

The Midden

Bald cypress by Chuck Snyder

Galveston Bay Area Chapter - Texas Master Naturalists

February 2023

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President's Corner by Pam House

Recently I was at the visitor's center of Haleakala National Park on Maui. (Yes, Christmas in Hawaii was pretty terrific.) While there I observed a surprisingly moving ceremony where two young people (strangers to me) were sworn in as National Park Junior Rangers. In addition to agreeing to respect the plants and animals of the park and telling their friends and families about what they had learned, they also pledged to learn about native species near their homes and to work to protect them. All the other tourists broke into spontaneous applause at the end of the ceremony.

When I looked up the pledge online, I found that the part promoting native species' appreciation at their home is either new or unique to the park we were visiting. In any case, what an important addition. It heartens me to think that the need for respect and protection of native species is being passed to the next generation.

The recent freeze also became a native plant learning experience for our local neighborhood. Our friend who writes the column in our community newsletter about gardening gave some advice to the local Facebook group. As folks were mourning the loss of their plants, she suggested that they should wander the neighborhood and observe which plants came through the freeze "like a champ." These, mostly native, species would recommend themselves as good choices for replacing the lost ones.

The importance of native species weaves it way through so much of what we do as master naturalists. Whether planting the Bayside Park, Attwater's prairie chicken protection, turtle patrols to protect the Kemp's Ridley, or converting a golf course into the native species celebration of Exploration Green, our volunteer hours make a huge difference in creating public awareness of native species' benefits on many levels.

As we begin a new year of GBAC, we will continue to emulate the adaptability of native species. We will have hybrid chapter meetings to accommodate both in-person and at home participation. We also may try some different times of day. All committee and board meetings are open to you all. Most are being conducted by Zoom because we discovered the lower carbon footprint and shorter time commitment of administrative work, left more time to do the things we enjoy in the field.

I hope your New Year is getting off to a wonderful start. I look forward to seeing you at the chapter meeting on February 2. It is hard to believe that I will be starting my third (and final) year as president. It continues to be a joy.



Next Chapter Meeting

February 2

All Together Now - Bridging Conservation, Environmental Justice, and Indigenous Knowledge for a Healthier, Wilder World

By

Jaime González
Nature Conservancy

Meeting format
to be determined

Women in Nature: Rosalie Barrow Edge by Meade LeBlanc

You have probably heard that well-behaved women seldom make history. This phrase could have been written with Rosalie Barrow Edge in mind. Rosalie was born in New York City in 1877, the daughter of a wealthy accountant father, who was also a cousin of Charles Dickens, and a mother who traced her lineage to the founder of the Dutch West India Company. Her first foray into activism was as a suffragist in New York, starting in 1915. She gave speeches, wrote pro-suffrage pamphlets and other activities for the cause, playing a significant role in the passage of the Nineteenth Amendment in 1920, which granted women the right to vote. The lessons she learned through that campaign took her into her future work.



Photo courtesy of Adventure Journal, LLC

After the women's suffrage cause was won, still in New York City, Rosalie became a passionate birder, accumulating a life list of 804 species. She often birded in Central Park, where she joined other amateur birdwatchers as well as ornithologists and biologists from the American Museum of Natural History who spent their lunch hours in the park.

In the late 1920s, she was horrified to discover that 70,000 bald eagles were slaughtered in the Alaskan Territory, but that existing conservation groups didn't care because bald eagles weren't rare at the time. Then, in 1929, she read a pamphlet written by Willard Van Name called *A Crisis in Conservation*. The pamphlet was particularly critical of the National Association of Audubon Societies (NAAS) for allowing hunting on the land it owned in Louisiana. As a life member of that organization, Rosalie was determined to reform the wildlife conservation movement. She started by attending the 25th annual meeting, taking a seat in the front row, and challenging the NAAS President to explain the

allegations outlined in the pamphlet. "What answer can a loyal member of the society make to this pamphlet?" she demanded, as the men sat speechless. Finally, the society founder and president T. Gilbert Pearson abruptly ended the meeting, declaring that Rosalie had ruined it and used up all the time allotted for other activities.

She then formed the Emergency Conservation Committee, dedicated to preserving all wildlife, whether it was rare or not. She utilized the skills she acquired during the suffrage movement to write pamphlets on wildlife facts, attempting to dispel myths leading to the mass killing of many species of wildlife. She berated the members of the NAAS for supporting bounties on bald eagles in Alaska, and not honoring their commitment to conservation. In a little over three years, she had hounded the officers of the NAAS from their posts.

Later, in 1934 after learning of a Pennsylvania tradition where thousands of birds of prey were killed for sport in the Appalachian Mountains, Rosalie first tried to get the NAAS to purchase the hunt site but failed at that attempt. She then personally raised the funds and purchased the property, stopped the hunt, and turned it into the world's first preserve for birds of prey. The area is now known as Hawk Mountain Sanctuary, where an average of 20,000 eagles, hawks, and falcons migrate through each year.

The research and bird counts done at Hawk Mountain have proven to be very valuable in bird of prey conservation. Rachel Carson made observations at Hawk Mountain, which resulted in her book *Silent Spring*, which helped link the decline in juvenile raptors to the use of DDT and the dangers of indiscriminate use of pesticides.

Rosalie was also involved in the campaign to preserve 8,000 acres in Yosemite National Park which helped to create Olympic and Kings Canyon National Parks. She influenced organizations like the Sierra Club, Nature Conservancy, and National Audubon Society, which learned from and made changes as a result of her activism. She was an inspiration to environmental activists of her day and was described by her friend and collaborator Willard Van Name in a 1948 New Yorker magazine profile as "the most honest, unselfish, indomitable hellcat in the history of conservation".

When she died in 1962, the Emergency Conservation Committee ceased to operate, but Hawk Mountain Sanctuary still exists to save birds, conduct research, and run educational programs. She continues to be an inspiration to "hellcats" of all ages working to save wild things and wild places.

Owls' Silent Flight by Rebekah Gano

One of my favorite demonstrations at Armand Bayou Nature Center features bird wings, where participants hear the whoosh of the roseate spoonbill wing and the barely audible puff of the owl wing. The wings are a similar size, but the difference between the stiff spoonbill feathers and the soft owl feathers changes the sound significantly. Visitors leave realizing that owls have special feather adaptations that allow them to silently hunt their prey at night.

Lately, I have found myself asking how those soft feathers really work. In a book series that I have been reading to my children (*The Guardians of Ga'Hoole* by Kathryn Lasky), owls often adjust their "plummels", which is the owls' word for the feathers along the edges of their wings; it made me ask: how much control do owls really have over their feathers? It turns out that all birds adjust their feathers frequently.

Avians have hairlike feathers called filoplumes for sensing which feathers need to be adjusted. These filoplumes usually consist of just a very fine shaft tipped with a few barbs, and they are covered by other feathers. Scientists believe these special feathers sense pressure and vibration changes in addition to sensing the location of nearby feathers. Thus, a bird can purposefully shift its feathers in many ways, whether it is making changes to its flight or fluffing up against cold weather.

Like other birds, owls are covered with large contour feathers and have a layer of smaller feathers called semiplumes. Unlike most birds, owls do not have many downy feathers. Instead, their larger feathers have a downy-like base. These soft barbules trap air as well as soften sounds.

Owl faces include other specialized feathers. Around the beak and eyes, most owls have small bristle feathers. Bristles are thin and stiff, much like eyelashes. Additional feathers near the beak are more like tendrils, increasing the sense of what the owl is touching. Those with facial disks have stiff feathers that form the disk. The feathers can be adjusted slightly to direct sound and light as the owl hunts.

Some owl species use ear tufts, also known as plumicorns, for displaying their moods and for camouflage. (They have no connection to owls' hearing abilities; owls' ears are located on the sides of their heads.) Even on their legs and feet, most owls have specialized feathers. Some keep owls warm and quiet their movements, while others likely serve as tentacles for sensing prey.

According to Audubon.org, owls that hunt at night are usually the most silent fliers. Quiet wings not only keep

prey from hearing the owls, but they allow the owls to hear their prey over their own wingbeats - very important when light is low. An owl's wing-shape contributes to the inaudibility and aids the owl as it hunts. Long, broad, rounded wings provide a large surface area and allow the bird to fly without superfluous flapping or loss of energy. Consequently, most owl species fly slowly and glide often as they hunt.

Scientists have long known that the soft trailing-edge fringe softens sounds of owl wings. More recently, they have studied the leading edge of owl wings. Along this front edge, they have discovered a comb-like surface that cuts noise. The leading-edge barbules stand up in short wave-like clumps and are called flutings or fimbriae. The flutings break down air turbulence, making the flight disturbance hard to hear. According to Deane Lewis of [The Owl Pages](#), scientists are still debating if the flutings simply muffle the sound or if they shift the sound to a higher frequency that most mammals, including humans and prey species, cannot hear.



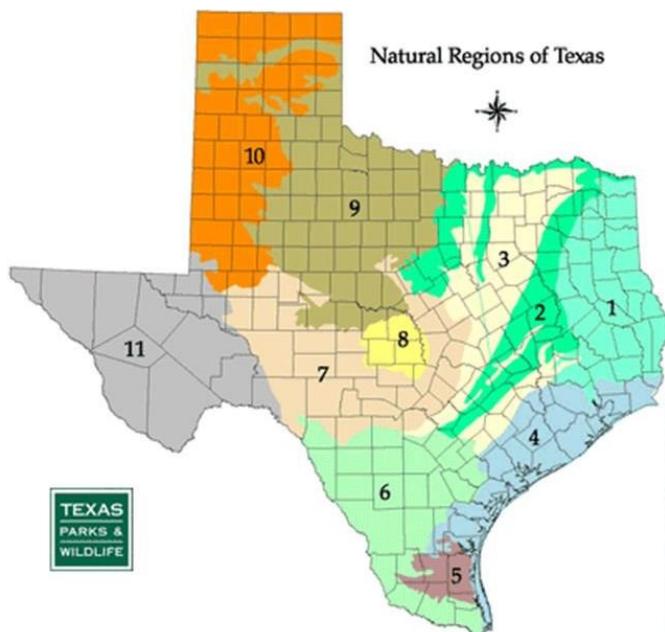
Close up image, courtesy of National Audubon Society, showing "comb" on the front of the wing and "fringe" on the trailing edge of the wing.

As the physics behind owls' flight adaptations intrigue scientists, the amazing birds will continue to awe naturalists and inspire writers. Owl feathers work in complex ways, allowing them to sneak up on prey, hear their prey over the sounds of their own wings, and sense many things in their environment. If only we could know what it feels like to adjust our "plummels" and soar silently through the night sky.

2023 Re-Cert Pin: Texas Ecoregions by Diane Humes

Texas is huge! Totalling 268,596 square miles, it stretches almost 1,000 miles in every direction. The biodiversity is tremendous in this vast, highly varied territory, where eastern swamps meet western deserts and northern cold challenges southern subtropical climates, elevation begins at sea level on the coast and climbs, mostly westward, to 91 mountain peaks higher than one mile. Our 2023 TMN re-certification pin celebrates the 11 Ecoregions of Texas.

When anyone asks you about your shiny new pin, here is some of what you might say:



1. Pineywoods
2. Oak Woods & Prairies
3. Blackland Prairies
4. Gulf Coast Prairies & Marshes
5. Coastal Sand Plains
6. South Texas Brush Country
7. Edwards Plateau
8. Llano Uplift
9. Rolling Plains
10. High Plains
11. Trans Pecos

In the east, the most northern **Pineywoods** region is home to the endangered Red-Cockaded Woodpecker, water moccasins, American alligators, catfish, the

Southern Short-Tailed Shrew and Rafinesque's Big-Eared Bat (editor's favorite!). Native vegetation consists of Shortleaf, Longleaf, and Loblolly Pines, oak, ash, hickory, gum and cottonwood trees, with orchids in the understory, carnivorous pitcher plants and sundews in wet areas, and native pipeworts. Visit and explore this habitat in the Big Thicket Nature Preserve and four national forests.

Moving south, we inhabit the **Gulf Coast Prairies and Marshes**, home to the greatest remnants of coastal tallgrass prairie, mostly covered by the Big Five grasses: big bluestem, eastern gama grass, switchgrass, yellow indiagrass, and little bluestem. The grassland is a rich environment for many small mammals plus the bobcats and coyotes that eat them, grassland sparrows, meadowlarks, warblers, Northern bobwhite quail, sandhill cranes, king snakes and turtles. Coastal salt marshes, beaches and dunes along the Gulf of Mexico create another rich ecosystem, home to shorebirds, fish, shrimp and oysters and, notably, nesting for endangered Kemp's ridley sea turtles and whooping cranes. This is our place, represented by re-cert pins: Kemp's ridley sea turtle (2017), grass shrimp (2007), and lightning whelk (2022).

Toward the southern tip of coastal Texas the **Coastal Sand Plain** is a dry, level area of sandy wind-blown soil. It is ideal ranch country - home to the King Ranch - with sparse human population.

The **Oak Woods and Prairies**, west of the Pineywoods and often called Cross Timbers, is divided in two sections - north-south bands of prairie interspersed with oaks. This transitional forest of post oak, blackjack oaks, hickory and water oaks is best seen at Lake Somerville State Park, the Post Oak Preserve in Seagoville, Tandy Hills Natural Area in Fort Worth, which protects the native prairie with more than 500 native wildflower and plant species, and the 750-acre Bob Jones Nature Center and Preserve in Southlake. The first TMN re-cert pin in 2002 was the post oak.

The **Blackland Prairies** feature a rich and deep black gumbo soil stretching in two parallel bands west of the **Oak Woods and Prairies**, with remnant tallgrass prairies, seen at Clymer Meadows Preserve, Parkhill Prairie, Cedar Hill State Park and Rosehill Park. Blackland prairies are famous for bluebonnets (2015 re-cert pin).

The rolling hills and flat plains of the **South Texas Brush Country**, extending to the southern tip of Texas, once were grasslands interspersed with trees, but are now characterized by thorny shrubs and cactus. The land is home to semi-tropical species from Mexico, desert species of far western Texas, and grassland species that

range northward. Visit a thorny acacia scrub forest at Choke Canyon State Park and view amazing spring wildflowers. Re-cert pins featured prickly pear cactus (2006) and ocelot (2018).

In the center of the state is the **Edwards Plateau** - the Hill Country - known for the limestone rock creating springs, caves, stony hills and deep canyons. Visit Balcones Canyonlands National Wildlife Refuge and Inks Lake State Park to find the natural habitat of this region. Several creatures from this region are re-cert pins: Texas salamander (2009), Golden-cheeked Warbler (2019) and Guadalupe bass (2016) -- To learn more about past pins, check out the chapter website and the Midden archives.

The **Llano Uplift** is a dome of Pre-Cambrian igneous and metamorphic rock in the center of the **Edwards Plateau**. Most of us have visited its forests, woodlands, savannas and rock outcrops at Enchanted Rock State Park.

Moving north, find the **Rolling Plains** - a land of gently rolling hills and flat grasslands where many rivers get their start and have cut deep canyons, home to several species more common in the Rocky Mountains. Visit Lake Meredith National Recreation Area to experience the shortgrass prairie, especially in spring for wildflowers.

The **High Plains** are the flat plateau on top of the Caprock Escarpment. Preserved at Buffalo Lake and Muleshoe National Wildlife Refuges, the shortgrass prairies were once home to huge herds of bison and pronghorn antelope and vast prairie dog towns. Visit Caprock Canyons State Park to see the State Bison Herd, descended from a handful of calves saved in 1876 by Charles and MaryAnn Goodnight. and Whiteside Museum in Seymour for Lower Permian vertebrate fossils.

The most complex ecoregion of Texas is the **Trans-Pecos**. See the desert grassland valleys, yucca and juniper savannas, pinyon pine and oak forested mountains and canyons of two national parks - Big Bend and Guadalupe Mountains - as well as Franklin Mountains and 89 state parks, historic sites and natural areas. With few people, skies are dark, "big and bright!"

As mentioned above, Texas is large and diverse. The road from El Paso to Texarkana is 814 miles long - crossing at least 7 ecotypes. So what? At the State Meeting the logic was: the human population in Texas is growing fast with homes and infrastructure needed; most of the land is owned by a small percentage of people, who are aging; land ownership will transfer soon, but to what end? How can we maintain good stewardship of our habitats? What about our water supply? What will we have if we do nothing??

As master naturalists we can spread the word about Texas' many natural wonders. We can help others to know what we have, starting by knowing our own backyard. But, we will all need to pitch in. Although master naturalist chapters are well-represented in the cities, High Plains, Rolling Plains, and Trans-Pecos ecoregions have chapters spanning up to 26 counties! And swaths of East Texas, South Texas and the Edwards Plateau do not yet have chapters. So, earn your hours and get to wear your new pin. And, you can always start planning road trips to see Texas diversity for yourself! Spread the word of our natural wonders.

Note: Texas Ecoregions vary; TPWD lists either 10 or 11 regions. The State Comptroller, however, counts 12 economic regions!

2023 Board of Directors

Elected	
President	Pam House
Vice President	Gene Fisseler
Treasurer	Meade LeBlanc
Secretary	Cynthia Hughes

Training Class Representatives	
Spring 2022 Class	Vivian Allen
	Lisa Hardcastle
Fall 2022 Class	Abhi Prasad
	Laura Clark

More information can be found at <http://txmn.org/gbmn/board-of-directors/> .

Appointed	
Volunteer Service (VS) Projects Director	Jo Monday / Kathy Tamer
Advanced Training (AT) Director	Mike Petitt
Membership Director	Patty Trimmingham / Tracy Walpole
Spring Class Director	Diane Humes
Fall Class Director	Gene Fisseler
Communications Director	Mary Doberstine
Sponsor	Julie Massey
Past President	<open>
State Chapter Rep.	Pam House
Justice, Equity, Diversity, and Inclusion Director	Mohammed Nasrullah

Member Spotlight: Wayne O'Quin by Meade LeBlanc

New class members have seen him arriving early, wagon in tow, carting snacks and setting them up at the back of the training room. Wayne knows that food is a natural icebreaker and a fun way to meet new class members. He, along with wife Alice, have made it a point to “meet and greet” this way since 2017, shortly after Wayne joined the chapter in 2016. Not only that, but he has been a mentor each time. This is just one way that he has demonstrated his dedication to educating the next generation of volunteers.



Photo by Wayne O'Quin

Camp Wild is another of Wayne's passions. He has volunteered there for the past 4 years and looks forward

to spending time with the children. Last year, Wayne said, there were 56 4th graders and 71 volunteers, most of whom are Texas Master Naturalists, which shows the level of dedication by the chapter to make sure the campers have a great experience.

Wayne is active with the Friends of Galveston Island State Park, helping the park rangers with beach and bay walks and prairie restoration. He has also been involved with Galveston Bay Foundation's water sampling program in Jamaica Beach. Lately, Wayne has been making appearances as “Sharky” during Beach Heroes programs.

Reflecting on those who helped Wayne when he first joined the chapter, he mentioned Julie Massey, the chapter liaison, who always makes things go well, as well as Maureen Nolan Wilde, who was chapter president at the time. He also acknowledged Lynn Smith, who recruited him for serving on the Friends of Galveston Island State Park board and for Camp Wild.

Wayne was surrounded by nature as a child, growing up on a farm in Mississippi with a stream running through it, where he could fish, grow crops, and learn about animals. As an adult, he enjoyed fishing and duck hunting, but it wasn't until retirement that he really had the time to spend outdoors.

With all the news about the future of the planet, and concerns about climate change, biodiversity, and the like, Wayne wishes that more would be done. That's one reason he is passionate about educating young people, so they can pitch in and help. And it's also the reason he is happy to be doing his part, and working with others like him, who care about the environment and the future that will be left to our children and their children.

Treasures of the Bay Recipients 2022

Each year our chapter recognizes outstanding service and contributions to natural resource restoration and education efforts with the “Treasures of the Bay Awards.”

The recipients recognized at the December chapter meeting are:

Non-Profit Award

Native Plant Society of Texas - Clear Lake Chapter

Beth Cooper Service Award

Robert Mason
Tracy Walpole

Dick Benoit Leadership Award - *The Midden* Team

Diane Humes, editor
Madeleine K. Barnes
Lana Berkowitz
Verva Densmore
Sheron Evans
Rebekah Gano
Meade LeBlanc
Carolyn Miles
Chuck Snyder

Sara Snell Education Award - Chris Anastas

Chapter Service Awards

Gene Fisseler
Cindy Howard
Cindy Liening
Emily Morris

Making a Difference Awards

Madeleine Barnes
Davis Clay
Joanna Mendoza
Maureen Nolan-Wilde
Patty Trimmingham

Heritage Book Study - Review of *The Man Who Planted Trees: Lost Groves, Champion Trees, and an Urgent Plan to Save the Planet* by Madeleine K. Barnes



Are you a lover of trees? Hard not to be in awe when you see and touch them. If so, you may be interested in learning more and about one man's massive mission to save the "best" examples of many species that are under attack or endangered and to propagate them for posterity.

Jim Robbins, the author, is a science and environmental writer and an enthusiastic tree lover. He has written several books and writes for numerous and varied publications. While not a scientist himself, he has documented the quest of an ordinary, non-scientist, nurseryman named David Milarch to save trees with his Champion Tree Project. His book takes you on a long and arduous search, begun years ago, to locate the oldest and healthiest trees and then clone them in order to save them, the forests, and the ecosystem. This journey in the book is fraught with setbacks and successes. Robbins introduces others along the way who are scientists and forestry experts providing facts, history, and current knowledge about trees as remediators, filtering and treating the air, absorbing carbon, and removing pollutants from water.

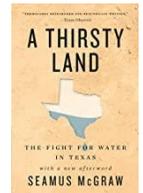
Robbins describes Milarch, with all his flaws, including some "woo" tales of visions that are the basis of his mission to save the trees. I would not let that put you off from reading this intriguing book. Robbins has written a very readable book, focusing on what ordinary people and scientists can contribute to stewardship and how they can effect changes in conservation. We also see how we can advance our learning while making a difference one tree at a time. I hope you consider adding this one to your reading list.

News about the Zoom Heritage Book Study AT's: Cheryl Barajas is the new Facilitator for the book study beginning January 2023. Also, the time has changed from 10am to 1pm to be more convenient for you to participate and earn AT hours. Please plan to continue reading, learning, and discussing books with your fellow members at the book study AT's in 2023.



Our next Zoom AT will be held on Monday, February 6, at 1pm to conclude our discussion of *Nature's Best Hope: A New Approach to Conservation That Starts in Your Yard* by Douglas W. Tallamy. We will be discussing the second half of the book, pages 125-230, Chapters 8-11, including the Remarks and FAQ's.

The following Zoom AT will be on Monday, March 6, at 1pm to begin our discussion of *A Thirsty Land: The Making of an American Water Crisis* by Seamus McGraw with pages 1-134, which covers the Prologue and Chapters 1-8. If you want to join us for either or both AT opportunities, please contact Cheryl Barajas at cherylbarajas9@gmail.com to be added to the list for additional information and to receive the Zoom meeting link and password.



We welcome your participation each month for two hours on the first Monday of the month starting at 1pm for these AT meetings. Please note that we welcome anyone to participate whether you are TMN certified, recertified, or just want to remain a chapter member. We look forward to seeing you and let us know if you have read any good naturalist books lately. Happy trails!

**World
Wetlands Day**
2 February 2023



It's time for wetland restoration

The Midden Deadline

for the next issue

February 27