



T E X A S
MASTER NATURALIST™
18th Annual Meeting
OCTOBER 20-22, 2017
OMNI CORPUS CHRISTI HOTEL

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."

**Annual Meeting
Sponsoring Agencies:**

TEXAS A&M
AGRILIFE
EXTENSION



About this year's Annual Meeting . . .

Welcome to Corpus Christi! This year marks our Program's 18th Annual Meeting and the 19th year of the Texas Master Naturalist Program. We have scheduled **117** different presentations and field sessions with a variety of topics and speakers from around the state. Outside of the classroom, we also have a great Silent Auction set up that is used to raise funds for the Annual Meeting, plenty of opportunities to meet new friends and old friends alike, some really beautiful artwork and photos entered into our annual contest, and a wide variety of chapter projects and materials on display in the project fair. Enjoy this weekend of comradery and learning! Thank you for being here with us overlooking the western shores of the Gulf of Mexico, where the breakwaters meet the sand dunes, neotropical birds fly overhead on their migration routes and endangered sea turtles return annually to their nesting habitats.

Friday October 20th, 2017

TENTATIVE AGENDA—SUBJECT TO CHANGE WHEN REQUIRED

Lunch on your own prior to arrival (Lunch not provided on Friday)

- 12:00 - 1:00 **Arrival and Conference Registration Check In Open**
Third Floor Registration Desk
- 12:00 - 6:00 **Texas Master Naturalist Bookstore Open**
Vendors & Swap Shop Open
VMS HelpDesk Open for LIVE support, demo & Q/A
Conference Hallway & Corpus Christi Ballroom A
- 1:00 - 5:00 **Set-Up of Chapter Project Fair Displays**
Set-Up of Photo & Art Contest Entries
Set-Up of Chapter Brochure, Scrapbooks and Newsletter Entries
Submission of Silent Auction Items
Conference Hallway & Corpus Christi Ballroom A
- 1:00 - 5:00 **Friday Afternoon Field Sessions**
Rendezvous in Lobby on First Floor
Range and Wildlife Management through the New Shotgun Shooting Sports Method
»Steve Hall, Texas Parks & Wildlife Department
Learn how to Shoot the "Optimum Shotgun Performance" (OSP) way to improve your shooting skills and teach others how the shooting sports directly supports range and wildlife management through population control, hunter education and conservation efforts in TX.
Island Ecology and History at the Padre Island National Seashore
»Patrick Gamman, Kathy Sanders, and Sarah McLaughlin, South Texas Chapter
Participants will explore the changes in ecology from the Gulf beach to dunes; from the dunes through the grasslands of mid-island to the mudflats to the Laguna Madre. Environmental conditions on all the flora, fauna and geology of the island impact all living things there, and had considerable impact on human history on the island.
Habitat and Wildlife of Mustang Island State Park
»Ben Horstmann, TPWD - State Parks - Region 2
Explore the waters and wonders of Corpus Christi Bay by kayak with an experienced instructor and interpreter. We'll be looking at the unique habitats and wildlife of this critical ecosystem. What to expect/bring: Weather can be unpredictable so please plan accordingly. Bring sunscreen, a hat, close-toed shoes and clothing you can get wet, and water. Binoculars and cameras are okay but please understand that they may get wet. We will cancel this program in inclement weather.
Urban Challenges to Managing the Oso Bay Wetlands Preserve
» Sarah Jose, South Texas Chapter
Participants will explore Corpus Christi's newest nature/recreational park located on Oso Bay. Development of this park within an urban surrounding presents unique challenges to maintain native flora and fauna, provide educational opportunity and entertainment for the community.
- 1:00 – 5:30 **Friday Afternoon 4 Hour Sessions *** (with 30 min. break at 3:00)
You Wormed Your Way into My Heart – A Hands-On Parasite Experience—
PARTNERSHIP BOARDROOM
»Charles (Chuck) Blend, Independent Researcher/Scholar
Are you ready to get down and dirty, because in this business – no guts, means no glory! Using previously-collected fish, members of this workshop will learn how to "post a host"; a skill which involves finding and collecting ecto- and endoparasites via microscopic examination of the surface, gills, body cavity, internal organs and viscera of fish. Taxonomic identification of

helminth (worm) parasites collected will be attempted and, if time, attendees also will learn about methods typically used to fix, preserve, stain and key out parasites. While the lab/workshop will be indoors, participants should wear loose-fitting, comfortable clothes that you wouldn't mind getting dirty/slimed/stinky.

1:00 - 3:00

Friday Afternoon 2 Hour - Sessions 2A

Basic Birding– NUECES A

»John Herron, *The Nature Conservancy (retired)*

Do you barely know the difference between a red-bird and a robin, but wish you could bird watch with 'real birders'? If you find birds interesting, but aren't sure about getting started – this is the class for you! John Herron, a wildlife ecologist with over 30 years of experience, will show you the basics – how to select and use binoculars, simple bird-recognition skills, choosing and using a field-guide book. We'll talk about attracting birds to your backyard, too. Bring binoculars if you have them.

Overview of Texas Coastal Ecology– NUECES B

»Matthew McClure, *Lamar State College - Orange*

The Texas coast contains a variety of habitats, each with their characteristic physical features, flora, fauna, and ecological importance. This presentation will provide an overview of the major types of coastal habitats of Texas, including sandy beach, jetty, salt marsh, mud flat, oyster reef, floating community, and sea-grass bed, with an emphasis on biodiversity including many non-game species of fishes, crustaceans, and mollusks. Various environmental issues will also be addressed, including coastal erosion and invasive species. Participants are encouraged to bring specimens or photos of Texas coastal and marine life (shells, etc.) for comparison.

WHAT IS THAT IN MY WATER? an Introduction To Freshwater

Macroinvertebrates– COPANO

»Richard G. McCarthy, *Central Texas Master Naturalist Chapter*

This presentation will include an introduction to the wide variety of macro life living on the surface and below in our fresh water sources. These interesting creatures, from the size of a period to about 2 inches in length, fill a very important role in the environmental community. Discover how their presence or absence affects us all.

The Millennial Mindframe: Engaging Young Professionals in Nature– MATAGORDA

»Jessica Lagalo, *Texas Parks & Wildlife Department*

What does it take to attract and retain young professionals from the millennial generation? Come hear an overview of Texas Parks and Wildlife's successful State Park Youth Ambassador program as we share the importance of engaging this demographic and tips to attract the next generation of stewards. Our panel of Millennial youth, who currently serve as both Ambassadors and Master Naturalists, will speak about what motivates them to spend time in nature, their attraction to the Master Naturalist program, and answer audience questions about how to better engage young adults.

Texas Master Naturalist Endowment – How We Can Grow into the Next 20 Years– CORPUS CHRISTI BALLROOM C

»Darin Paine, *Texas A&M AgriLife Extension & TMN Endowment Team*

As the TMN Program celebrates a milestone anniversary in 2018, a team of dedicated program supporters have been focusing on the next 20 years. To ensure the program continues to have financial security and an opportunity to grow sustainably, the Texas Master Naturalist Endowment was created. The mission of the Texas Master Naturalist Endowment is to further enhance the Texas Master Naturalist Program, its chapters and volunteers, now and into the future, for the benefit of natural resource education, conservation and stewardship. Join us as we talk about how we can grow into the next 20 years of the Texas Master Naturalist Program.

Instructing the new Laws, Regulations and Ethics Module: A Game Warden's Point of View– BAYVIEW

»Michael Mitchell, *Texas Parks & Wildlife Department*

In the latest newly-published curriculum, a new section was added on Laws, Regulations and Ethics. Game Warden Mike Mitchell, a past chapter advisor and chapter founder, composed the course of study based upon over a decade of experience teaching and training Texas naturalists, youth, teachers, and landowners. Mike is stationed at Austin TPWD headquarters and is highly focused upon innovation and outreach. The session contains a one-hour lecture example of what

would actually be delivered to a chapter audience, then a one-hour contextual discussion of how other trainers might present that same new curriculum content on their own.

Butterfly/Pollinator Gardening– RACQUETBALL COURT A

»Roger Sanderson, *Texas Discovery Gardens*

A complete investigation into how to create the best Butterfly/Pollinator garden. Areas covered will include why we need them, what species can you expect, what are the host plant for these species, and what are some of the best nectar plants for the adults. Some examples of these plants will be displayed.

How to Get Involved with Texas Wildlife Association's Outdoor Learning Opportunities In Your Local Schools– RACQUETBALL COURT B

»Leslie Wittenburg, *Texas Wildlife Association*

The TWA Conservation Legacy provides schools with hands-on interactive TEKS aligned activities through our L.A.N.D.S. (Learning Across New Dimensions in Science) programs. Our programs are offered free to schools in Texas and focus on teaching science concepts using land stewardship, wildlife conservation, natural resource literacy and leadership development skills. Attendees of the session will learn about the many different programs available free to their schools throughout Texas. Emphasis will be on the L.A.N.D.S. Intensive year long program, which provides resources for teachers to use in their classrooms paired with outdoor learning experiences at local ranches or water systems. Attendees will experience some of the hands-on activities, take home program as well as contact information to share with their local chapters for volunteer opportunities.

1:00 - 2:00

Friday Afternoon 1 Hour – Session 1A

Making a Difference One Child at a Time– LAGUNA MADRE

»Craig Hensley, *Texas Parks and Wildlife Department*

One of the most powerful roles Master Naturalists can play in their (your) volunteer capacity is working with children. Life-long naturalist and interpreter Craig Hensley will share his insights into the impacts you can make when you volunteer your skills and enthusiasm with our youngest members of society. Want to be inspired? Looking for confirmation that what you are doing matters, then join Craig for this inspirational presentation.

Exploring the Coastal Bend – Birds of Corpus Christi– ARANSAS

»Amanda Gobeli, *Texas A&M AgriLife Extension*

Make the most of your time in the "birdiest" city in North America! With more than 200 different species and a wide variety of habitat types, Corpus Christi and the surrounding area is a birder's paradise and a prime opportunity to flesh out your life list. This one hour classroom presentation will cover some of the species you're likely to see with tips on identification by sight and sound, as well as information on behavior and ecology. There is no special clothing or equipment required.

2:00 - 3:00

Friday Afternoon 1 Hour – Session 1B

Managing a Chapter Volunteer Project– LAGUNA MADRE

»Michael Lewis, *Texas A&M University - Corpus Christi*

Are you tired of the chaos surrounding a project? Would you like things to run a bit more smoothly? Basic project management techniques can make projects of any size less stressful and more successful. This talk will provide an overview of the discipline of project management as well as some of the available tools from a certified Project Management Professional.

How to Take Students Outside– ARANSAS

»Sarah Coles, *Corpus Christi Museum of Science and History*

The new Environmental Literacy Plan for the state of Texas emphasizes the importance of students spending time out of doors and creating an intersection between formal and informal educators to make this happen. Over the last few years the Coastal Bend Children in Nature Collaborative has been conducting teacher workshops to help dispel these fears and has created lasting partnerships between environmental agencies and classroom teachers. These partnerships include Master Naturalists and they are often the front line of helping teachers take students outside. Learn how to work with local teachers and create a great experience for your local students.

3:00 - 3:30

Hotel Room Check-in Begins *Room Check-in at Hotel Front Desk

Friday Afternoon Break

Conference Hallway

3:30 - 5:30

Friday Afternoon 2 Hour – Session 2B

Birding for recreation, education, and conservation– NUECES A

»Maureen Frank, Texas A&M AgriLife Extension Service

Birding is a growing recreational activity in the U.S. Beyond recreation, though; birding can be a valuable tool for education and conservation. This accessible activity is open to all ages, interests, and abilities, and can be done in urban as well as rural areas. Birdwatchers develop a connection to the surrounding natural world that drives educational interests and promotes conservation actions.

Ecological management of small properties– NUECES B

»John Herron, The Nature Conservancy (retired)

How can we manage our properties (whether it's a big backyard or a 'ranchito') in ways that will improve habitat and increase the number of plant and wildlife species that we all love? What is biodiversity and why is important? Learn from a wildlife ecologist about putting science into the practice of habitat management, focusing on the kinds of management that's practical for small-acreage parcels. John Herron, a wildlife ecologist with over 30 years of experience, will show you how you can apply habitat management to your own little piece of heaven.

Bringing the Night to Life– COPANO

»Craig Hensley, Texas Parks and Wildlife Department

This workshop will provide attendees a variety of program ideas with specific activities for engaging audiences after the sun goes down. Areas of focus will include owls, bats, night hikes and stargazing. This hands-on workshop will require participation so be ready!

Diversity in the TMN Program – Leveraging the Whole Community– MATAGORDA

»Marc Opperman, Monica Ramirez & Caroline Taylor, Capital Area Chapter, Texas Master Naturalists

To maximize conservation in our communities, we have to get the whole community involved, and the future of conservation depends on reaching ever-more diverse segments of the population. This session will shed light on the demographics of the Texas Master Naturalist program, with a focus on race/ethnicity, and age. In this workshop, participants will discuss ways to create chapter structures that are inclusive of people coming from different cultures and ages.

More Nature of Naming– LAGUNA MADRE

»Matthew McClure, Lamar State College - Orange

This session provides an expansion of the statewide curriculum. Scientific naming and history of classification are reviewed from the Two-Kingdom system of Linnaeus to the 3-Domain system of today. The discussion of binomial nomenclature will be expanded to include the various ways that species names are presented in the scientific literature. The process of discovering and describing a new species will be described using zoological examples including a discussion of the rules of naming. The session will also include hands-on simulations of classification and of the use of dichotomous keys for identification.

What's that? Identifying unknown organisms with online resources–ARANSAS

»Sam Kieschnick, Texas Parks and Wildlife

Have you ever found something outside and not known what it is? Are you ever on a nature walk and a child brings you a bug, but you couldn't give it a name? Well, you are not alone. Texas has thousands of species of plants and animals, and it's hard to memorize each one. In this presentation, we'll go over some of the online resources that will help you better identify the unknown plants and animals in your neck of the woods. Learning the name of something is the first step in appreciating it. Come and learn some names!

The Search for American Eel – We Need You! – RACQUETBALL COURT A

»Stephen Curtis, Texas Parks & Wildlife Department

This workshop will educate participants on the life history of American Eel and provide hands-on training to contribute to current research on one of Texas' most cryptic species. Texas Parks & Wildlife Department needs your help to collect data on juvenile American Eel in tidal streams and estuaries along the Texas Coast. Upon completion, participants will receive the necessary gear to begin sampling for American Eel. All data will be used to assist natural resource agencies in the conservation and management of this unique species. If you are unable to attend the

training but are still interested in the project, please contact me at Stephen.Curtis@tpwd.texas.gov.

**Beyond the Road with TxDOT: A Look at Cultural and Natural Resources—
RACQUETBALL COURT B**

»*Laura Cruzada, Texas Dept. of Transportation*

Since 1917, the highway department built roads shaped around the state's scenic splendor and cultural heritage. Today, the Environmental Affairs Division at TxDOT helps care for the state's natural and cultural resources in tandem with this vision. Thanks to TxDOT's archeologists, historians and environmental scientists, there may be a hidden story about Texas beyond the road that is ripe for discovery. For this session, participants will learn more about the field and practice of cultural (archeology and history) resource management and/or natural resources management at TxDOT and ways to get involved in your communities. Go Beyond the Road with TxDOT to see how our marketing and outreach efforts are helping tell a unique story about the state.

3:30-4:30

Friday Afternoon 1 Hour – Session 1C

Introducing the Alliance for America's Fish & Wildlife: Forever impacting natural resources in Texas – update to last year's Blue Ribbon Panel— CORPUS CHRISTI BALLROOM C

»*Richard Heilbrun, Texas Parks & Wildlife Department*

Surprisingly, much progress has been made in Washington DC on advancing legislation to change the landscape of natural resource management in the U.S. A new national initiative was launched this year, and Master Naturalists can play a starring role in the effort. I'll introduce "The Alliance" and ask you how you'd like to spend \$50 million/year. We'll discuss how these efforts overlap with the production of energy on federal lands and how the legislation is being received on Capitol Hill.

Education and Interpretation: the perfect partners— BAYVIEW

»*Danielle Bradley, Texas Parks & Wildlife Department*

This program is designed to take all the wonderful knowledge our Master Naturalists know, and help them present it in a more interpretive format. We plan to offer tips, tricks, and suggestions on how to take educational facts and make them interpretive tidbits! Come prepared with a specific educational topic in mind.

4:30-5:30

Friday Afternoon 1 Hour – Session 1D

A Pivotal Moment in Wildlife Conservation— CORPUS CHRISTI BALLROOM C

»*Karly Robinson, True To Texas*

Despite the hard work of conservation groups, our nation is in a state of conservation crisis. Fortunately, we are on the precipice of what could possibly be the biggest wildlife conservation "win" in American history in the form of alternative funding for wildlife conservation at the national level. This presentation provides an overview as to the current status of alternative funding legislation and what that legislation would mean for Texas, as well as a walkthrough of how to be involved with the effort.

State Representatives Round Table – BAYVIEW

»*Michelle Haggerty & Mary Pearl Meuth, Texas Master Naturalist State Office*


The TMN Chapter's State Representatives role was established to help be another communication link to the state office for each chapter. This position within a chapter's organization can help to relieve some of the administrative burden from the president, along with review and provide input to statewide policy updates etc. Join this discussion to learn the ways that chapters **use** their State Representative roles, ways that the State Representatives can function as a whole across the state and other opportunities for this role within a chapter. All State Representatives from the TMN Chapters around the state, or other chapter leadership interested in being a part of this discussion are invited to attend.

5:45 - 6:30

Shuttle Buses Leaving for Dinner at the Texas State Aquarium

Travel to Texas State Aquarium either by bus (meet in hotel lobby) or with own transportation. Parking at Aquarium is free for the evening.


- 6:30 Doors Open at Texas State Aquarium
- 6:30 - 10:00 Dinner and TMN Family Reunion at the Texas State Aquarium
 *Entry & Dinner Included with Registration
 Texas State Aquarium Gulf of Mexico & Sharks Exhibit
- 8:00 Buses begin return departure to Omni Corpus Christi
- 10:00 Final bus departs Texas State Aquarium to Omni Corpus Christi

 **TMN Volunteer Management System Helpdesk**

Home Solutions

How can we help you today?

SEARCH

HELP

The TMN Volunteer Management System Helpdesk team will be providing LIVE demo, support and Q&A throughout the Annual Meeting.

Help Desk Hours are Friday 1-5:30pm, Saturday 8am-5pm.

There are three sessions being offered by the VMS Team this year:

10:00 - 12:00 Saturday Morning

TMN VMS Reporting: Chapter Reporting and Decision Making

4:00 - 5:00 Saturday Afternoon

Roundtable Discussion: VMS System Administration for Chapter Leaders

9:00 - 10:00 Sunday Morning

TMN VMS Administrators Training 201

Saturday October 21st, 2017

7:00 - 8:00 **Conference Breakfast**
Corpus Christi Ballroom B & C

7:00 - 8:00 **Registration Check in Open**
Third Floor Registration Desk

8:00 - 6:00 **Chapter Project Displays, Popular Vote Contest Voting, Vendors, Silent Auction Bidding and Texas Master Naturalist Bookstore Open** *Ballots for Popular Vote included in Registration Packet
Preassembly Hallway & Corpus Christi Ballroom A

8:00 - 5:00 **Saturday All Day Field Sessions**
Rendezvous in Lobby on First Floor *Pick up Box Lunches at Registration Desk
Habitats, Research and History of the Welder Wildlife Foundation, Sinton Tx
»Michelle Smith, Welder Wildlife Foundation and South Texas Chapter
Participants will explore the varied habitats of the Welder Wildlife Refuge. Ranching history, rangeland and wildlife research activities, tours of the specimen collections, and travel around the refuge to explore wetlands, grasslands, oak motts will serve display unique ecosystems of this site. Most areas will have primitive trails with access by motor vehicle.

8:00 - 12:00 **Saturday Morning Field Sessions**
Rendezvous in Lobby on First Floor
Padre Island National Seashore - Plant Trail
» Charles Sassine, South Texas Chapter
Participants will explore and learn the diversity of plants that thrive between the Gulf beach and the Laguna Madre. Discussion of adaptations that plants need to survive this area will be presented. Some trail walking is easy and paved, but some is primitive and in the dunes.
Oso Wetlands Preserve – Featuring Projects of -and Birding the Trails with- the South Texas Chapter
» Sara and Rick Laughlin, South Texas Chapter
Participants will explore the avian communities of the Oso Wetlands. Oso Bay provides opportunity to see shorebirds, while riparian areas for sparrows, rails, wrens and other birds; and trails through thorn-shrub habitat provide opportunity to see song birds, dove, raptors and other birds. This is a guided tour and binoculars are available upon request.
Geology and Ecology of Coastal Bend
»Dr. Christopher C Mathewson, Regents Professor, Emeritus, Department of Geology, Texas A&M University, and Dr. Heather A. Mathewson, Assistant Professor, Department of Wildlife Science, Tarleton State University
The field session will depart the Omni Corpus Christi Hotel at 8:00am and proceed south along North Shore Boulevard where we will observe shoreline developments and marine facilities. Our first stop will be at Cole Park to observe the undeveloped shoreline environment along Corpus Christi Bay. There will be a discussion of the geologic origin of the southern Texas coastal zone, the origin of the many bays and deltas associated with the numerous small rivers that drain into the Bay and Gulf of Mexico. A discussion of the origin and development of the wetland ecosystems that exist along the coastal zone will also be presented. The trip will continue south along Ocean Drive, cross the inlet to Oso Bay, pass the Naval Air Station, Corpus Christi, and turn along Lexington Drive to intersect the John F. Kennedy Memorial Causeway and cross the lagoon and wetlands behind Padre Island and the Gulf Intracoastal Waterway (GIWW). You will be able to observe the line of dredge material islands, “spoil islands” associated with the construction and maintenance of the GIWW. The trip then turns northward along TX-361 toward Matagorda Island State Park. We will explore the open beach, dune systems and back dune regions to investigate the active geologic processes and the localized ecology of this dynamic area. The trip will then visit the back of the island and observe the wetland environments along the shore of Corpus Christi Bay. We will continue along TX-361 to Port Aransas and stop at

Roberts Point Park for a look at a developed marina and have a discussion of the ecology of shallow marinas. From the park we will take a TxDOT ferry across the Gulf Intracoastal Waterway and travel across the back island wetlands where we will observe the highway “cut and fill” environment that was needed to build a stable highway across the wetland. What do you think are the environmental impacts of such highway construction? After crossing the back island wetlands and Aransas Bay, we enter the town of Aransas Pass known for shrimping and tourism, along with farming and oil and gas activities. We cross a local channel that supports the shrimping industry which is harbored in Conn Brown Harbor, located to our right (north). We turn left and take TX-361 toward Ingleside and highway TX-35 in Gregory where we then follow TX-35 and TX-181 through Portland, across the inlet to Nueces Bay, pass the location of the USS Lexington and back to the hotel in Corpus Christi.

8:00 - 5:00

Saturday All Day Sessions

Bryophytes and Lichens: Taking a Closer Look at Biodiversity –PARTNERSHIP BOARDROOM

»*Dale Kruse, S. M. Tracy Herbarium*

Bryophytes and lichens are often rather inconspicuous components of many ecosystems. However these organisms serve many vital functions in nature and can be found in most habitats with a little training. In the lecture we will delve into the basics of bryophyte and lichen systematics, morphology, and ecology. The laboratory session will take a detailed look at the morphology of these organisms to gain a basic understanding of their intricate morphology. Using dissecting microscopes participants will observe the macro and micro morphological characteristics that are essential for accurate identification of these groups. Finally, an opportunity to participate in a statewide effort to inventory these groups will be presented. Volunteers are invited to participate in their local region to collect and process specimens for inclusion in the project. Discussions will provide details of the project and develop the organizational structure to complete the goals of the project.

8:00 – 12:00

Saturday Morning 4 Hour Sessions

How Many Mega Pixels? Camera, Lenses and Techniques for Nature Photography–REPUBLIC OF TEXAS

»*John Herron, The Nature Conservancy (retired)*

Megapixels, zoom, shutter speed, small cameras, big cameras, Canon, Sony, Nikon, Fuji ... the variety of camera choices seems unending. John Herron, a wildlife ecologist and amateur photographer, will sort through the terminology and ‘focus’ on the features that are important for nature photography. We’ll also discuss the basics of photo composition – how to make a good photo great! Bring your camera - after the class, John will meet with individuals to answer specific questions about cameras the group has. If you don’t have a camera yet, you can try out one of John’s! Dress comfortably, we may step outdoors if time allows.

8:00 - 10:00

Saturday Morning 2 Hour Sessions -2A

Expanding Your Trailside Toolkit– BAYVIEW

»*Craig Hensley, Texas Parks and Wildlife Department*

Trailside teaching and interpretation can be done anywhere, but it does require more than just naming names. This session will share a variety of successful activities you can incorporate/modify to enhance your educational impact. Learn to engage your audience with birds, butterflies, plants and more during this engaging session with an experienced interpreter. We will spend the majority of time outdoors.

Audubon TERN- Citizen Science Connecting Communities to Colonial Waterbird Conservation– NUECES B

»*Kari Howard, Audubon Texas*

Texas Estuarine Resource Network or T.E.R.N. is a community-based citizen science program designed to train members of the community to collect bird monitoring data used to assist researchers with projects and scientific conservation management. This training program will transform volunteers to citizen scientists and teach how to identify local species of colonial water birds and to monitor these bird species at wetland foraging habitats, how to use current scientific survey protocols and data collections, and how this data will assist researchers with conservation.

A Refresher Course for Botany Skills and Collecting Scientific Specimens– COPANO

»*Tiana Rehman, Botanical Research Institute of Texas*

Approximately 5000 vascular plant taxa can be found natively or naturalized in Texas, documented through scientific specimens deposited at herbaria across the state and throughout North America. However, our understanding of the distribution of these species is still poor, due in part to a lack of sampling of these species across their range. This course will include a refresher of basic plant morphology (incl. hands-on plant dissections) and botanical taxonomy for plant identification, and ultimately a guide for how an individual may make their own plant collections and deposit them in herbaria to improve sampling efforts across the state.

How and Why to use iNaturalist– LAGUNA MADRE

»*Sam Kieschnick, Texas Parks and Wildlife*

You've likely heard about iNaturalist, but why should you use it? This presentation is geared towards those that are interested in citizen science and documenting biodiversity and how to do this with the tool iNaturalist. We'll discuss how to use iNaturalist with your camera as well as with your smart phone, benefits of using iNaturalist, and why it's a valid and important volunteer opportunity. Also, you can learn some of the new features of iNaturalist.

It's a Wild, Wild Life on the Mid-Texas Coast Part 1: Ecology of the Coastline– MATAGORDA

»*Peggy Romfh, Master Naturalist, Cradle of Texas Chapter and Rich Tillman, Texas A&M AgriLife Coastal Marine Resources Agent and Sea Grant Agent (ret)*

This session will take an in-depth look at the unique coastline environment of our Mid-Texas Coast, from the tides and wrack line, to the function of the dunes, and the importance of the estuaries and bays. It will also include a review of some of the plants and vegetation of the coastal shoreline and dunes, and a discussion about "beach finds" – items deposited on the beach by storm surges and flooding, as well as man-made trash and pollution. Participants will have the opportunity to examine vegetation samples firsthand in break-out groups, and will also learn about specific volunteer opportunities related to the topics discussed.

TMN Tech Tools II: Putting it all Together– ARANSAS

»*Marc Opperman & Caroline Taylor, Capital Area Chapter, Texas Master Naturalists*

You've added Facebook and maybe Twitter to your chapter's online communications toolbox. But now what? How do you take it to the next level? Join us to learn how to integrate all these widgets into a powerful suite of useable tools that are consistent with your chapter's goals and member's needs. We'll discuss communications strategies, how to choose apps based on chapter goals, and a few of the most useful technologies– MailChimp, SurveyMonkey, Google Drive and more – that can help solve gaps in chapter communications and management. The Capital Area Chapter will be used as a case study. (P.S. There is no "TMN Tech Tools I" presentation.)

Techniques for Effective Leadership of Meetings – CORPUS CHRISTI BALLROOM C

»*Rose Mary Fry, Degrees of Work*

Board Chairs are challenged with the need to lead constructive meetings for their Chapters. Although board meeting agendas are designed, sometimes it can be difficult to keep the discussions and decisions on track. Attend this workshop to learn how to design an agenda, use Roberts' Rules of Orders, and other meeting management techniques. The goal is to have Board discussions that result in meaningful work for the Chapter. The Board Chair and Board need to understand when additional discussion is needed, when discussions need to be summarized, and decisions made. It is an art form that can be learned for more effective meetings.

Brush Busters: Controlling Invasive Brush Species– VALET PARKING CIRCLE AT FRONT ENTRANCE TO HOTEL

»*Megan Clayton, Texas A&M AgriLife Extension Service*

The Brush Busters program includes leaf, stem, and cut-stump treatments for the control of noxious brush species on range or pastureland with herbicides. Participants will learn about equipment needed, techniques, and about specific species of brush. Our session will be outside for 2 hours, so bring a camp chair (optional) and prepare to walk away with new skills!

8:00 - 9:00

Saturday Morning 1 Hour Sessions – Sessions 1A

Entomology: The Study of Insects and their influence on ecosystems and agriculture – NUECES A

»*Christopher Ebling, Blackland Prairie Master Naturalists*

This presentation will cover the basics of the study of insects. Topics will include the importance of insects to the ecosystem and to agriculture, insect lifecycle & morphology, insect orders & identification, and insect collection and preservation

Life on Earth Depends on Natural Darkness: Save the Night and Participate in Globe at Night Citizen Science Project – RACQUETBALL COURT A

»Karen McGraw, *International Dark Sky Association - Texas Section*

Almost every living thing on our planet uses the cycle of light and dark to trigger life processes. Humans depend on artificial light for nighttime activities. How does our artificial light at night affect fauna and flora? It's hard for us to see what habitat destruction by artificial light looks like. This program helps us understand the effects of artificial light on living things, including ourselves, and how we can reduce the negative effect of our lights. Also, learn how to participate in the Globe at Night Citizen Science Project to measure light pollution at your location and share that data with others.

Nature Play on a Budget – RACQUETBALL COURT B

»Lauren Young, *Hays County Chapter/Lady Bird Johnson Wildflower Center*

Looking for an active way to engage the next generation of Texas Master Naturalists? Nature Play is a fantastic way to spark imagination and hands-on creativity for kids and kids at heart. By using readily available resources, we can promote learning and connectivity with nature. Be inspired by real-world examples, including current events and programs from the Lady Bird Johnson Wildflower Center.

9:00 - 10:00

Saturday Morning 1 Hour Sessions – Sessions 1B

Ant identification and biology– NUECES A

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

Do you know the first thing to look for when identifying an ant? If you said "nodes" then you are on the right track. This session will teach how to identify common ants as well as provide information on their biology.

Shrike Force Texas! Citizen Science Project– RACQUETBALL COURT A

»Tessa Chenoa Ownbey, *Fossil Rim Wildlife Center* and Dr. Amy Chabot, *African Lion Safari, Canada*

Both wintering and breeding populations of Loggerhead Shrike are experiencing substantial declines across much of its range. The Loggerhead Shrike Working Group was established in 2013 in response to the need for international collaboration on Loggerhead Shrike conservation. The Working Group is focused on building partnerships and pursuing conservation priorities under its Conservation Action Plan. Development of habitat models; standardized occupancy surveys and habitat assessment; and implementation of a multi-state color-banding project are priority actions. The Working Group, and its partner, the Conservation Centers for Species Survival, are partnering with the Rio Brazos Master Naturalist Chapter in Johnson, Hood and Somervell Counties, who in 2015 formed a "Shrike Force." We will provide an overview of methods and make a call for establishing a Texas-wide "Shrike Force" of Master Naturalists.

Pollinators and Native Plants -Who are the Real Managers of Wildlife Habitats? – RACQUETBALL COURT B

»Ricky Linex, *USDA Natural Resources Conservation Service*

Landowners and land managers often believe that by reducing stocking rates of livestock or controlling numbers of deer on their property they are managing the habitat. Participants will learn of the true importance of the many species of pollinators in keeping healthy forbs, flowering shrubs and trees. Without pollinators our food supply would be significantly reduced and habitat for wildlife and livestock would crash. Come and learn about the importance of pollinators.

10:00 - 11:00

Saturday Morning Break

Conference Hallway

10:00 - 12:00

Saturday Morning 2 Hour Sessions – 2B

The Science of Wind– LAGUNA MADRE

»John Nielsen-Gammon, *Texas A&M University*

The wind blows, but why? Some of the simple explanations from school are sort of right, others are completely wrong. This presentation will explain many things about Texas wind that you

either never think about or think you already know, such as where gusts come from, why most tornadoes spin counterclockwise, what time of day has the strongest winds, why summer winds are almost always from the south, and what the wind will do tomorrow.

Monarch Gateway Milkweed Propagation - Paying It Forward– NUECES B

»*Barbara Keller-Willy, Monarch Gateway*

Monarch Gateway will donate approximately 200,000 Texas native milkweed, grown from local seed, in 2017. Learn the inside secrets to our success. Participants will learn propagation techniques used to grow our milkweed and see all products used. We show studies of native milkweed colony soil characteristics and micronutrients preferred so you can plant the native milkweed you grow for sustainability. Participants leave with local ecotype seed for their region/project to propagate themselves. We only ask that you pay it forward and donate some of what you grow from our seed and materials to local projects in your area.

Parasite Safari! A Tour Inside, Outside & Literally Through Your Favorite Texas Wildlife– COPANO

»*Charles (Chuck) Blend, Independent Researcher/Scholar*

Parasites are often overlooked in many studies of wildlife and in conservation efforts, but to do so is ironic at best and poor management at worst. How so? Because parasitism is, by far, the most common mode of life on Earth – there are a lot more of them than there are of us! We either ignore or remain ignorant of them at our peril. As master naturalists, we need to be knowledgeable of the entire environment(s) in order to gain a deeper appreciation of the complex inter-relationships at work there.

This presentation will provide a broad introduction to the protistan, helminth (worm) and arthropod parasites one is likely to find in and on animals you typically see and enjoy outdoors. Our focus will be on basic anatomy (i.e. “Hey! What is this “thing” I’m looking at?”), life histories (i.e. “How did this ‘little feller’ get into this bird?”) and ecology (i.e. “What are the connections between the host, parasite and environment?”) of these pesky but fascinating critters.

Notebooks, Journals, and Logs: Field observations in the modern world– BAYVIEW

»*Brooke Byerley Best, Botanical Research Institute of Texas*

Explore both new and old techniques and tools to enhance your current field observation skills. Whether your field notebook is made of paper or made of ones and zeros, you’ll hone the observation skills crucial to modern field science careers and improve overall natural science literacy. Bring a notebook and pen/pencil.

TMN VMS Reporting: Chapter Reporting and Decision Making– ARANSAS

»*Cheryl Foster, Dale Hughling, Brad James, Clyde Camp, TMN VMS Team*

Join us for a session on creating reports using data from the TMN Volunteer Management System to provide information to your members and assist your chapter with decision making. We will go over the process of exporting data out of eCoordinator and importing it into Excel to produce useful reports. We’ll focus on both member and chapter reporting. Member reporting will include: rosters, dues, certifications, volunteer counts, hours reporting percentages, milestones, class listings and emailing volunteer milestones and certification progress. Custom grids and named searches will be created to help pull these reports together. We’ll cover creating pivot tables and charts in Excel to see where your chapter members are spending their time. Chapter partners often need information on volunteering; we will show you how to set up opportunities to capture and report this data. Need to export a large amount of information from eCoordinator? We built a tool to make combining all of those files together easier. We’ll demonstrate how to use it. Lastly, Time will also be given for chapters to describe how they have used the TMN VMS for other management decisions not currently addressed in the training.

Holding the Mirror Up to Individual and Board Performance– CORPUS CHRISTI BALLROOM C

»*Rose Mary Fry, Degrees of Work*

An effective and engaged Board of Directors is a critical partner in designing and delivering the work of their local Chapter. In many organizations, healthy conversations and goals are discussed in Board meetings. However, sometimes follow-through on Board or Committee work does not occur. This workshop will highlight techniques and tools to use as Board Accountability tools on an individual and board perspective. They can be effective strategies for translating Board discussions and decisions to actual work for the organization.

10:00 - 11:00

Saturday Morning 1 Hour Sessions – Sessions 1C

An Introduction to the U.S. National Vegetation Classification and Standards– NUECES A

»Charles Sassine, National Park Service/Padre Island National Seashore

The National Vegetation Classification is a central organizing framework for documentation, inventory, monitoring, and study of vegetation in the United States from broad scale formations like forests to fine-scale plant communities. The Classification allows users to produce uniform statistics about vegetation resources across the nation at local, regional, or national levels. This presentation will discuss the difference between the National Standard and Classification, how federal land managers utilize the information, and why the Standard is so important. Participants will also learn about the unique vegetation associations and species found at Padre Island National Seashore.

Exploring Texas' Seagrasses – RACQUETBALL COURT A

»Faye Grubbs, Coastal Fisheries, Texas Parks and Wildlife Department

Join us for this presentation which will cover: 1) Seagrass Identification; 2) A "How To" on Creating Seagrass Pressings; and 3) Texas Parks and Wildlife Department's Continued Efforts on Seagrass Conservation.

It's a Wild, Wild Life on the Mid-Texas Coast Part 2: Shorebirds – MATAGORDA

»Kristine Rivers, Professional Birding Guide / Master Naturalist, Cradle of Texas Chapter

Not every bird found at the shore is a shorebird, and not every shorebird is found at the shore! This session will review lifestyle, behavior, and identification techniques of common Mid-Texas Coast species within the avian taxonomical group known as shorebirds, which can often present a challenge in identification even for experienced birders. Participants will have the opportunity to practice their newly-learned identification skills using their own field guides, as well as comparing them with those used by other participants. In addition, participants will learn about specific volunteer opportunities related to the topic.

11:00 - 12:00

Saturday Morning 1 Hour Sessions – Sessions 1D

Virtual Herbarium Search Engine – NUECES A

»Raul Pena, retired, Hill Country Master Naturalist

There are a number of things about this database that make it unique. First is that plants can be identified by either specifying the anatomically correct characteristics or the visually correct characteristics of a plant which are not always the same. Once we get this program on line anyone with a smart phone or a tablet can use it to identify plants in the field. . Another important option is that Master Naturalist Chapters around the state can be set up to add the plants in their ecosystem to the database turning this into a state wide resource. There is an option to restrict the search to only the plants in a particular ecosystem or county since some counties span more than one ecosystem or to just do a state wide search of all of the plants in the database. It is possible to tag a plant as an invasive and limit the search to only those plants. One of the characteristics we provide is a link to the USDA distribution map which may be an important tool in tracking the invasive plants or the distribution of native plants.

Taming the Bayou– RACQUETBALL COURT A

»Claudette Johnson, Texas Southern University

This session will take a look at how development along Brays Bayou has changed the landscape for better or for worse. Volunteers will see how the Bayou has defined and provided for a neighborhood and how channeling the Bayou has failed in recent years. Volunteers will also learn about proposals to try to improve the Brays.

Non-game Cats in Texas: Mountain Lions and Bobcats– MATAGORDA

»Monica Morrison, Texas Native Cats, North Texas Chapter

Texas has two non-game, meaning unprotected, feline species. One of these is the bobcat, a feline that exists throughout the state, yet widely hunted for its pelt. The other non-game cat is the mountain lion, which has two distinct populations, one of which is believed to be highly-fragmented, due to loss of habitat.

Most people in the state know little about these felines, and the audience will learn about the cats' characteristics, habitat, prey species, and range. The existence of predators is a sign of a healthy ecosystem, and these cats do their part to maintain Nature's balance.

This is an indoor presentation; the attendees need only bring their curiosity.

12:00 - 1:00	Conference Lunch Corpus Christi Ballroom B & C
12:30 - 1:00	<p>(Optional) Yoga in Nature *does not count for AT hours <i>Enjoy a break from being inside and in chairs! Come outside and stretch, breath and relax in nature. Bring a mat, or a hotel beach towel, and join us for gentle yoga focusing on the breath. All levels welcome, class geared to beginner.</i> Corpus Christi Ballroom Balcony</p>
1:00 - 5:00	<p>Saturday Afternoon Field Sessions Rendezvous in Lobby on First Floor</p> <p>Texas Stream Team Core Water Quality Monitoring Training »Michael Jones, Texas Stream Team Anyone with a desire to monitor water quality or learn more about the natural resources in Texas can be involved. Volunteers monitor a wide variety of habitats from rivers, creeks, ponds, and lakes to bays, bayous, and estuaries. Volunteers range from school age to senior citizens, from individuals to organized groups like Master Naturalists. Texas Stream Team Citizen Water Quality Monitors are certified by completing a three phase training course using a test kit that measures physical and chemical parameters of water. Participation in the program includes these commitments:</p> <ul style="list-style-type: none"> • one-year commitment to monitor at least one location, • monitor their site(s) monthly at approximately the same time of day each month (the physical and chemical parameters fluctuate over a 24-hour period). Monitoring takes approximately one to two hours. <p>Texas Waters: Field Session to a Wetland »Sara Jose, Oso Bay Wetlands Preserve Trace an urban storm water channel as it enters the Oso Bay Wetlands Preserve. We will discuss water flow, sediment transfer, and the brackish/fresh water gradient in coastal wetlands. Please bring plenty of water and shoes that will get muddy. We will be in the field for most of the trip.</p> <p>Fauna and Flora of Coastal Habitats: Estuarine Field Session »Grace Lopez and Chad Huckabee, South Texas Chapter Prepare to sein, sample mud and get dirty! Participants will be provided opportunity to sample and examine flora and fauna living adjacent to and on an oyster reef site. Seining, mud sampling, birding, beachcombing and plant identification will be easily accessible to all participants.</p>
1:00 – 5:00	<p>Saturday Afternoon 4 Hour Sessions Hop on the Organic, Free Range Food Movement: Wild Game Care and Processing –AMBASSADORS SUITE *Rendezvous at Third Floor Registration Desk »Steve Hall, Texas Parks & Wildlife Wild game such as deer, quail, turkey and fish are excellent food sources to go with your home grown vegetables. Whether you hunt or fish for food, yourself, or get donations of meat from a friend, wild game represents an organic, healthy protein source for you and your family. Learn how to prepare wild game meats/fish "from field to table" in a hands-on fashion. Field dressing, transporting, processing and cooking tips will be included for a variety of fish and wildlife found in Texas.</p>
1:00 - 3:00	<p>Saturday Afternoon 2 Hour Sessions Video Storyteller 101– COPANO »Jennifer Weisensel, North Texas Master Naturalist This class will provide an overview of the skills needed in the pre-production and production stages to create a well-rounded story within your video presentations. Some basic camera, audio, and lighting techniques will be outlined, but the focus is on how you use composition, shooting styles, etc., to properly tell your story for marketing, promotions, and education. Best used in conjunction with Video Storyteller 102, but can be attended individually as well.</p> <p>Into the Weeds: Monitoring for Monarchs – NUECES B »Katie Boyer, U.S. Fish and Wildlife Service</p>

For decades, the majestic monarch butterfly has inspired citizen scientists to work with conservation practitioners to answer critical questions about the species' biology, migration, and habitat. Recently, an international group of scientists known as the Monarch Conservation Science Partnership has combined elements of various citizen science programs into one holistic integrated monitoring strategy. The strategy is designed to gather monitoring data on key monarch and habitat characteristics that will inform conservation targets, factors causing the species' decline, and management actions to improve habitat. This presentation will provide an overview of the monarch monitoring protocols, including: (1) monitoring adult monarchs and nectar plant use; (2) estimating milkweed species diversity and density, egg and larvae density, and relative abundance of blooming nectar plants; (3) estimating monarch survival; and (4) estimating abundance and biomass of red imported fire ants.

Getting to know you: Educating Yourself and Others on the Snakes of Texas—LAGUNA MADRE

»*Kelly Norrid, Texas Parks & Wildlife Department*

This presentation will go over many topics pertaining to snakes such as: What exactly are snakes and where do they fit in to the reptile class, venom and toxicity, benefits to the homeowner and ecosystem, common myths busted, and general ID. We will also cover an overview of the 4 families and common representatives found in Texas.

It's a Wild, Wild Life on the Mid-Texas Coast Part 3: Beach Invertebrates—MATAGORDA

»*Mike Mullenweg, Brazoria County Parks Lead Interpreter/Events and Trails Coordinator and Peggy Romfh, Master Naturalist, Cradle of Texas Chapter*

This session will cover the amazing variety of fascinating invertebrates that live along our Mid-Texas Coast beaches, including crustaceans (ghost crabs, hermit crabs, fiddler crabs, barnacles, and shrimp); gastropods (Atlantic moon snails, our official State Shell the lightning whelk, pearwhelks, and lettered olives); bivalves (angelwings, disk dosinia, coquina, and oysters); and many others (jellyfish, plumed worms, Portuguese Man O' War, anemones, and sand dollars.) Participants will have the opportunity to examine samples firsthand in break-out groups, and will also learn about specific volunteer opportunities related to the topics discussed.

Interpretive Trail Guiding and Getting Kids and Adults Outside – BAYVIEW

»*Dave Powell, Heard Natural Science Museum and Wildlife Sanctuary*

First part of class will be inside Power Point.

Second Part of class will be outside practicing with tools presented in Power Point

With opportunities to discuss and ask questions"

How to Deal with Conflict in Board or Committee Meetings—CORPUS CHRISTI BALLROOM C

»*Rose Mary Fry, Degrees of Work*

Whenever individuals work on Boards or committees, conflict can occur. This workshop will highlight the causes of conflict, how life roles affect conflict, the benefits and disadvantages of conflict, and problem-solving models to resolve conflict within nonprofit organizations. This workshop will strengthen the organization's ability to deal with different perspectives.

1:00 - 2:00

Saturday Afternoon 1 Hour Sessions – Sessions 1E

Ecosystem Ecology through Forest Ecology—ARANSAS

»*Christopher Ebling, Blackland Prairie Master Naturalists*

This presentation will cover ecology in general and forest ecology specifically. Topics will include: What is ecology, and specifically forest ecology? What is an ecosystem, and specifically a forest ecosystem? Basic components and structure of forest ecosystem. Processes associated with living and nonliving elements within a forest ecosystem. Different forest ecosystem/types and factors that contribute to the differences.

Introduction to Laws & Ethics—NUECES A

»*Richard Heilbrun, Texas Parks & Wildlife Department*

Famous maybe, but not yet infamous, this training is back by popular demand. Explore the laws and culture of natural resource management, what it means to be an ethical naturalist, and discuss and debate touchy subjects such as high fences, hunting, urban sprawl, feeding deer and other value judgements. Are you completely legal when you're walking in the woods? Should you be? How does Texas stack up compared to other states? Does it really matter? We'll

explore the legalities involved with wildlife management as we take these moral quandaries out for a ride.

EASO- the bird for your backyard – RACQUETBALL COURT A

»*Ed Ellerbe, Blackland Prairie Chapter*

Eastern Screech Owls are major predators of critters we don't want in our homes in the suburbs. Cheap pest control that they are they are also ideal for connecting children to nature. Learn how to attract them and something about their natural history.

2:00 - 3:00

Saturday Afternoon Break

Conference Hallway

2:00 - 3:00

Saturday Afternoon 1 Hour Sessions – Sessions 1F

Dendrology 101 and Tree Identification Techniques– ARANSAS

»*Christopher Ebling, Blackland Prairie Master Naturalists*

This presentation will cover the basics of tree structure and composition as well as provide a primer on the techniques and tree characteristics used in tree identification. Characteristics include location, form, leaves, twigs, fruit, wood, and bark. Tree structure will include the components of a tree and their function as well as classes of trees. The presentation will detail the characteristics of some trees common to the north Texas region.

Intermediate Laws & Ethics– NUECES A

»*Richard Heilbrun, Texas Parks & Wildlife Department*

Bring your sense of right and wrong, and check it at the door. Or at the very least, be ready to dive into the cultural, political, and legal reality of what it means to be a naturalist, nature lover, and citizen. Join us for an enjoyable, intellectual discussion of the legal and ethical issues that impact the conservation community. We'll dive into the North American model of wildlife conservation and explore highly controversial issues like the overlap between energy production and conservation, whether managing for huntable species is a good idea (or just the system that we've been given). We might even talk about the ethics of bird watching and nature photography. Is a photo shoot any different from canned hunts? Prior attendance in Laws & Ethics or "Value Judgements" training is strongly encouraged.

Let's Get Social: How to Use Social Media to Engage Your Audience– RACQUETBALL COURT A

»*Holly Vierk, Texas Water Development Board*

Social media is a vital asset to organizations and can help generate awareness, action, and engagement among key audiences—even with limited resources. Learn how to identify the platforms that work best for your messages and how you can develop effective content for each platform. We'll take a look at generational differences in communication style; how to engage audiences through a variety of techniques such as visuals, two-way interaction and dialogue, and storytelling; how to plan an editorial calendar; and how analytic tools can help you understand user behaviors.

3:00 - 4:00

Saturday Afternoon 1 Hour Sessions – Sessions 1G

Video Storyteller 102 – COPANO

»*Jennifer Weisensel, North Texas Master Naturalist*

This class will provide an overview of the items needed in the post-production (editing and distribution) stage to create a well-rounded story within your video presentations. Some basic editing, graphical animation, and sound effects will be presented to help you to properly tell your story for marketing, promotions, and education needs. Also provided will be a short overview on how to distribute your material and distribution platforms. Best used in conjunction with Video Storyteller 101, but can be attended individually as well.

Sound the Alarm: How Birds Use Calls to Get Out a Warning – BAYVIEW

»*Scott Kiester, Elm Fork Chapter, Texas Master Naturalist*

Most people are familiar with the bird songs used for courtship and to defend territories, but are less aware of the calls they use for communication. Perhaps most important calls are those used to send an alarm, from often quiet chip notes that denote a predator nearby to raucous mobbing calls, bird warnings carry information not only to members of the same species, but to other birds and many animals in the surrounding environment. This class will introduce members to

the variety and depth of information that the alarm calls of many common Texas birds transmit to their surroundings

Fifty Shades of Green; Neat Natives for your Landscape – ARANSAS

»*Ricky Linex, USDA Natural Resources Conservation Service*

This presentation will show 50 species of native plants that are beautiful and sometimes unusual and can be used in your native landscaping. Some of these can be purchased but many are uncommon and will have to be collected in the wild. A one page listing of the 50 plants including common and scientific names will be provided to attendees. This list also includes whether the plants provide values for pollinators. The list will be useful as you begin your search for these neat natives.

Applying Big Day Birding Principles to Herping (Reptile and Amphibian Hunting) – LAGUNA MADRE

»*Romey Swanson, Hill Country Conservancy*

This presentation will review the Texas Nature Trackers “Herps of Texas” project and the Snake Days Reptile and Amphibian Diversity Contest. Romey will discuss how he has successfully applied Big Day Birding principles to herp hunting throughout West Texas while sharing stories and photographs from the field.

It's a Wild, Wild Life on the Mid-Texas Coast Part 4: Sea Turtles, Snakes & Alligators – MATAGORDA

»*Phil Huxford and Kristine Rivers, Cradle of Texas Chapter, Texas Master Naturalists*

This session will discuss some of the special reptiles that can be found along the Mid-Texas Coast, with an emphasis on the preservation efforts related to the critically endangered Kemp's Ridley sea turtle, the various species of snakes that live in our dunes, and the many alligators which are present in our area. Participants will have the opportunity to handle live animals, including non-venomous snakes and alligators, and will also learn about specific volunteer opportunities related to the topics discussed.

All Join In: Connecting game and non-game wildlife interests for conservation– NUECES A

»*Maureen Frank, Texas A&M AgriLife Extension Service*

The number of hunters has been declining over the past few decades, both nationwide and in Texas. On the other hand, participation in non-consumptive wildlife activities, such as birding and wildlife photography, has increased. What are the implications of these changes for wildlife management and conservation? This talk will discuss the history of conservation, specific benefits of consumptive and non-consumptive activities for conservation, and how to connect diverse interests to benefit wildlife.

Texas Whooping Cranes Past, Present, & Future– NUECES B

»*Raymond Kirkwood, Mid-Coast Chapter, Texas Master Naturalist*

The presentation will describe the Whooping crane and the historic causes of its decline and the struggle to recover the species. The emphasis will be on the future requirement to identify and protect the habitat required to allow this iconic winter Texan to continue to its return to abundance. The Whooping crane is a prairie wetland bird requiring large tracts of productive wetlands in both Canada, where it reproduces and on the Texas coast, where it overwinters. More awareness and advocacy along the Texas coast is needed to ensure enough habitat is set aside for continued Whooping crane recovery and for the benefit of many other species.

What's Calling from the Pond? – RACQUETBALL COURT A

»*Marsha May, Texas Parks and Wildlife Department*

“WEEEEEEEEEEEEEEEE” coming from your backyard pond. It is so loud and no matter how hard you try, you just can't seem to find the source. Could it be a frog or toad? This presentation will introduce you to the many frog and toad calls in Texas and help you with tips on identifying that backyard noisy neighbor.

Golf Course to Green Space: The Evolution of Houston's Exploration Green – CORPUS CHRISTI BALLROOM C

»*Jerry Hamby, Texas Master Naturalist, Gulf Coast Chapter & Mary Carol Edwards, Stormwater Wetland Program Specialist, Texas Coastal Watershed Program*

A lead volunteer and a stormwater wetland program specialist highlight the master plan for Exploration Green, the former Clear Lake City Golf Course that is now a 200-acre conservancy site devoted to flood control, hydrology, stormwater wetland plant and native tree planting, and habitat restoration. The presenters will discuss the organization and operation of on-site native

tree and native wetland nurseries, community planting events, and environmental benefits of native plantings and supplemental projects, including installation of bluebird boxes and bat houses. Exploration Green is an approved community service project under the Texas Waters Specialist Training program.

4:00 - 5:00

Saturday Afternoon 1 Hour Sessions – Chapter Project Fair Sessions

Quiz Bowl IV– NUECES A

»*Richard Heilbrun, Texas Parks & Wildlife Department*

Join us for a fun-filled, low-stakes, but high energy trivia contest battle between the chapters! Participants will compete for prizes 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, battle of wits, or throw-down of who can talk the biggest game. Teams are encouraged this year. Bribes are welcome, but not guaranteed to work in your favor.

Roundtable Discussion: VMS System Administration for Chapter Leaders– NUECES B

»*Cheryl Foster, Dale Hughling, Brad James, Clyde Camp, TMN VMS Team*

This roundtable will focus on resources available to help the chapter leadership manage their hour's record keeping and reporting. Additionally, chapter VMS administrators are invited to share their experiences and offer suggestions on improving the process. Attendees will have the opportunity to discuss Federal Grant auditor requirements and reporting implications of the VMS, and bring up their chapter's questions. Other chapter leaders may want to attend to gain insight into the VMS conversion process and learn from the experiences of other chapters. Please note that during the conference, there is a kiosk booth in the Commons Area staffed by the VMS Implementation Team to answer questions and demonstrate program features.

Recognizing Youth Research in Texas Conservation– COPANO

»*Lynn Seman, Rolling Plains Chapter, Texas Master Naturalist*

Participants in this session will hear how our chapter sponsored a "Special Award" at the 2017 Texas State Science and Engineering Fair in San Antonio. Participants will learn how they can encourage young scientists across the state by volunteering to be a judge at the state science fair for the Texas Master Naturalist Conservation Award. Pen or pencil needed.

Building Community Backbone: Bringing Back Blackland Prairie Habitats that Matter – MATAGORDA

»*Susan Gregory Drechsler, Friends of White Rock Lake, North Texas Chapter*

Setting Goals to Success: An A-Z startup overview of a nonprofit - park and recreation department partnered effort to develop a focused and funded rescue program to save the rare Blackland Prairie at White Rock Lake.

Master Naturalist Training at the Texas Department of Corrections Ellis Unit Horticulture Program; A Pilot Project– LAGUNA MADRE

»*Scott Ball, retired, Heartwood Chapter, Texas Master Naturalist*

The Heartwood Chapter led a "pilot" project to provide Master Naturalist training at the Texas Department of Corrections (Ellis Unit) near Huntsville, TX. This TDC unit has an ongoing horticulture associate degree program run by Lee College (Baytown, TX). The class requested this instruction after being involved in raising American Water Willows as part of the Lake Livingston Friends of Reservoir conservation project which is restoring aquatic plant life back into the lake. Results of this pilot program, approved by the TMN state leadership, will be presented along with challenges, accomplishments and results.

Gosh, can we keep this up for 10 years? – ARANSAS

»*Ron Diderich, retired, Pineywood Lakes Chapter, Texas Master Naturalist*

Three years into our ten year project, we have transitioned from a project idea and strategy into an organized, sustainable project. We identified challenges in leadership, volunteer management and recruiting, funding and accounting, and clarification of long term objectives. This presentation will address our approach to these challenges and some of our early successes. The project will not survive a recess and must not be too dependent on a key individual. We will share our thinking, and contrast the differences between this project and the other projects our chapter has undertaken.

Junior Master Naturalist Program in Lost Pines– BAYVIEW

»Kathryn Hedges & Kim Iberg, *Lost Pines Chapter, Texas Master Naturalist*

The TMN - Lost Pines Chapter established a Junior Naturalist program this year at Cedar Creek Intermediate School in Bastrop, TX, in conjunction with Beyond the Bell, an after-school program non-profit. We want to share our experiences with others.

This presentation will focus on the "How to..." and help other explore ways to set up a Nature oriented, yet school-related, informal youth programs. We will also provide a workbook for participants to use as a model of our collaborative effort that involved the school administration, several teachers, parents, Beyond the Bell Program, and the Texas Master Naturalist - Lost Pines Chapter and its members.

Objectives:1. Share our experiences with others, 2. Provide a model that includes things such as sample lesson/meeting agendas & plans, letters to parents, flyers, and administrative procedures for volunteers, 3. Demonstrate sample hands-on/ outdoor activities.

- 5:00 - 6:00 **TMN Social, Year in Review, and Family Reunion with Cash Bar, Project Fair Display Judging** *Chapter Project Representatives stand with project displays to answer judges questions
Preassembly Hallway & Corpus Christi Ballroom A
- 6:00 - 7:00 **Dinner and Keynote Presentation**
Corpus Christi Ballroom B & C
State of the Gulf
»Larry McKinney, Executive Director, Harte Research Institute for Gulf of Mexico Studies
- 7:00 - 8:30 **TMN Awards Ceremony**
Corpus Christi Ballroom B & C
- 8:30 - 10:00 **Black Light Station for Night Flying Invertebrates**
Meet in First Floor Lobby, Station Set up on Front Lawn of Hotel
- 9:00 **Silent Auction Bidding, Project Contest and Popular Vote Contests All Close**
Preassembly Hallway & Corpus Christi Ballroom A
- 9:00 – 10:00 **Silent Auction Winners Check Out** *Additional check out time in morning
Preassembly Hallway & Corpus Christi Ballroom A
- 9:00 – 12:00 **Social Time Campfire, Music Gathering**
Second Floor Balcony accessed through Pool Area
*If inclement weather, moved to Conference Hallway

Sunday October 22nd, 2017

- 6:30 - 8:00 Chapter President's and Chapter Advisors Breakfast
*(Or Chapter President Designee)
Republic of Texas Bar & Grill, on top floor
- 7:00 - 8:00 Conference Breakfast and Chapter Officers/Chairs Roundtables
Corpus Christi Ballroom B&C
- 8:00 - 10:00 Texas Master Naturalist Bookstore and Swap Shop Open
Silent Auction Winners Check Out
Corpus Christi Ballroom A and Conference Hallway
- 8:00 - 8:45 Annual Meeting Contest Awards & Special Presentations
Corpus Christi Ballroom B&C
Conserving the Quintessential Native Texan
»Mike Tewes, Department of Animal, Rangeland, and Wildlife Sciences, Texas A&M University-Kingsville
Mike Tewes will discuss his 35 years of work on the conservation issues threatening the continued survival of a Native Texan.
- 9:00 - 12:00 Sunday Morning 3 Hour Sessions
Geology of Texas: Rocks, Soils and Water– NUECES A
»Christopher Mathewson, Department of Geology, Texas A&M University
This 3-hour course is designed for students who are not geologists, but are interested in the physical environment that controls and impacts our natural world. The course will discuss the geologic evolution of the State of Texas, showing where and why the various rock units were formed and how the bedrock impacts both the soils that develop on the surface and the groundwater that flows below. We will discuss the rock cycle and see how all the geologic processes are related as “Mother Nature” naturally recycles her Earth materials. Understanding how rocks were formed and the conditions that existed when they were formed provides you with a fundamental understanding of the foundation of the environment. Critical to that understanding are the soils that develop on top of the “bedrock” because they reflect the parent material, climate, topography, organisms and time of formation that are associated with your site of interest. The county soil survey for your area is a very valuable and detailed source of information about the area. Finally, it rains and where does this water go? The hydrologic cycle and hydrology associated with your site of interest is critical in influencing the soil development and vegetative cover in the area. Surface water causes erosion, sediment transport and deposition of the soil and weathered materials thus producing a new environment. Rainwater that infiltrates into the ground and moves between the soil particles or along bedding planes or in fractures and faults creates the groundwater system. Surface and groundwater impacts the natural world that we live in. Registered students will receive a copy of the course notes and a Texas Highway Geologic Map as a reference.
The Armchair Botanist: Engaging the Online Community to Improve our Knowledge of the Texas Flora– MATAGORDA
»Tiana Rehman, Botanical Research Institute of Texas
While more than 3 million botanical specimens exist in Texas herbaria, only a small fraction of these are digitally accessible for observation or inclusion in scientific studies. Producing images of these specimens is the first step in liberating these data; the second step is engaging our citizen science community to help us extract the label information from these images. Bring your computer and join us as we participate alongside organizations around the globe in the Annual Worldwide Engagement in Digitizing Biocollections (WeDigBio) event. We will be extracting data from historical Texas specimens and doing some virtual botanizing!
Plant Identification by Family Association and use of Written and Online Botanical Keys– BAYVIEW
»Ricky Linex, USDA Natural Resources Conservation Service

Participants will gain an understanding of how Texas plants have been collected and identified through the past 200 years. Plants will first be identified by use of Family Associations and then followed by written and online botanical keys. Participants will learn how to quickly key out plants arriving at the proper identification. Session will be indoors, copies of the keys needed will be provided for all. Magnifier, tweezers, and knife would be useful but not required. Handouts of Family Associations and list of useful plant ID books will be provided. Never again will you fear the challenge of keying out a plant.

Finding Common Ground and Advancing Positive Conservation Outcomes in Environmental Issues— CORPUS CHRISTI BALLROOM C

»Richard Heilbrun, , Ben Eldredge, TPWD; Craig Childs, Hill Country Master Naturalist Chapter and Jaime Gonzales, Katy Prairie Conservancy

Texas Master Naturalists, as both knowledgeable citizens and responsible Americans, are called to use sound science and common ground in reaching our audience members, friends, colleagues, and neighbors. As our society has embraced the language of divisiveness, how can we use our TMN skills to fulfill this moral imperative? This workshop will address this challenge by focusing on the language of effective communication, examples of successful environmental initiatives, and opportunities to advance conservation issues. Walk away with tools capable of making a difference at the local, regional, or national level.

9:00 - 10:00

Sunday Morning 1 Hour Sessions – Sessions 1A

State Parks as Training Grounds– NUECES B

»Ben Horstmann, TPWD - State Parks - Region 2

Join State Park Staff for a brief description of the types of training opportunities at Texas State Parks. Training topics include interpretation, outdoor recreation, resource protection and management, and a just about anything else! We will discuss current sites near you offering training as well as identify sites that you may want to contact. We will also discuss the types of chapter volunteer project opportunities at your local state park.

Using Your Skills & Knowledge at the Witte Museum – COPANO

»Helen Holdsworth, Witte Museum

Utilizing your skills and knowledge in a non-traditional education setting can have a positive impact on the museum visitor and help further both of the organizations missions. You will learn what types of programs the newly renovated museum offers and how you can be a part of educating thousands of museum visitors. We will also discuss any ideas you have to expand the partnership between our organizations!

Kemp's Ridley Sea Turtle Nesting Detection and Protection Efforts in Texas – ARANSAS

»Donna Shaver, National Park Service, Padre Island National Seashore

Kemp's Ridley is the most endangered sea turtle species in the world, and efforts have been underway in Texas since the 1970s to help recover the species and increase nesting by it here. Five nest detection, documentation, and protection programs are underway in Texas and Texas Master Naturalists are vital participants in all of them. Come listen to my presentation about the progress that we have made with recovery efforts for this magnificent species and some of the challenges that we face with these efforts.

TMN VMS Administrators Training 201– PARTNERSHIP BOARDROOM

»Cheryl Foster, Dale Hughling, Brad James, Clyde Camp, TMN VMS Team

Join us to review some of the more advanced features of the Samaritan TMN VMS system and procedures that coincide with the usage of the system. We will go over the process of transferring volunteers to and from your chapter. As well as handling volunteer opportunities in neighboring chapters when your volunteers join them. We'll discuss maintenance of your chapter's data. Cleaning up logbooks, opportunities and volunteer entries, and managing the Volunteer's drop-down box in eRecruiter. Advanced topics will also include along with a thorough discussion of opportunity categories, exporting data to excel and using the email functionality for logbooks entries. Do you have a need to see data in a unique way? We will show you how to create grids for your chapter. Need to modify a large group of volunteer records? We will show you how to run an 'Automation' event to make those changes.

Texas Waters: Mission-Aransas Reserve Plants, Water, and People– RACQUETBALL COURT A

»*Jace Tunnell, Mission-Aransas National Estuarine Research Reserve*

The Mission-Aransas National Estuarine Research Reserve (Reserve) is host to 5 water quality monitoring stations that collect data 24/7 for the use by resource managers, state and federal agencies, fishing guides, Texas Master Naturalists (TMN), and much more. The real-time data is easily accessible and can be used to determine short and long term changes in water quality. The data can also be used in coordination with other projects, such as vegetation monitoring, freshwater inflow science, and climate change impacts. Educating the public about water conservation, and monitoring changes in plant communities, is another goal of the Reserve. With the help of TMN, the Reserve has completed multiple projects to help reach thousands of people about the importance of water conservation and native plant communities. This presentation will focus these initiatives with TMN and dive into the real world use of water quality data from the Reserve's stations.

Smoke Signals: Reaching Our Youth, Creating a Social Media Presence & Social Media for Large Events – RACQUETBALL COURT B

»*Kristi Leonard, Kristi Kerr Leonard, Specializing in Nature Philanthropy & Education*

This session will cover the gamut from creating and building a social media presence to actually using it for a large event. Why? The future of our planet is our youth. The future of communications is social media. Youth use Social Media, so let's start reaching them! We will also cover a "Social Media Overview" to consider for your chapter, such as defining Chapter Objectives for Social Media (recruitment, excitement, increase participation, etc.), structure (define platforms, designate a volunteer per platform), support (build a team that will engage, share, brainstorm, send content ideas), longevity and Social Media Calendar (how to keep it going), and Hootsuite (a great tool for scheduling and sharing duties). Case Study: Native Plants & Prairies Day 2017 for North Texas Master Naturalists @ White Rock Lake.

10:00 - 11:00

Sunday Morning 1 Hour Sessions – Sessions 1B

Encouraging Children and Families to Learn and Love Nature– NUECES B

»*Sarah Coles, Corpus Christi Museum of Science and History*

Sarah Coles, Education Director of the Corpus Christi Museum of Science and History and Chair of the Coastal Bend Children in Nature Collaborative, will share ways to help students and children to discover the wonders of nature. She will discuss various techniques used in the museum and other informal science settings and how to explain elements of nature to children and adults alike.

Birding by Ear 101– COPANO

»*Marsha May, Texas Parks and Wildlife Department*

"Peter, Peter, Peter" coming from high above in the trees. What is that bird? This presentation is for the beginning birder interested in expanding their knowledge of the bird world through song. Learning to identify birds by their song greatly increases your bird list when in the field. You will learn handy tips on how to remember songs of many of the common Texas species and a few of the rare ones as well.

Everything You Needed to Know About Sea Turtles– ARANSAS

»*Allison Copony, –Heartwood Chapter, Texas Master Naturalist*

Information about the seven sea turtle species, which belong to a unique evolutionary lineage that dates back at least 110 million years, will be presented with emphasis on sea turtles occurring on the Texas coast. Topics will include size, diet, population, range, behavior, endangered status, how to get involved with protecting the seven species and other fascinating information about sea turtles.

Junior Master Naturalist and the "Secret Garden" – RACQUETBALL COURT A

»*Janice Ainbinder, Flour Bluff ISD*

Join us to learn about the evolution of an after school Nature Club to an amazing group of Jr. Master Naturalist who are causing a wave of excitement across our district and community! Discussion will include: Management of large numbers of students; Activities and projects; "Secret Garden"; Impacts – school/district/community/home; Growing more Naturalist – young and old. This group of Jr. Master Naturalists are a driving force and these youngsters are making a difference in the world as well as inspiring others to do the same. Kids can be our greatest assets and advocates!

An Arundo Prevention Program for Texas– PARTNERSHIP BOARDROOM

»Monica McGarrity, Texas Parks and Wildlife Department

The creeks and rivers of the Hill Country have historically provided multiple ecosystem benefits—most notably abundant clean water for fish, wildlife, water supplies, coastal bays and estuaries, and groundwater recharge. Much depends on the health of these streams, which in turn relies on properly functioning riparian areas. *Arundo donax*, an aggressive invasive plant has spread like wildfire in recent decades, taking over many riparian areas. Public awareness about *Arundo* and how it spreads is sorely lacking, yet could go a long way toward controlling the spread of this invader. This program seeks to raise awareness of key audiences uniquely positioned to help address and prevent suspected vectors of *Arundo* spread. Attendees will learn more about this invasive plant and its impact and spread as well as new educator resources for Texas Master Naturalists interested in joining the Healthy Creeks Initiative to manage *Arundo* in Texas by helping to conduct public outreach on this topic.

11:00 - 12:00

Sunday Morning 1 Hour Sessions – Sessions 1C

Orienteering for Master Naturalists– NUECES B

»Gary Chapman, Chevron, Heartwood Chapter, Texas Master Naturalist

This session will define the basics of orienteering and provide a fundamental understanding of the associated tools and techniques to determine location in the field and prevent naturalists from becoming lost. The presenters will share examples of how easy it is for even an experienced naturalist to get lost and the sobering consequences. Volunteers will learn to use the basic tools of orienteering (i.e., map, compass, altimeter, GPS), individually and together, to determine their present location and guide them to their intended destination. No specific clothing or equipment is needed to participate.

Songs and Calls of Specialty & Rare Birds of South Texas – COPANO

»Ronald Renk, South Texas Border Chapter Texas Master Naturalist

The Rio Grande Valley is visited by many rare species of birds and home to approximately 30+ species of birds found only in the 4 counties and which define the Rio Grande Valley. Their two flyways which converge in the Rio Grande Valley, the Central and Mississippi Flyways. Laguna Madre is a hypersaline lagoon, a body of water even saltier than most seawater. Many fowl migrate and live around the lagoon including 75% of all redhead ducks. Other birds in the area include the peregrine falcon, piping plover, roseate spoonbill, long-billed curlew, crane, egret and the brown pelican.

Restoring Prairie Habitat Nature's Way– ARANSAS

»Dave Powell, Blackland Prairie Chapter of TXMN

Power Point presentation to show the Wylie and Erwin Park Project and discuss what we have done and the result we are seeing and dealing with city's Park and Rec.

Bringing Nature to Public Schools - A Quail Queens' Adventure – RACQUETBALL COURT A

»Lynn Seman, Rolling Plains Chapter

Public Schools need our help! Many members in Master Naturalist groups are retired teachers from a variety of disciplines and have spent entire careers working with youth. On the other hand, some are a little afraid of working with kids, but have valuable skills to share. Our chapter decided to be brave and use the experiences in TMN to assist a local first-year teacher with a project dear to our hearts. In this presentation, we will demonstrate how your chapter can offer valuable help to area public schools, get over any “fears” associated with helping kids, and share your expertise with children who hold the future of Texas. Pen or pencil and paper suggested; no special clothing required.

Sea Beans– PARTNERSHIP BOARDROOM

»Linda Butcher, Rio Grande Valley Master Naturalist

What are sea beans? Description and identification of sea beans that can be found on the Texas coast. Where and when to find them.

12:00 - 1:00

Conference Closes (Lunch on your own)

Hotel Room Check Out Before 12:00pm *Late check out available upon request

1:00 - 5:00

Post Conference Field Session

Nature and Birding Hike at Lake Corpus Christi State Park *does not count for AT hours

»Ben Horstmann, TPWD - State Parks - Region 2

Come hike the trails and shoreline of Lake Corpus Christi State Park with park staff and interpreters. We will explore the unique habitat looking for plant and wildlife specialties of South Texas. Sturdy hiking shoes, water, sunscreen and a hat are recommended.

It's a Wild, Wild Life on the Mid-Texas Coast Field Session

»Mike Mullenweg, Brazoria County Parks Lead Interpreter/Events and Trails Coordinator

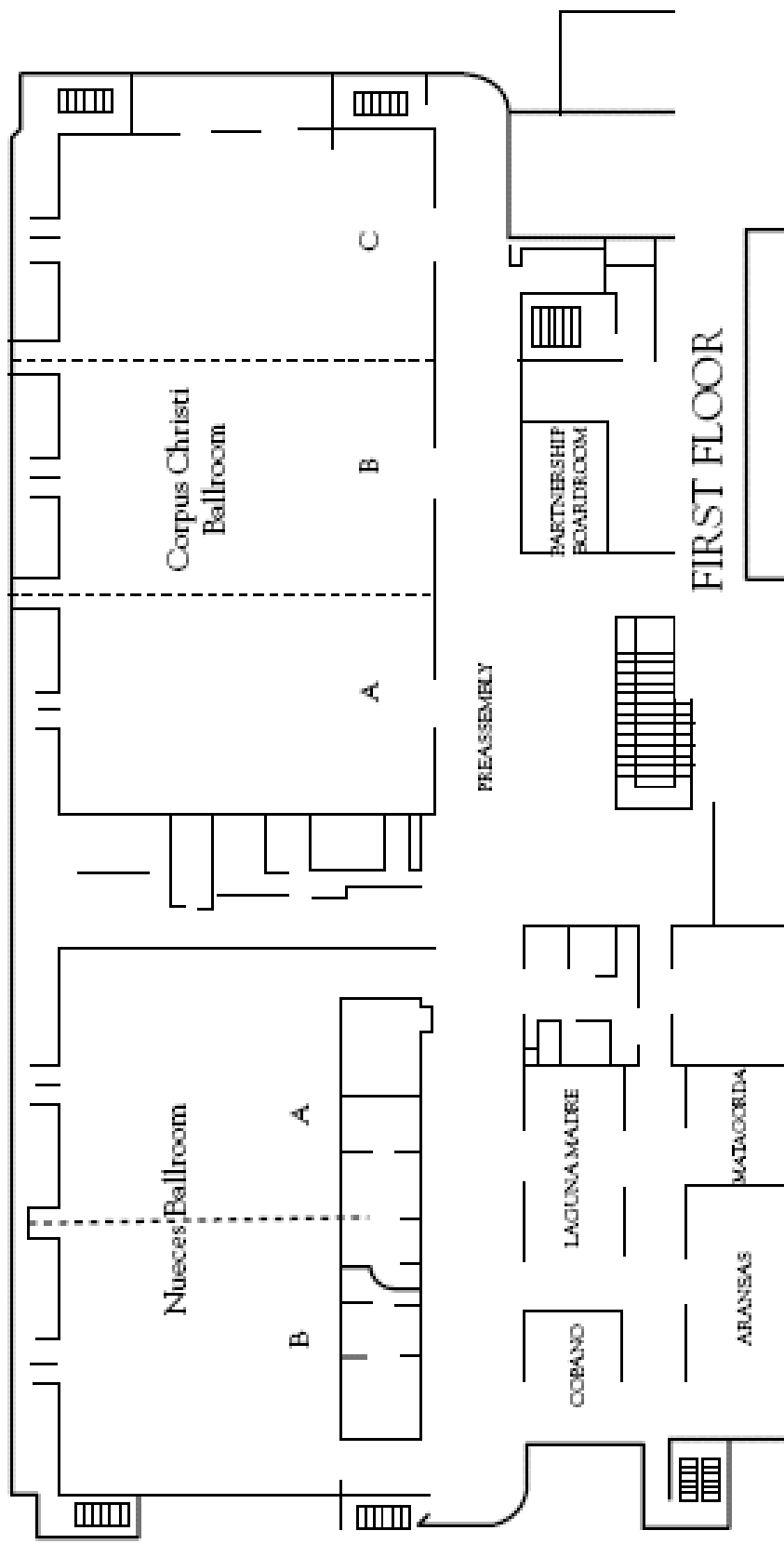
Kristine Rivers, Professional Birding Guide / Master Naturalist, Cradle of Texas Chapter

Jimmy Salinas, Master Naturalist, Cradle of Texas Chapter

Rich Tillman, Texas A&M AgriLife Coastal Marine Resources Agent and Sea Grant Agent (ret)

This special follow-up field trip is available to those who participated in any of the classroom portions of "It's a Wild, Wild Life on the Mid-Texas Coast" and will be conducted as an on-site survey of a local Corpus Christi beach (location to be determined.) Participants will assist in dragging a seining net through estuary or ocean waters, and examining and identifying the animals that are captured; digging for ghost crabs on the beach; and identifying any shorebirds, invertebrates, reptiles and flora seen. Participants should wear comfortable clothing appropriate for being in the field, including mud boots or galoshes, wear sunscreen, and bring water and/or snacks.

THIRD FLOOR



FIRST FLOOR

