bay Area Chapter TX Master Naturalists*

Advanced Training Session

Texas has a wealth of biodiversity in its natural ecoregions, but the landscapes we treasure today haven't always looked like they do now. This program will explore the concept of ecological succession—how natural communities change over time. We will compare the processes of primary and secondary succession and see how some classical succession models work. Then we'll examine the environmental factors that drive community change, with particular attention to some very special Texas ecosystems. We will conclude with current ideas ecologists are researching about succession and how ecological succession is affected by human impacts that are important to Texas Master Naturalists.

3:10pm - 4:10pm

Teaching about Nature Through Unique Art - Burleson

- *Kimberly Jungkind, HLMN*

Advanced Training Session

Calling all artists, sculptors and Master Naturalists! Artist, writer and Master Naturalist, Kim Jungkind, has created a way to use art to educate children and families. Using an impasto (thick textured) painting technique, she shows her students how to create art that simulates the textures of trees. The paintings they create help them better

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understand the texture of native Texas tree trunks, branches, foliage, leaf structure, nuts and fruits. The program also enables other artists and Master Naturalists to use their talents to help educate and more fully engage people of all ages. Examples and ideas will be presented to inspire others who want to use their own talents to better understand nature.

3:10pm - 5:20pm

Vibrant Lichen Studies - Chautauqua B

o *Zane Liston*

Advanced Training Session

Lichens are the precursor to soil formation and the living edge of the nonliving world. They are of remarkable importance in the biosphere and yet receive very little social or scientific attention. Why? In this class, we will learn the historical and current understandings of lichens. By focusing in on the names we give to these organisms, we will unpack their interpretive capacity for naturalists, settling complexities in identification. We will cover new cutting-edge science, as well as more ephemeral and mysterious parts of their existence. Naturalists will gain a general understanding of morphology, phylogeny, distribution in the Hill Country, ecological niche, presence in field guides and bioindicator status. They'll use tools of the trade for lichen identification, with a demonstration of how to use magnification, UV and chemical-based spot tests to make sense of lichens. Finally, a call to action. What is needed in the field? How can we think anew about these creatures?

3:10pm - 4:10pm

Wildlife Video Production - San Marcos River A

o *Lee Smith, TPWD*

Advanced Training Session

This session will cover the use of techniques for wildlife video production. We will examine the difference between still photography and video photography. Special camera techniques for wildlife video will be demonstrated. We will peruse different types of equipment, with a special emphasis on capturing high-quality audio. We will look at considerations using blinds and camouflage. We will also consider the practice of ethical production with regard to wildlife. We will also demonstrate proper techniques to record specimen shots for iNaturalist.

3:10pm - 4:10pm

New Information Regarding Texas Tortoise (*Gopherus berlandieri*) Habitat in South Texas - Veramendi A

o *Daniel Guerra, Texas State University*

Advanced Training Session

The Texas tortoise (*Gopherus berlandieri*) is a Species of Greatest Conservation Need that is relatively understudied compared to other North American tortoises. Despite increasing pressures on tortoise populations worldwide, there has been comparatively little effort at determining the habitat associations of *G. berlandieri*. In this presentation, Daniel will summarize the current knowledge of Texas tortoise habitat associations and discuss the renewed efforts to understand this unique reptile within

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South Texas. This includes an updated review of published habitat research, as well as a presentation of cutting-edge research using radio and GPS tracking of tortoises, estimations of tortoise space use and analysis of relationships between tortoises and available environmental variables such as canopy cover. This knowledge will enable stakeholders such as landowners or conservationists to effectively incorporate *G. berlandieri* into conservation or management practices in the near term.

3:10pm - 5:20pm

Nightjars: Nocturnal Enigmas - Veramendi H

○ *Scott Kiester, Elm Fork Chapter TMN*

Advanced Training Session

Nightjars: everybody's seen them gliding through the night sky, scooping insects out of the air around the lights of a parking lot or stadium, or heard their distinctive calls in the darkness. But there is so much more to them! We will visit with each of the species native to Texas and then investigate some other members of the family Caprimulgidae, including the oilbird –one of only two species of birds known to use echolocation.

3:10pm - 4:10pm

Exploring Ambiguous Moral and Ethical Situations (Formerly Laws and Ethics) - Veramendi I

○ *Richard Heilbrun, Texas Parks & Wildlife Department*

Advanced Training Session

Open to previous attendees and newcomers, in 2024 we'll explore ethical dilemmas that a Master Naturalist might encounter and explore the background of how a TMN might respond. This interactive exercise will discuss situations that every Master Naturalist should know and understand. Some situations may be straightforward, and some may ask you to dig into your life experiences and training to apply your conservation ethic to real-world situations. Brought to you in a friendly, common-sense dialogue between a retired game warden and a wildlife biologist, the speakers will challenge each other and the audience to answer conservation's most challenging quandaries. This activity will supplement the Laws, Rules & Ethics module in the TMN curriculum. Now in their seventh year teaching this topic at the annual meeting, Richard Heilbrun and Mike Mitchell put a new spin on this interesting discussion.

4:20pm - 5:20pm

Nature Connection and Mental Health - Burluson

○ *Lari Jo W Edwards, South Texas Master Naturalist*

Advanced Training Session

In today's fast-paced educational environment, people are experiencing unprecedented levels of stress and overwhelm. This presentation explores the profound impact of nature's connection to mental health and its potential to foster a deeper curiosity about the world. We will delve into five practical strategies to integrate nature into daily routines, providing a rejuvenating antidote to the pressures of modern life. These strategies include mindful nature walks, incorporating natural elements into the classroom, outdoor learning activities, nature-based mindfulness exercises and fostering ecological stewardship. By reconnecting with nature, we can improve mental well-being,

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reduce stress and ignite a passion for lifelong learning. Join us to discover how nurturing our relationship with the natural world can transform our educational experiences and promote a healthier, more engaged community.

4:20pm - 5:20pm

Be a Champion for the Night - Chautauqua A

○ *Soll Sussman, Hays County Friends of the Night Sky*

Advanced Training Session

In this session, you'll learn how to be part of The Globe at Night program and the Sky Quality Meter campaign to raise public awareness of the impact of light pollution by inviting citizen scientists to measure their night sky brightness and submit their observations from a computer or smartphone. The Texas Project uses the same data, but focuses on readings taken in Texas. You'll learn how to submit your data to both projects. Light pollution threatens not only our "right to starlight," but can affect energy consumption, wildlife and health. More than 100,000 measurements have been contributed by people in 115 countries during the campaigns each winter/spring over the last decade, making Globe at Night the most successful light pollution awareness campaign to date. You'll also learn how to establish a Night Sky Protect Project in your TMN chapter if you don't already have a way to record your volunteer time as you gather data or work to reduce light pollution.

4:20pm - 5:20pm

Symbiotic Relationships in Texas and How to Teach it -

Placido

○ *David Powell, Heard Natural Science Museum and Wildlife Sanctuary*

Advanced Training Session

This training session provides an explanation of the types of symbiotic relationships in Texas. You will be provided with examples of symbiosis and taught a game that can be used to teach about them to multiple age groups.

4:20pm - 5:20pm

Empowering Naturalists with AI: Creating Engaging,

Educational Video Content - San Marcos River A

○ *Dr. Meagan Pollock, Engineer Inclusion*

Advanced Training Session

While enjoying nature or volunteering, have you considered creating digital content to boost outreach and engage more broadly with your community? This workshop showcases using AI and smartphone technology to produce short educational videos, offering an innovative approach to environmental education. With the 'Bayou Boat Skipper' series as a case study, we'll demonstrate how volunteers can utilize AI for content creation alongside smartphone apps for filming, enabling the efficient production of compelling content that is both accessible and engaging! The session will provide practical steps for training volunteers in these technologies, ensuring consistent, impactful educational messaging across platforms. Attendees will craft their own video script and production plan and leave ready to produce their first video, applying these skills immediately to enhance their outreach efforts.

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4:20pm - 5:20pm

Jumping Through Hoops: The Uncertain Listing of Texas

Kangaroo Rat - Veramendi A

○ *Maggie Sinner, Environmental Consulting and Technologies*

Advanced Training Session

Rats are not always considered the most charismatic of species, but kangaroo rats may find themselves the exception. With oversized hind legs that allow these tennis-ball-sized creatures to jump 8 feet, they pique more interest than the average rat. Texas is home to 5 kangaroo rat species, all of which thrive in desert conditions, living underground and foraging for seeds at night. This presentation will pay special focus to the Texas kangaroo rat (*Dipodomys elator*), which was proposed to be listed as endangered by USFWS in August 2023. During this period of proposed listing, Texas landowners can enter a Candidate Conservation Agreement of Assurance with TPWD and USFWS. These voluntary programs require the landowner to implement management techniques to conserve habitat for candidate species but provide assurance that additional measures will not be required if the species is federally listed. We will discuss this species as well as current conservation efforts to protect them.

4:20pm - 5:20pm

The Monarch Butterfly Migration Its Rise and Fall -

Veramendi B

○ *Monika Maeckle, Texas Butterfly Ranch*

Advanced Training Session

Butterflies have enchanted humans for time immemorial, but when National Geographic Magazine announced the “discovery” of the monarch butterfly overwintering sites in Mexico on its August 1976 cover, a particular orange-and-black butterfly was literally thrust onto the coffee tables of America. Since then, monarch butterflies have captured the imagination of the world, especially those of us who live along their migratory flyway. How and why have we become so captivated by this insect? That inquiry creates more questions than answers. Should we stop eating avocados since Mexico's cartels are clearing the roosting forests to cash in on the "green gold"? What role does citizen science play? What about Tropical milkweed? Are commercial and at-home breeding good or bad? Are monarchs endangered or not? What to believe? What's the right thing to do? Through natural history and personal experience, this session will explore those questions and encourage others to do the same.

4:20pm - 5:20pm

Educating Youth with the Texas Wildlife Association

(TWA) - Veramendi D

○ *Kassi Scheffer-Geeslin, Texas Wildlife Association*

Advanced Training Session

The Texas Wildlife Association (TWA) is a statewide membership organization whose mission is, “serving Texas wildlife and its habitat, while protecting property rights, hunting heritage, and the conservation efforts of those who value and steward wildlife resources.” Several TWA programs depend on landowners opening their gates and topic

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specialists (on topics such as soils, succession, rainfall simulator, plant ID, nest predation, macroinvertebrates and water chemistry) to facilitate successful natural resource education or hunting opportunities. Join our session to learn about youth education programs (specifically the Student Land, Water & Wildlife Expeditions) and how you as a Texas Master Naturalist can lend your expertise.

4:20pm - 5:20pm

Wild Cats in Texas - Veramendi G

- *Dr. Sharon Wilcox, Defenders of Wildlife; Monica Morrison, Texas Native Cats*

Advanced Training Session

Learn about the native wild cats of Texas, their natural history in the state and where they can be found today. Join Monica Morrison, founder of Texas Native Cats, and Dr. Sharon Wilcox, Senior Texas Representative with Defenders of Wildlife, to learn more about Texas' wild cats and discover practical methods you can use to help ensure their coexistence with communities in Texas.

4:20pm - 5:20pm

Constructing Relevant and Engaging Education - Veramendi I

- *Charley Curd, Bandera County River Authority & Groundwater District; Corrina Fox, Bandera County River Authority & Groundwater District*

Advanced Training Session

The Bandera County River Authority and Groundwater District (BCRAGD) educational team shares experiences and resources for providing engaging children's education in the formal and informal setting. Learn strategies to identify relevant content and align organizational goals in combination with State Curriculum standards. Determine how your organization can become a significant source within your community.

4:20pm - 5:20pm

Living Soil: The Universe Beneath Our Feet - Veramendi J

- *Shannon Westveer, Coastal Prairie Chapter*

Advanced Training Session

It's not just dirt! Soil is alive and providing life-sustaining services for all creatures on the top side of the planet. Whether it's recycling minerals and nutrients, converting atmospheric nitrogen into plant fertilizer, breaking down detritus and dead things for reuse by others or sequestering additional atmospheric CO₂ back into long-term storage below, our soil and the world of microorganisms within have been quietly humming along in the background unseen, unheard and unappreciated for billions of years. Learn why the living soil ecosystem is so important to plants and animals, and appreciate how to conserve and protect it where we live and through our actions indoors and out.

7:00pm - 8:00pm

A Biocultural History of the San Marcos Springs - Veramendi

EF

- *Jeff Gessas, Texas State University*

Keynote Presentation

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This talk explores the biocultural history of the Texas Hill Country through the story of the San Marcos Springs, from its Indigenous stewards 15,000 years ago, as part of the El Camino Real de los Tejas, as the Waterful Wonderland known as Aquarena Springs, and finally to the conservation efforts of Texas State University and The Meadows Center for Water and the Environment for the 9+ endangered endemic species who live in and around these waters. In addition to introducing and welcoming conferencegoers to San Marcos through the history of the springs, Jeff will use a philosophical concept, the Abyssal Line, to introduce participants to the practice of biocultural conservation. Biocultural conservation sees human systems (culture) as inherently tethered to natural systems (bio), and vice versa. Hence, the biocultural approach integrates the sciences with the arts, humanities, and storytelling to co-create a sense of community with the other-than-human world.

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Saturday October 26th, 2024

8:00am - 9:00am

Advice from a Botanic Garden, 1) How to Select Plants for your Native Plant Projects for Beginners and Experts and, 2) Opportunities at Botanic Gardens that Involve Native Plants - Chautauqua A

- *Zoe Matranga, Mercer Botanic Gardens; Anita Tiller, Mercer Botanic Gardens - Mercer Botanical Center - Harris County - Precinct 3; Kari Hernandez, Mercer Botanic Gardens*

Advanced Training Session

Overwhelmed about how to launch your search and selection of plant species for your native plant project? Learn how to narrow your search by region, pollinators and more. Learn about advanced training and volunteer opportunities provided by botanical gardens/institutions that will help you become a native plant expert or expand and challenge your knowledge about native plants! Using Mercer Botanic Gardens' native plant programs as examples, learn how you can become involved with 1) herbarium, library and botanical art collections; 2) native plant propagation; 3) native plant display gardens and outreach; 4) native plant restoration and planting projects; 5) mentoring student interns; and more.

8:00am - 10:10am

Public or Private Land - Who Really Benefits? - Chautauqua B *Sarah Dean, Hill Country Conservancy; Karastin Katusin, Bayou Land Conservancy; Carolyn Stephens, Hill Country Conservancy*

Advanced Training Session

Land trusts across the state rely heavily on volunteers to support land conservation efforts, from stewardship to education. 95% of land in Texas is privately owned, which includes land held by land trusts. This statistic may have you thinking your options for volunteering with a land trust are limited, but land trust volunteer opportunities are as diverse as the Texas ecosystems we serve. This session will provide an overview of land trusts, demonstrate the public value by volunteering with a land trust, share stories of successful volunteer partnerships between Texas Master Naturalists and local land trusts and share tips and tricks to move forward in these partnerships. If you are a new volunteer, a chapter leader or just curious about partnering with a new group, this session will provide insight into the reality of volunteering with a land trust. Additionally, you'll leave with a directory of land trusts across the state so you can start a partnership with your local land trust!

8:00am - 9:00am

Training the Next Generation: A Comprehensive Look at TMN Chapter's New Member Training Class Structure -

Placido

- *Hannah Ferguson, Texas Master Naturalist Program*

Saturday October 26, 2024

Advanced Training Session

In May 2023, the Texas Master Naturalist State Program office sent a comprehensive survey to each chapter president and training director. The 64-question survey covered all topics pertaining to new member training classes—from finances and applications to curriculum and travel logistics. 42 of the 49 TMN chapters completed the survey and provided in-depth insight into their training class structure and methods. The survey results were analyzed and organized into 6 sections: New Member Applications and Outreach, Training Schedules, Financial Structure, Curriculum Unit Organization, New Member Engagement, and Training Completion. This session will discuss the results of the survey, and participants will gain new ideas for training class structure and management.

8:00am - 10:10am

Making an Effective Slide-based Presentation - San Marcos River A

- *Kelsey Low, Houston Arboretum & Nature Center*

Advanced Training Session

Don't let inexperience or bad design get in the way of your message! You can use PowerPoint, Canva or Google Slides to create engaging, accessible, and interactive presentations for all ages and abilities. In this session, you'll learn the basics of planning, designing and delivering effective slides from a professional educator. Whether you're a novice or an experienced presenter, you'll get great tips for taking your presentations to the next level through outlining content, choosing color schemes, editing images for readability, branding and developing your speaking confidence.

8:00am - 9:00am

Natural Sciences and Texas Women - San Marcos River B

- *Michal Hubbard, Texas Master Naturalists - Lost Pines Chapter*

Advanced Training Session

The history of the natural sciences generally ignores the many women who were pioneers in the field. Women's names were not recorded until the early 1900s. However, their contributions to the earth, life and physical sciences have been significant for more than 125 years. This presentation highlights some of these intriguing and persevering females, particularly those in Texas. These women developed research, published books or created collections that led to world-class herbaria, renowned museums or reference materials that may still be used in Texas college classrooms today.

8:00am - 9:00am

Texas Backyard Wildlife: Stories from a Suburban Wilderness - Veramendi A

- *Dan Ballard, Texas Backyard Wildlife; Jane Hunter, Texas Backyard Wildlife*

Advanced Training Session

It's 3 a.m. Do you know where your critters are? At Texas Backyard Wildlife, we know exactly where our critters are, and we know what they've been doing. We share our SW Austin property with gray foxes, raccoons, skunks, ringtails, porcupines, opossums,

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owls, songbirds and 65 motion-activated security cameras. Every day we record thousands of video clips and every day we see something interesting. Once a week, we see something astonishing. We've seen fawns outrun coyotes, gray foxes racing up and down cedar trees, raccoon mamas nursing their kits in 100-degree heat and great horned owls courting each other with freshly killed rats. Porcupines lumber along our trails, armadillos bathe in the water bowls and convoys of ringtails tip-toe across the top of our driveway gate. We edit and narrate the most compelling videos and publish them on our website and YouTube channel. Our work has been recognized by the BBC, the New York Times, the Economist and many others.

8:00am - 9:00am

Chasing Dragons: A Photographic Obsession with the Dragonflies and Damselflies of Texas. - Veramendi B

o *Dwight Bohlmeyer, Brazos Valley Chapter*

Advanced Training Session

Texas is home to over 240 species of dragonflies and damselflies in the order Odonata. Their colors and amazing aerial acrobatics make them fun to watch but somewhat difficult to photograph. My first sighting of a neon skimmer in 2004 sparked my interest in dragonflies, and photographing them became an obsession during the pandemic. This talk will cover life cycles, anatomical features used for identification, the major families within the order, as well as when, where and how to see many of the common species found throughout the state.

8:00am - 11:20am

iNaturalist: The Miniseries - Veramendi C

o *Craig Hensley, Texas Parks and Wildlife Department; Wendy Anderson, Texas Parks and Wildlife Department*

Advanced Training Session

iNaturalist is a powerful data collection tool enjoyed globally by hundreds of thousands of people. Starring Texas Nature Tracker Biologists and naturalists like you, this session will provide you insights into how to enjoy the tool and contribute to community science efforts at the same time. Feel free to join us for part or all of the miniseries! Act 1: iNaturalist 101. You will be introduced to the TNT program and the basics of iNaturalist. Act 2: iNaturalist advanced mini sessions presented by TMN iNaturalist Trainers. We may take a deep dive into the iNaturalist website, exploring the possibilities of everything from uploading photos from your camera, editing observations, searching for taxa, performing identifications for others, and lastly, creating places for developing your own projects. Act 3: iNaturalist Office Hours. Bring all of your questions about iNaturalist—from the most basic to the most advanced.

8:00am - 10:10am

Interpretation 101 - Veramendi D

o *BEN HORSTMANN, Texas State Parks - Region 2, TPWD*

Advanced Training Session

Interpretation is an essential tool in building stewards and advocates for our natural resources. In this workshop, we will go through the ins and outs of interpretation. We'll

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use hands-on activities to learn and practice the techniques and skills you can use to become a more effective interpreter. All you need to bring is good energy and questions!

8:00am - 9:00am

Improving Surface Water Quality in Texas Through Public Outreach and Education - Veramendi G

○ *Leanne Wiley, Texas A&M AgriLife Extension Service*

Advanced Training Session

Nearly one-third of water bodies in Texas do not meet the state water quality criteria, with the majority being impaired due to elevated E. coli bacteria concentrations. Animal agriculture and feral hogs are potentially significant sources of bacteria in Texas. With nearly 96% of the state privately owned, it is imperative to educate landowners and livestock managers about the impacts of land management practices on water quality. The Lone Star Healthy Streams (LSHS) program offers Texans a unique curriculum focusing on the best management practices of livestock and wildlife management to reduce E. coli bacteria in water bodies. This presentation will discuss the purpose of the LSHS program, its application in watershed management and current and future outreach efforts to continue engaging the diverse landowners of Texas.

8:00am - 10:10am

Approaches to Bird Identification - Veramendi H

○ *Jim Hailey, Good Water Chapter*

Advanced Training Session

Seeking help with identifying the birds in your backyard, neighborhood and community? This class focuses on good observation techniques, what physical characteristics and behavior are most important and necessary equipment and tools available to beginning birders.

8:00am - 10:10am

The Prairie Project - Veramendi I

○ *Kylie Waller, Angelo State University; Dr. Morgan Treadwell, Texas A&M AgriLife Extension Service*

Advanced Training Session

Pyric herbivory, mixed species grazing with cattle and goats, and new technology available free and online are promising climate-smart management approaches to adapt to accelerated woody plant encroachment, wildfire risk, droughts and variable forage production in the Great Plains and Southwest. Patch burn grazing in Oklahoma, Kansas, North Dakota, Iowa, and Tennessee has been shown to buffer the impact of varying rainfall on livestock weight gains by diversifying forage resources and providing higher quality and adequate quantity of grazable biomass even during droughts. Co-grazing cattle and goats in the Plains have been shown to increase rancher returns while controlling woody plants and reducing the intensity and spread of wildfires. These are all resources that landowners at any scale can implement to align their practices with the principles and processes that semi-arid rangelands evolved from and adapted for.

8:00am - 9:00am

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Friends Don't Let Friends Spread Invasive Species -

Veramendi J

o *Dr. Matthew McClure, Lamar State College- Orange*

Advanced Training Session

Invasive species are non-native organisms introduced by human activity into a new area, become established and cause environmental and/or economic harm. More than 800 aquatic and terrestrial invasive species are currently known in Texas. This presentation serves as a basic introduction that will focus on Texas examples, modes of introduction and spreading, various harmful effects and what you as citizen scientists can do to help.

9:10am - 11:20am

Growing a Nursery of Nurseries - Chautauqua A

o *Seed To Tree Partnership; Vit Kasper, TreeFolks; Ali Baucom; Central Texas Seed Savers; Tree Folks*

Advanced Training Session

TreeFolks' Nursery Manager, Vit Kasper, will share about the TreeFolks Seed to Tree Native Nursery that started in the summer of 2023. Attendees will learn what happens to the seeds received from Central Texas Seed Savers, as part of the Seed to Tree Partnership, in order to grow them into the native tree saplings for distribution back into the community. The TreeFolks Seed to Tree Native Nursery relies on volunteers who work beside Vit to perform seed intake and documentation, processing, storage and eventual germination before they are taken outside to be planted. Nursery volunteers mix and pack soil into plant bands before planting seeds or transplanting seedlings into the bands. Volunteers learn what is necessary to start tree saplings at home, making the TreeFolks Seed to Tree Native Nursery a true "Nursery of Nurseries." Successful tips and tactics that were used to overcome obstacles will be shared and demonstrated to inspire attendees to try this at home!

9:10am - 10:10am

Using Nature Based Solutions to Promote Diversity in Juniper-Oak Woodlands - Chautauqua B

Jim ODonnell, City of Austin

Advanced Training Session

The Balcones Canyonlands ecoregion in Central Texas is a biodiversity hotspot with many endemic and imperiled species. Within this ecoregion, the Balcones Canyonlands Preserve was established to protect endangered and rare species from habitat loss. Land management focuses on protecting Ashe juniper-oak forests, enhancing recovering systems and restoring degraded sites. We use historic documents, aerial photographs and reconnaissance to identify the degraded sites and use regenerative techniques to promote resilient ecosystems. Starting from the ground up, we begin with earthworks to stabilize eroding sites, capture water high in the landscape, rebuild the soil "sponge" and increase native plant diversity. Restoration is designed within an adaptive management framework to connect and expand forest patches, promote carbon sequestration, increase groundwater infiltration, provide pollinator habitat and recycle invasive woody material back into the ecosystem.

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9:10am - 10:10am

Unlocking Adult Learning: The Art of Andragogy - Placido

o *Asst Cmdr Mike Mitchell, Texas Master Naturalist*

Advanced Training Session

New for 2024. Embark on a journey of adult education exploration in our latest session, tailored for the modern educator. Distinguishing itself from pedagogy, we delve into the unique realm of andragogy, recognizing the distinct ways in which adults learn and grow. Through an engaging discussion, participants will gain invaluable insights into enhancing their effectiveness as instructors among adult learners. Drawing upon cognitive developmental theory, this session illuminates the pathways to deeper understanding and engagement with our audience. Uncover strategies and practical techniques aimed at bridging the gap between educator and adult learner, paving the way for transformative learning experiences. Join us as we culminate our exploration with a concise roadmap, including four actionable steps designed to empower educators in effectively connecting with their audiences and fostering meaningful learning journeys.

9:10am - 10:10am

Mother Nature's Naturalist Mothers - San Marcos River B

o *Jill Zipperer, Texas State University*

Advanced Training Session

This session will contain a broad overview of women's influences on the naturalist history of America. From guiding explorers along the trail to leading international movements, women have made lasting impressions on the natural world. Come along on this journey through history as we learn about influential women and their legacies, including Hazel M. Johnson's role as the "Mother of Environmental Justice," Marjory Stoneman Douglas' love of the Florida Everglades, JoAnn Tall's environmental activism for her Oglala Lakota tribe, Molly Goodnight's pivotal bison conservation in Texas and Florence Bascom's work as the first female U.S Geological Surveyor. We will discuss the political, cultural and academic impacts that female environmentalists have had on the development of naturalist movements in America.

9:10am - 11:20am

Integrating BCI Programs for Comprehensive Bat Education and Outreach - Veramendi A

o *Fran Hutchins, Bat Conservation International*

Advanced Training Session

Explore how incorporating Bat Conservation International (BCI) programs into your chapter's education and outreach initiatives can enhance community awareness and appreciation for bats. This session covers the Bat Gardens, Bat Walks, and K-12 Bat Education programs, providing a cohesive strategy for delivering educational content, interactive experiences and curriculum-aligned lessons that highlight the significance of bats and their conservation.

9:10am - 11:20am

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Here Be Dragons - Veramendi B

○ *Brent Franklin, Cross Timbers*

Advanced Training Session

This session provides a brief introduction to the magical world of Dragonflies and Damselflies. Through pictures, stories and facts, Brent will impart the reason he loves these amazing insects and why you should too.

9:10am - 11:20am

Land Stewardship and Reading the Land

Tools for Developing a Land Stewardship Ethic - Veramendi EF

○ *Ricky Linex, Retired, USDA Natural Resource Conservation Service*

Advanced Training Session

Presentation introduces how to first “read the land” to understand what has happened in the past, what is happening now and what may be in the future meshing with an introduction to Land Stewardship through the years. Presentation takes a deeper look into progression of becoming a land steward. Good and bad land management will be shown to reinforce the ethics that a good land manager must choose to follow to properly care for our most precious natural resource, the land.

9:10am - 10:10am

Water Resources Database Demonstration - Veramendi G

○ *Monica Polgar, Texas Parks and Wildlife Department*

Advanced Training Session

The increase in water demand across the state of Texas, paired with the effects of climate change, makes managing water in Texas more imperative than ever. Texas contains numerous ecosystems with different types, quantities and qualities of environmental resources, all ranging in water availability. Given the variety of water managing and regulating entities, as well as the types of water uses, water management can be complex. Therefore, to protect and conserve the vast diversity of Texas’ ecosystems and water resources, online water resource tools are available to inform decisions amongst the array of management entities and water uses. The public can utilize online water resource tools to find real-time information on Texas water bodies, precipitation, water quality, water quantity, groundwater stations, permitted discharge sites and many other valuable data points important to the management of our water resources. This presentation includes a demonstration of online water tools.

9:10am - 10:10am

Invasive Species: Reporting, Workshops, and More! with Texasinvasives.org - Veramendi J

○ *Ashley Morgan-Olvera, Texas Invasive Species Institute*

Advanced Training Session

At Texasinvasives.org we believe the more trained eyes watching for invasive species and managing them, the better our chances are of lessening or avoiding damage to our native landscape! This presentation will highlight our Sentinel Pest Network at Texasinvasives.org, which focuses on invasive pests that are causing or are likely to cause significant damage in Texas. It will also cover how to report Sentinel Pests,

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highlight group removal days and how you can schedule an Invasive Species workshop for your chapter!

10:20am - 12:30pm

Mountain Cedars: Junipers that Benefit Limestone

Groundwaters - Chautauqua B

Elizabeth McGreevy, Project Bedrock/Land Steward

Advanced Training Session

For almost 100 years, we've been fighting the woody brush spreading across Texas karst country (limestone bedrock + shallow soils). Much of this woody cover consists of mountain cedars and species of juniper trees that prefer limestone soils. We've been taught these trees cause harm. But, instead of causing harm, we recently learned there's a deep connection between mountain cedars and the limestone bedrock beneath our feet. Whereas the bushy pioneer thickets act as nature's ecosystem engineers to regenerate degraded karst country, the old-growth cedar forests sustain groundwaters, healthy soils, deepen carbon storage, add biodiversity and reduce fire risk. You will learn how to identify karst country, why we need to start using mountain cedars and other nature-based solutions to help regenerate these lands and management basics.

10:20am - 11:20am

Educating Others 101 - Placido

Kellie Donajkowski, Edwards Aquifer Research and Data Center

Advanced Training Session

Have you ever had to speak to a large group? Or teach someone about something you learned in your Master Naturalist class? Or maybe you want to volunteer for one of the many outreach initiatives your chapter does? Then this is the place for you! Come learn about some tips and tricks on how you can be a better and more confident educator. Learn to avoid common mistakes when presenting information and strategies for teaching different ages.

10:20am - 11:20am

Good Water's Youth Program: Building Outreach Crates for Teaching Kids and Building our Programs - San Marcos

River A

Flo Ulrich, Good Water Chapter; Mary Ann Melton, Good Water Chapter

Advanced Training Session

The Texas Master Naturalist Good Water Chapter has been building presentations with training box materials over the last 12 years. This year, we have gone through our boxes to create complete lesson plans for the multiple types of places we use the boxes. The purpose was to make it easier for new presenters to come in and have all the information ready for them to present their station. Our activities do include PowerPoints, but they also include several hands-on activities. In addition, we want to talk about Good Water's Youth Programs: Our Junior Master Naturalist project (Elementary and Middle/School High School), our library programs, our Parks and Recreation programs and our preschool programs.

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10:20am - 12:30pm

Nurture Sustainable Biodiversity Within Your Nature Club

- San Marcos River B

○ *Dr. Meagan Pollock, Engineer Inclusion*

Advanced Training Session

What do you notice when looking around at your nature club or organization? Do you see a homogenous set of regular members and contributors and can't figure out why? If you want to create an inclusive and welcoming club that attracts and retains diverse members, you can! It is not a simple, one-and-done solution, however. Through intentional focus, targeted interventions and sustained effort (just like in our gardens!), you can grow a thriving community of members that reflects the beautiful diversity of our population, all striving together to protect, conserve and enjoy our natural environment and resources. In this interactive workshop, you'll learn about a different ecosystem than you are used to, the engagement ecosystem and how to create and nurture an inclusive environment that attracts and retains the talent and ideas you are missing.

10:20am - 11:20am

Turning Master Naturalists into Nature Interpreters -

Veramendi D

○ *Kristy Daniel, Texas State University; Jill Zipperer, Texas State University*

Advanced Training Session

Interested in leading hikes, developing guided tours, and educating the public on your incredible natural areas? Join us for an interactive discussion on the fundamentals of naturalist interpretation! This session, based on the National Association for Interpretation's guidelines and Tilden's Six Principles of Interpretation, will lead you through the basics of developing interpretive programming. Special emphasis will be placed on programming structure, tools for targeting specific audience types and suggestions for increasing engagement through program introductions. Participants will receive take-home materials to help them get started with interpretation right away!

10:20am - 12:30pm

From Passion to Action: Creating a Water Quality

Monitoring Project - Veramendi G

○ *Todd Sink, Texas A&M AgriLife Extension Service; Brittany Chesser, Texas A&M AgriLife Extension Service*

Advanced Training Session

Volunteers can directly contribute to monitoring and improving water quality in their local area, study area or project site, leading to healthier ecosystems and better living conditions for aquatic organisms. During this training, volunteers will receive a presentation that will explain what water quality is, why is it important to fish and other aquatic organisms, how different water quality parameters can affect them, the importance of sustained water quality monitoring, sampling protocols and commonly used equipment. The training will conclude with teams of volunteers using portable

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field-testing kits to measure several water chemistry parameters that are important to a fishery, developing skills in titration chemistry, data collection, analysis and interpretation. This course will mix lectures with hands-on experience and may require leaving the indoor classroom environment to collect water samples.

10:20am - 11:20am

Speciality Birds of the Rio-Grande Valley - Veramendi H

o *Anne Mayville, South Texas Border*

Advanced Training Session

Anne will present a vibrant talk about birds that reside in the Rio-Grande Valley year-round. Her talk includes photos of each bird, interesting stories about these birds and typical calls of some of them. These are birds that people come from all over the country to see. Last year's birding festival drew birders from 39 states and 13 countries to see these birds.

10:20am - 11:20am

From Kangaroo Rats to Horned Lizards: Understanding the Value of Bare Ground in Species Conservation -

Veramendi I

o *Joseph Veech, Texas State University*

Advanced Training Session

The conservation of most wildlife species typically requires creating and maintaining appropriate habitat, often on private property with the cooperation of the landowner(s). Past and ongoing research on many different small-bodied and ground-dwelling wildlife species has revealed that some amount or percentage of open bare ground is a crucial feature of habitat. The ideal amount of bare ground or very thinly vegetated ground may be as great as 50% or more. Although the creation and maintenance of this habitat condition may be relatively easy, convincing landowners of its importance may be challenging –particularly if the landowner perceives such habitat to be aesthetically unappealing. In some cases, the habitat may appear degraded or perhaps overgrazed. In this presentation, I will discuss the challenges of promoting bare ground as an important component of habitat. To illustrate, I will use the Texas kangaroo rat, Gulf Coast kangaroo rat and Texas horned lizard as examples.

10:20am - 11:20am

The Invasive Species Dilemma in Texas with Highlight on San Marcos - Veramendi J

Matt Turner, Native Plant Society of Texas, Austin Chapter; Robin Doughty

Advanced Training Session

Of the hundreds of non-native plants and animals living in Texas, a relatively small number of species are increasingly affecting the economic, medical and ecological health of the state. Some of these invasive species, like feral hogs, water hyacinth and salt cedar, are well-known adversaries, and millions are spent on their removal and extirpation. Others, such as house sparrows, starlings and free-roaming cats, are either ignored or become subjects of intense controversy. Based on research for our book, "Unnatural Texas? The Invasive Species Dilemma," this presentation will be both a

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primer and a “think piece.” In addition to the “big hitters” of Texas mentioned above, we’ll zero in on the San Marcos area with brief coverage of chinaberry, Ligustrum, catclawvine, armored catfishes, zebra mussels and the emerald ash borer. Discussing invasive species introduction, spread and control strategies, we’ll explore how culture and shifting attitudes influence their management.

11:30am - 12:30pm

Bringing Native Plants to Schools - Chautauqua A

o *Haeley Giambalvo, Alamo Area Chapter*

Advanced Training Session

Would you like to help local schools start their own Texas native plant gardens? Haeley Giambalvo of the NPSOT Native Plants in Schools committee will show you how! You'll learn from examples of schools around Texas that have successfully installed native plant gardens. You'll also be introduced to a range of resources and activities available to help you mentor schools along their garden journey and engage students in the outdoors!

11:30am - 12:30pm

Coastal Brigade, Growing our Future Coastal Conservation Leaders - Placido

o *EMILY MILLER, TPWD, Coastal Brigade*

Advanced Training Session

In 2016, Coastal Brigade joined the Texas Brigades lineup. Texas Brigades offers ten 5-day educational camps across the state, all to encourage today’s youth to become our conservation leaders of tomorrow. Coastal Brigade focuses on educating teens on coastal habitat and fisheries management, as well as coastal ecology, saltwater fishing, boater safety and more. Coastal Brigade takes place each summer in Galveston, where professionals from several agencies, including Texas Parks and Wildlife Department and Texas A&M AgriLife Extension Service, come together to pass on their knowledge and skills in conservation to future generations. Cadets learn about watersheds, aquatic vegetation and many of the marine species that inhabit the Texas coast while also exploring skills in photography, journaling and art. Most importantly, each Brigades camp teaches life skills, such as team building, critical thinking and public speaking, so our youth may become our future conservation leaders.

11:30am - 12:30pm

Floristic Quality Assessments of Oak Point Nature Preserve - San Marcos River A

o *Lune Martin, Plano ISD Academy High School*

Advanced Training Session

As Blackland Prairie remnants face threats of woody vegetation and invasive species with intense fragmentation and the lack of grazers on many remnants, it's imperative to study different land management methods. Oak Point Nature Preserve in Plano Texas provides an interesting study as prescribed burns are often used as a land management

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practice. To understand if these burns are improving the prairie, this study analyzed vegetational communities throughout fall 2023 through spring 2024 to see if a burn in November and environmental disturbance was reflective of bison using an FQAI and Adjusted FQAI. Join this presentation to understand the short-term impacts of different environmental disturbance patterns on prairie remnants at Oak Point Nature Preserve.

11:30am - 12:30pm

A Chapter on Bats - Veramendi A

o *Nicole Mersiovsky, TMN Lost Pines Chapter*

Advanced Training Session

Bats are ecologically and economically important to life on this planet, and many factors contribute to their vulnerability. One way we can help is by monitoring their populations and using the collected data as a tool to help protect and foster bat populations. This year the Texas Nature Trackers invited Texas Master Naturalists to be citizen scientists for bats in an expanding continent-wide project from NABat, beginning a project unlike anything TPWD or TMN have ever done. We'll take an overview of the importance of bats and zoom in on the SGCN bats in Texas to identify the need for this project to continue to grow. Since each chapter has been asked to manage their area and volunteers for this brand new Acoustic Monitoring project, we'll review successful strategies for motivation and coordination at the chapter level so attendees can bring back knowledge, excitement, proven ideas and tools to their own chapters for this project—and possibly other projects!

11:30am - 12:30pm

Night Wings Over the Prairie – Insect Life After Dark -

Veramendi B

o *M L Spolyar, TMN Gulf Coast*

Advanced Training Session

As Master Naturalists, you may know a lot about prairie plants and their associated insect life during the daytime. But how much do you know about prairie insect nightlife? Learn about three Houston-area coastal prairies—Lawther-Deer Park Prairie, TNC Nash Prairie Preserve and TNC Texas City Prairie Preserve—and find out who comes to light when the sun goes down. Not all nocturnal insects are attracted to blacklights, but a great many are. Explore common and unusual species, rare finds and invasives. From colorful microleafhoppers to mantidflies (which are not flies!) and very long-horned beetles to fabulous sphinx moths, it's a kaleidoscope of life in the prairie night.

11:30am - 12:30pm

Spanish for Naturalists - Veramendi C

o *Ernesto Garcia-Ortega, Texas Parks and Wildlife Department; Tania Pena, Texas Parks and Wildlife Department; Wendy Anderson, Texas Parks and Wildlife Department*

Advanced Training Session

Español para naturalistas! Join Spanish speaking Texas Parks and Wildlife Department biologists and learn the Spanish names of common trees, plants, flowers, animals, birds and insects. Prior knowledge of the Spanish language is great, but everyone is welcome

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as the course is designed to cater to all levels. By the end of the class, students will have gained a newfound confidence to use the names of flora and fauna in Spanish. Overall, this course is an excellent opportunity for individuals to expand their knowledge of the Spanish language, while also learning about the world of nature.

11:30am - 12:30pm

Urban Wildlife Information Network - Veramendi D

o *Natasia Moore, Texas Parks and Wildlife*

Advanced Training Session

This presentation will discuss the concept of urbanization and urban ecosystems. We'll cover the importance of studying urban wildlife and why we must properly manage them, what the Urban Wildlife Information Network (UWIN) is and some of the research projects that have been involved and possible ways in which the data can be used to manage urban wildlife. Along the way, I will mention that we're always looking for virtual volunteers to help us tag photos obtained during the survey periods, which occur four times per year.

11:30am - 12:30pm

Bird City Texas - Helping Cities be more Bird Friendly -

Veramendi H

o *Chloe Crumley, Audubon Texas; Judit Green, Texas Parks and Wildlife*

Advanced Training Session

What is good for birds, is good for people! Bird City Texas is a certification program run by Audubon Texas and Texas Parks and Wildlife to recognize cities' efforts to protect birds and their habitats where people live, work and recreate. To be recognized as a Bird City, communities must employ science-based initiatives and community-centric actions. It takes the whole community to implement these actions. That's where you come in! Texas Master Naturalists have the knowledge and skills to help cities fulfill and meet the criteria to become a Bird City. Join us to learn the minimum criteria necessary and examples of where TXMN have used their knowledge and volunteer time to help current Bird Cities meet the criteria; such as native plant gardens, bird monitoring projects, city nature challenge, creating bird amenities, educational outreach and more.

11:30am - 12:30pm

Habitat Management Practices and Funding Opportunities in Texas - Veramendi I

o *Coleman Stilwell, Wildlife Habitat Federation*

Advanced Training Session

Explore popular habitat management practices implemented in Texas, focusing on strategies that enhance wildlife conservation, improve ecosystem health and support sustainable land use. Additionally, the presentation highlights various funding opportunities available to landowners and conservationists in Texas, such as state grants, federal programs and private funding initiatives, which are designed to support the implementation of effective habitat management practices. Attendees will gain insights into practical management techniques and learn how to leverage financial resources to promote environmental stewardship in Texas.

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11:30am - 12:30pm

EEK! What's That on my Sidewalk? Modes and Rates of Spread of the Invasive Black Velvet Leatherleaf Slug and Invasive New Guinea Flatworm - Veramendi J

- *Ashley Morgan-Olvera, Texas Invasive Species Institute; Dr. Matthew McClure, Lamar State College- Orange*

Advanced Training Session

The Black Velvet Leatherleaf Slug and the New Guinea Flatworm are two terrestrial invertebrates with similar histories of invasiveness in Texas. Both species arrived around 2017-2018 and have since spread state-wide –all while being carriers of harmful *Angiostrongylus* nematodes. Through the valuable input of citizen scientists and other concerned citizens, we have been able to track their spread across Texas almost in “real time.” We will discuss probable modes of introduction and spread, their potential impacts and local management strategies.

2:00pm - 3:00pm

How to Stay Motivated and Keep Volunteers Against Overwhelming Odds - Chautauqua A

- *Ann Ray, TMNGL Chapter*

Advanced Training Session

We were faced with the beautiful 2-acre Indian Creek Nature Area in Burton Texas being totally overcome with invasive *Ligustrum*. The *Ligustrum* trees were outcompeting the other native trees and plants, and lower large branches of big live oaks were dying for lack of sunshine. The source of the problem had to be addressed first. New methods and new tools needed to be utilized. This caused a shift in which chapter members were interested in the work. The shutdown of 2020 was a new challenge that ended up to our advantage. A Burton school group and city employees even got involved. Empowering volunteers was key to removing over 1,000 *Ligustrum*!

2:00pm - 3:00pm

From Coyotes to Prickly Pears... Award Winning Youth Research Projects - Chautauqua B

- *Lynn Seman, Texas Master Naturalist*

Advanced Training Session

What do coyotes and prickly pears have in common? They are the focus of this year's award-winning youth research projects! Each year at the Texas State Science and Engineering Fair, two special award projects are chosen by a team of volunteer Texas Master Naturalist judges from hundreds of qualifying projects. This year's junior winner is Daniel Rutnam from Rice Middle School in Plano, TX. The title of his project is, “Coyote Vocalization Classifier to Avert Negative Human-Coyote Interactions.” The senior award winner is Galilea Velasco from El Paso High School in El Paso, TX. The title of Galilea's project is, “Paper Trails: Using the *Opuntia ficus-indica* to Make Paper Production More Sustainable.” Please come support these enthusiastic young scientists as they share their award-winning research and see how YOU CAN HELP support future Master Naturalists!

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2:00pm - 5:20pm

Project WET workshop (Water Education Today) - Placido

○ *Marti Lathrop, Elm Fork Education Center*

Advanced Training Session

Join Marti for an introductory workshop to the Project WET Foundations of Water Education curriculum, a series of 12 lessons that provide a foundation addressing all of the Principles of Water Literacy. The session will be presented in a hands-on, minds-on workshop style working in groups of 6-8 persons. Project WET is dedicated to solving critical environmental challenges by teaching the world about water. We do this by providing hands-on, science-based water education resources to formal and non-formal educators around the world. These resources encourage responsible environmental stewardship and promote meaningful action to address environmental challenges, climate change, social justice and sustainability. All who complete the workshop will receive a copy of the Project WET Foundations of Water Education curriculum guide for their personal use.

2:00pm - 3:00pm

Geologic Foundations of the Central Texas Ecoregion

Crossroads - San Marcos River A

○ *Keith Winfree, Cut Plain Geoscience*

Advanced Training Session

Central Texas is a complex mosaic of landscapes because the area has been a crossroads of geologic events for over a billion years. Master Naturalists can enjoy the biodiversity offered by four different ecoregions within a two-hour drive from San Marcos, Austin, or San Antonio. Participants will have a concise understanding of how the rocks provide one of the criteria to define an ecoregion. They will understand that the Edwards Plateau ecoregion, for example, is a concept used to describe a place that contains diverse landscapes and multiple important topographic features. They will see that rocks are a way to organize biotic and abiotic information that helps us understand the biodiversity of Texas. The primary goal of the presentation is to enhance or awaken awareness of geology to help people find their own connections between the rocks and whatever aspect of the Master Naturalist world they are passionate about. A list of resources and tools to do that will be provided.

2:00pm - 5:20pm

Freshwater Ecology and Conservation of Fish, Mussels and Crayfish in Texas Rivers & Streams - San Marcos River B

○ *Archis Grubh, Texas Parks & Wildlife Department; Clint Robertson, Texas Parks & Wildlife Department; Stephen Curtis, Texas Parks & Wildlife Department*

Advanced Training Session

Class participants will learn about the ecology of fish, freshwater mussels and crayfish in the rivers and streams of Texas. Presenters will provide a general overview of the many species that can be found in our aquatic systems, along with descriptions of the habitats they utilize, their unique life history traits and other interesting facts about aquatic

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biota. Participants will also learn about a variety of research and monitoring efforts that support the conservation and management of our diverse freshwater systems. Additionally, preserved specimens will be on display for attendees to interact with the fish, mussels and crayfish that will be discussed.

2:00pm - 5:20pm

BAT Project Roundtable - Veramendi A

○ *Craig Hensley, Texas Parks and Wildlife*

Advanced Training Session

Texas Nature Trackers has collaborated with Texas Master Naturalists from across Texas to initiate a 5-year project to document the presence of bats using acoustic monitors. With the first year complete and data review underway, it is time to bring together participants attending the Annual Meeting to review successes, challenges and next steps. Through this conversation, we anticipate solidifying project protocols that will serve as a guidance tool for participating chapters going forward. We invite any volunteer who participated in the project to join us.

2:00pm - 3:00pm

Spiders of Central Texas - Veramendi B

○ *Sheryl Smith-Rodgers, Writer, Author, Editor, Photographer*

Advanced Training Session

Hate or fear spiders? Hang out with Sheryl Smith-Rodgers, and hopefully, you won't anymore. During this session, you'll learn the basics of what makes spiders tick, how they reproduce and whether or not they're harmful to humans. She'll also educate you about common spiders found around the Hill Country, throw in some informative videos and answer that burning question: How do you tell a female spider from a male?

2:00pm - 3:00pm

Texas Wildflowers and QR Codes - Sharing the Magic With the Visually Impaired - Veramendi C

○ *Sherry Mossbarger, Indian Trail Master Naturalists*

Advanced Training Session

Reading a cereal box can lead one down interesting paths. The NaviLens app, developed in Spain, was featured on one such box and sparked the idea to expand our mission of inclusion. Using the NaviLens website, custom QR codes of various sizes can be generated. When scanned, the codes deliver verbal information through the phone app about each flower, grass and tree encountered during wildflower walks at Midlothian Nature Park and Ennis' Kachina Prairie. Codes are mounted on stakes near each plant or at strategic spots along the trails. Texas Master Naturalist Indian Trail Chapter members with extensive botanical and historical knowledge provide informative facts for each code to share with visitors, just as they normally do during walks. As the vegetation changes, each code can be revised by chapter volunteers on their personal computers. The app enables any visitor, visually impaired or not, to learn about the wonders of the Blackland Prairie at any time, not just during scheduled walks.

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2:00pm - 3:00pm

Pack Your Trunk with Nature! - Veramendi D

- *Paula Richards, Highland Lakes Master Naturalist*

Advanced Training Session

Have you ever wished you had a nature expert in a box that you could take on the road with you? While we can't box up your favorite TPWD expert, we can create assets that will capture the key concepts and help you present them in an engaging format. We will cover the basics of discovery trunks—what makes a good trunk and what makes a GREAT trunk. We will cover selecting topics and themes, creating, acquiring and curating content and available resources. We will discuss how to enable others to teach the topics. From school field trips to Saturday morning programs at the park or local coffee shops, trunks can have a multiplier effect enabling chapters to have a broader reach, expanding their capacity and capabilities. Key take aways: Discovery trunks can help chapters deliver a broad range of environmental education programs. Leverage your in-house experts and create a legacy program to capture their knowledge and enthusiasm. Resources are available within TXMN and online.

2:00pm - 3:00pm

Advanced Water Training for Master Volunteers - Veramendi

G

- *Dr. Kelly Albus, Texas A&M AgriLife Research, Texas Water Resources Institute*

Advanced Training Session

Texas A&M AgriLife and the Texas Water Resources Institute, through a grant from the Texas State Soil and Water Conservation Board and in partnership with the Texas Master Volunteers, are developing a new course for water advanced training certification to be released in 2025. This course will combine materials from existing statewide water programs (Lone Star Healthy Streams, Healthy Lawns Healthy Waters, Texas Watershed Stewards, Urban Riparian, Texas Well Owners Network, Texas Stream Team and others) into a comprehensive water course for Texas Master Volunteers that meets advanced training requirements and can be completed entirely online or in a hybrid format through AgriLife Digital Education. If you would like to learn more about the protection and conservation of Texas' waters and be among the first volunteers to learn about and provide feedback on the new training course, join this session for a sneak peek!

2:00pm - 3:00pm

Saving an Endangered Species - Veramendi H

- *Diana Kies, Friends of Attwater Prairie Chicken National Wildlife Refuge*

Advanced Training Session

The Attwater's Prairie-Chicken is one of the most endangered birds in the US. This subspecies of the Greater Prairie-Chicken is endemic to the coastal prairies of Texas. It was listed as endangered in 1967. The Attwater Prairie Chicken National Wildlife Refuge was created in 1972 to preserve some of the coastal prairie habitat for the remaining wild population. The Captive Breeding program was established in 1993 in an effort to repopulate the species. There are over 200 chicks released each spring and are tracked

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to monitor survival. The Texas Master Naturalist Gideon Lincecum Chapter is committed to assisting in special projects in support of the Refuge. An ongoing project is the maintenance of a display garden of native grasses and native plants found on the coastal prairie. The challenges are numerous with the decline of native coastal prairie habitat, predation and extreme weather events. With the collaboration efforts of the various partners there is hope for recovery.

2:00pm - 3:00pm

Managing Invasive Plant Species with Integrated Pest Management in the Wildland Urban Interface - Veramendi I

o *Daniel Chad Cummings, Texas A&M AgriLife Extension Service*

Advanced Training Session

Invasive plant species pose a serious threat to natural areas, parks, pastures, roadsides and properties. Plant identification is the first key to effective management. Plant biology, plant growth and location characteristics can aid in choosing which tools will be implemented in management strategies. Vegetation management is a lifetime commitment, not a one-year solution. But make sure you have an annual plan in place for integrated pest management (IPM) success. Use all the tools available in your toolbox to control pests in the wildland-urban interface environment. Pesticides can still be a tool in the urban landscape—when precautions and use instructions are followed. Education is huge in customer satisfaction, neighbor relations and general public understanding of why we control invasive plants and pests. Education is everyone's responsibility and can facilitate neighborhood, community, city and county level involvement in invasive species management plans.

2:00pm - 3:00pm

Project Learning Tree: Youth Environmental Education Curriculum - Veramendi J

o *Jaden Kelly, Texas A&M Forest Service*

Advanced Training Session

Project Learning Tree is an award-winning environmental education program designed for teachers and other educators, parents and community leaders working with youth from preschool through grade 12. PLT's new flagship curriculum Explore Your Environment: K-8 Activity Guide includes 50 hands-on, TEKS-aligned, multidisciplinary activities to connect children to nature and increase young people's awareness and knowledge about their environment. Join us as we explore how to connect students with natural phenomena they can relate to using the fantastic resources available in Project Learning Tree. In this session, we will participate in activities that create experiences giving students the opportunity to talk and make sense of the natural world. Take away ideas and activities that you can use in your community tomorrow.

3:10pm - 4:10pm

Brazos River Cleanup/Campout & Educational Weekend - Chautauqua A

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- o *Melody Holm, TMN - Rio Brazos Chapter; Kristina del Pino Borgstrom, TMN - Rio Brazos Chapter; robert walker, TMN - Rio Brazos Chapter; Kaitlyn Walker, TMN - Rio Brazos Chapter; Nancy Haubert, TMN - Rio Brazos Chapter*

Advanced Training Session

In 2017 the Texas Master Naturalist™ Rio Brazos Chapter created a project to cleanse our namesake of tires, trash and other debris that had accumulated in the river over the decades. We utilize canoes, kayaks and foot patrols to clean the river, sandbars, and banks. In eight years, the project has morphed from a simple four-mile river section with 13 chapter members participating to over 20 miles worked by multiple crews in 2023. Eighty-four people and twelve chapters participated in 2024. Since the modest beginning, we have added a weekend campout to the event, allowing members time to get to know each other better. Additionally, we dedicate a full day to training classes that offer members an opportunity to accumulate up to eight hours of advanced training. With over 700 tires and 2,000 pounds of trash collected, our goal is to continue bringing other groups into the project as we expand our footprint (or should I say erase footprints) up and down the Brazos River.

3:10pm - 5:20pm

Insect Themed Activities for Kids - Chautauqua B

- o *Wizzie Brown, Texas A&M AgriLife Extension Service*

Advanced Training Session

Presenting the topic of insects and their relatives to kids is always fun as their excitement is palpable. This presentation will cover various insect-themed activities that can be used to engage kids of all ages (including adults!) in the world of insects. The session will include two hands-on activities for demonstration.

3:10pm - 4:10pm

Unique Geology of the South Texas Sand Sheet - San Marcos River A

- o *Randy Bissell, South Texas Chapter - TMN*

Advanced Training Session

The “Wild Horse Desert” or South Texas Sand Sheet blankets greater Kenedy and Brooks Counties in South Texas. The total area is larger than the State of Delaware, exceeding 10,000 square kilometers. This broad, thin eolian sand and silt veneer covers the Pliocene-Pleistocene coastal plain strata, including the Beaumont, Lissie and Goliad Formations. During the last “Wisconsin” Ice Age, beginning 100,000 years ago and culminating approximately 12,000 years ago, the South Texas coastal plain was entrenched by numerous river, creek and gully systems. An entire Pleistocene watershed and estuary may have been buried under the Holocene Sand Sheet in the last 8000 years. The unique landscape of the STSS is designated as its own ecoregion (see our 2023 TMN pin) with over 50 endemic plants including 15 unique species. It is the home to deer, bobwhite quail, ocelots and many bird species. Understanding the formation of the Sand Sheet adds a fascinating perspective to Texas's natural history.

3:10pm - 4:10pm

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Hogna 'incognita' - Veramendi B

○ *Eric Neubauer, Texas Master Naturalist*

Advanced Training Session

This session will discuss a new species of wolf spider discovered in 2021 and recently confirmed by genetics. A scientific paper is in preparation in collaboration with Russell Pfau. Most amateur interest in arachnids begins with jumping spiders. For Eric, it was an unidentifiable wolf spider on his property. The initial work on isolating this species was done in the field without even a macro lens, and on the internet using sites like iNaturalist and BugGuide. Along the way Eric found he had to improve his photography as he traced their development from egg sac to adult.

3:10pm - 4:10pm

The Bilingual Art of Native Plant Advocacy - Veramendi C

○ *Laura Zarate, Arte Sana*

Advanced Training Session

Master Naturalists interested in amplifying their native plant messaging will be introduced to two successful projects that can be customized for targeted community outreach and engagement goals. Lessons learned from the Texas Native Plant Week social media campaign will be shared, and attendees will learn how to create a user-generated content (UGC) campaign with related native plant hashtags in English and Spanish for enhanced bilingual outreach. The 2024 PlantArte native plant art contest collaboration with the Native Plant Society of Texas, Defenders of Wildlife, North Texas Master Naturalist and Native American Seed, will also be showcased as a model for channeling the power of art to raise awareness and mobilize individuals to support native plant conservation and restoration efforts. A presentation of native plant art in diverse mediums will be shared, and attendees will be given the opportunity to directly inform the 2025 PlantArte native plant art contest themes.

3:10pm - 4:10pm

How to Be Relevant and Engage Support from Wildlife

Viewers: New Data - Veramendi D

○ *Shelly Plante, Texas Parks and Wildlife Department*

Advanced Training Session

Join this session to learn more about the results and recommendations of a recent Wildlife Viewer Survey. The National Wildlife Viewing and Nature Tourism Working Group worked with Virginia Tech to conduct a nationwide study, including an oversample in Texas (that was funded by TPWD), to explore and learn more about the behaviors, experiences, perceptions, needs and preferences of wildlife viewers. Through the survey data shared, you will learn about recommendations for Texas on ways to better connect with wildlife viewers and what their overall needs and wants are from agencies and programs. The survey examined viewing and conservation behaviors of wildlife viewers; past financial contributions to state agencies and likelihood of future financial contributions; perception of state agencies and their management for wildlife viewers; suggestions for building relevancy with a broader audience of wildlife viewers in Texas and more!

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3:10pm - 4:10pm

What Lies Beneath - Animals in the Edwards Aquifer -

Veramendi G

- *Kellie Donajkowski, Edwards Aquifer Research and Data Center*

Advanced Training Session

The Edwards Aquifer is an essential resource in San Marcos, responsible for the long history of our town, giving us Spring Lake and the San Marcos River. While it is easy to appreciate its above-ground flow, it is harder to understand and know what happens beneath. During this session, you will get a chance to learn about the different organisms found in the aquifer, their adaptations and life histories.

3:10pm - 4:10pm

Chimney Swifts: Why We Should Care -

Veramendi H

- *Georgean Kyle, Chimney Swift Conservation Association; Paul Kyle, Chimney Swift Conservation Association*

Advanced Training Session

Travis Audubon and the Chimney Swift Conservation Association will give a 45-minute PowerPoint presentation with imbedded video, followed by 5+ minutes Q&A. Sleek, unique and secretive, Chimney Swifts build their nests, raise their families and sleep just feet from where we watch TV, eat meals and play with our own children, yet most people have never actually seen one to know what it is. Join the Kyles as they explore the secretive home life of these aerial acrobats, their fight to cling to survival and what is being done to conserve their declining numbers.

3:10pm - 4:10pm

How Land-Management Practices Affect Central Texas's Water Supply and Climate -

Veramendi I

- *Dr. Nico Hauwert*

Advanced Training Session

Local and worldwide environmental studies have shown that local land management practices have a large effect on water supply, water/air quality, local cooling, wildfire risk, flooding and local rainfall. Observations of land management practices have affected civilizations for thousands of years and historical records and scientific analysis reveal how they have shaped modern landscapes. The scientific data, alternate hypotheses and mechanisms for local climate effects and groundwater flow are covered.

3:10pm - 5:20pm

Good Gall-y! -

Veramendi J

- *Kristy Daniel, Texas State University*

Advanced Training Session

The Research Rangers volunteer project is a partnership between the Texas Master Naturalist Hays County Chapter and Texas State University. We are creating a series of outdoor observational science activities designed for public outreach and normalizing engaging in science. Additionally, the Research Rangers activity series integrates cultural connections and highlights a diverse array of scientists. All activities are aligned with 5th-grade TEKS and promote using science practices to collect and analyze data

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about the local natural environment. We will explore the Good Gall-y activity for participants to learn more about five plant galls commonly found on Plateau Live Oaks Trees, and consider how they may develop and implement a Research Rangers activity at their own site!

4:20pm - 5:20pm

Building a Team of Maniac Builders - Chautauqua A

- *Kristi Vogt, Lost Pines Chapter, Texas Master Naturalist; James Stolpa, Lost Pines Chapter, Texas Master Naturalist*

Advanced Training Session

This presentation focuses, though not exclusively, on one of the sub-groups of the Texas Master Naturalist Lost Pines Chapter - The Bridge Maniacs. We cover:

Defining a team: Identifying a need and finding a team theme, specifically a rallying name or totem (It's what WE do).

Identifying Subject Matter Experts (SMEs): Some people are born into SMEdom and some have it thrust upon them.

Identifying Leadership: Often this overlaps with SMEs. Technical chops can garner respect or conflict.

Evolving the team: Individuals change, team members change, demands change - when expected and managed these are opportunities, not crises.

Conflict: This involves managing individualism and togetherness. Different folks need different strokes. Humor helps. Volunteers aren't paid—positive reinforcement and no blame. Knowing when to say when (It's not what WE do). Building protocols and passing the torch.

4:20pm - 5:20pm

Understanding the Ecology of West Texas through Prairie Dogs and Mesquite - San Marcos River A

- *Isabella Saldana Haworth, South Plains Chapter of Texas Master Naturalist*

Advanced Training Session

The High and Rolling Plains ecosystems of West Texas are widely underappreciated, despite their immense natural beauty. In this classroom session, we will discuss the unique conservation challenges in this region, centered around the two most controversial native species: mesquite and prairie dogs. Both of these species have a claim to the title "keystone species," but are in direct competition for remaining habitat. Additionally, they are often labeled as invasive despite both being native to these regions. In order to better understand these dichotomies, we will explore the history of mesquite and prairie dogs in their ecosystem, their interactions with each other and their relationship with the many different cultures of the southern plains. The key takeaways from this session will include an understanding of the ecological misconceptions surrounding mesquite and prairie dogs and, hopefully, a greater appreciation for the beauty and ecological diversity of West Texas.

4:20pm - 5:20pm

An Introduction: Texas Flies, Oh My! - Veramendi B

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○ *Sheryl Smith-Rodgers, Writer, Author, Editor, Photographer*

Advanced Training Session

Once upon a time, Sheryl Smith-Rodgers thought the word “fly” meant pesky house flies and fruit flies. Then she began to document different species in her Blanco yard. The diversity astounded her! After writing a magazine article on the topic, Sheryl put together a presentation that shares what she learned and observed. Sneak peek: Did you know that lovebugs are flies?

4:20pm - 5:20pm

Making the Outdoors Accessible - Veramendi C

○ *Patti Bonnin, Houston Arboretum & Nature Center*

Advanced Training Session

The Houston Arboretum believes the outdoors should be enjoyed by everyone. However, outdoor areas tend to have more barriers than access for people with disabilities. In this presentation, we will discuss some of the inclusive practices of the Arboretum, including our new monthly trail maintenance program with the Gulf Coast Chapter of Texas Master Naturalists.

4:20pm - 5:20pm

Interactions with Nature and Mental Health are Intertwined: A Review of the Research on Why This is the Case and Some Practices on how to Promote Well-Being -

Veramendi D

○ *Cali Bakker, Blackland Prairie Chapter TMN; Peter Williams, Blackland Prairie Chapter TMN*

Advanced Training Session

After a review of the latest research evidence from the psychology literature on well-being, mental health and interactions with the natural world, we will discuss several ways that we can interact with nature and promote well-being in ourselves and in our communities. We will summarize and synthesize key findings from the recent research literature and extract practical applications. Finally, we will demonstrate a practice or two that attendees can participate in.

4:20pm - 5:20pm

What's New: The State of the Art in Rainwater Harvesting Systems - Veramendi G

○ *Chris Maxwell-Gaines, Innovative Water Solutions LLC*

Advanced Training Session

While the practice of rainwater harvesting is ancient, this doesn't mean the practice is stagnant and stuck in the days of yore. There are many organizations and companies that are pushing the boundaries of rainwater harvesting through design and technology advances. This presentation will present the current state of the art methods and show where rainwater harvesting is headed.

4:20pm - 5:20pm

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Little Prairie in the Suburbs - Veramendi H

- *Crystal Flannery-Bachicha, City of Frisco; Hannah Valentine, City of Frisco*

Advanced Training Session

For the past 5 years, the City of Frisco has made sizeable investments into restoring pockets of the Blackland Prairie ecosystem within its public land holdings. Slowly and steadily, 11 natural areas have been established within one of the fastest growing cities in the nation. This presentation will focus on the institutional and biological issues the Natural Resources Department has overcome (or are overcoming) to bring the Blackland Prairie back to North Texas. The unexpected challenges that have popped up and times where lemons have indeed led to lemonade (hint: there's fire involved). Also covered is Hannah's months-long experiment of using cold-stratification to increase germination rates of green milkweed. So far with this method, germination rates have consistently hit the 60-90% range, which in nature can be as low as 1%. This project was begun in response to the high cost of native seeds and the lackluster performance of previous seed sowings done by our department.

4:20pm - 5:20pm

Texas Forestry - Veramendi I

- *Jaden Kelly, Texas A&M Forest Service*

Advanced Training Session

Join us as we explore the rich history of Texas Forestry, tracing its path from old-growth pine stands through the era of sawdust and tree stumps and into the age of reforestation and forest management. Come learn from the past and delve into some of today's best forest management practices. Discuss the current challenges facing the forested land of the East Texas Piney Woods.

5:30pm - 6:30pm

Trivia Contest (Quiz Bowl) XI - Veramendi A

- *Richard Heilbrun, Texas Parks & Wildlife Department*

Advanced Training Session

How are you with wildlife trivia? Join us for a fun-filled, low-stakes, but high energy battle! Participants will compete for prizes and bragging rights by answering science questions, wildlife facts and Master Naturalist trivia. Test your knowledge or come to learn! Bring the beverage of your choice or just bring yourself and a sense of humor and represent your chapter in a contest of knowledge or battle of wits. Teams are encouraged this year. Assemble your team of 4 beforehand, or participate individually.

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Sunday October 27th, 2024

10:00am - 12:00pm

How to Identify Different Mountain Cedars (Limestone Junipers)

○ *Elizabeth McGreevy, Project Bedrock/Land Steward*

Field Session

There are two types of mountain cedar (junipers that grow on limestone karst country) cover: pioneer thickets and old-growth forests. It is important to recognize the difference when making land management decisions, because each cover type tells a different story and can guide a landowner towards making more holistic decisions that will help regenerate and sustain Texas karst country.

10:00am - 2:00pm

Explore the role of nature in forensic anthropology

○ *Kristy Daniel, Texas State University; Tim Gocha, Texas State University*

Field Session

On this unique field trip experience, we will explore how nature impacts human decomposition at the Forensic Anthropology Center at Texas State University (FACTS). FACTS aims to advance forensic anthropology and related sciences through world-class education, research, service and outreach. FACTS is a multifaceted center that encompasses a whole-body donation program, the 26-acre outdoor Forensic Anthropology Research Facility (FARF), the Osteological Research and Processing Laboratory (ORPL) and the Grady Early Building, which houses the Texas State Donated Skeletal Collection (TXSTDSC). This field experience will be led by Dr. Tim Gocha, the Associate Director of FACTS. Together, we will visit the FARF site at the Freeman Center to learn firsthand how scientists explore the impacts of various natural conditions on human decomposition. We will also visit the ORPL and GEFARL to experience the full cycle of how researchers process and curate skeletal remains. We will also hear details on how to discriminate between human and non-human bones, excavation and recovery methods, methods of personal identification and whole-body donations.