Whooping Cranes by Nancy Saint

Galveston Bay Area Chapter - Texas Master Naturalists April 2019

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The Great Monofilament Adventure

By

The Monofilament Team
GBA Master Naturalists

At
Extension Office*

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Greetings fellow naturalists!

It is that time of year again where the chapter really starts to swing on all cylinders. I hope you all share in my enthusiasm as this very wet and rainy season, hopefully, begins to taper and spring brings the multi-dimensional opportunities for stewardship and outreach that makes us the well-rounded chapter of which we are so proud! As of this reading, the spring training class members will be nearing the halfway point of their curriculum. Please continue to support this worthy and enthusiastic bunch in every way possible.

Opportunities to volunteer abound in preservation and restoration at all of our work locales. A short list to keep in mind would be Armand Bayou Nature Center, Environmental Institute of Houston at UHCL, Texas City Prairie Preserve, Sheldon Lake, San Jacinto, and Galveston Island State Parks, and Exploration Green. Plastic pollution and other refuse that diminish the environment are under attack by the P3 initiative and its newer arm, Shoreline Cleanup by Kayak. Citizen science hawk watch has begun, and if you pay attention closely, bird island nesting is underway, and has its own volunteer opportunities.

Which brings me to my persistent message *du jour*. Our communications team works very hard to keep this chapter informed and involved on all topical issues. Please do read all of your Constant Contact email! Please visit our Facebook page for news, photos, and fun updates. And by all means, visit our website often, and spend some time there. Also, remember to read The Midden!

Chapter Newsy Notables:

1. Our newly re-formed green team is up and running, as witnessed at the chapter meeting, ATs, and the first training class. Thank you all.
2. INaturalist's City Nature Challenge is around the corner, specifically April 26-29. A worldwide friendly citizen science species count competition. Please familiarize yourselves and participate! Details:http://citynaturechallenge.org/.
3. And lastly, there is a regional buzz about the North American Prairie Conference. It is held every two years, beginning in 1968. This is the 25th Anniversary and only the second time in Texas. This 2019, it is in Houston, headquartered at UHCL. This is big! Please consider being involved in some way! Details:www.northamericanprairie.org.

Prairie Fever - Catch it!

Wetland Wanderings: Ballparks and Other Parks by Lana Berkowitz

If you really stretch, you can find a way to combine baseball and wetlands in a Wetlands Wanderings column, especially if you emphasize wanderings.

A potting shed buddy at Sheldon Lake State Park completed a tour of all the Major League ballparks last year. Paulette Pittman of the Gulf Coast chapter and her husband were still working when they started going to ballparks about 11 years ago. During their trips, they went to nearby parks and other tourist sites. "It's a great way to see America", said Paulette, now retired.

You can do the same thing on a minor league level in Texas this baseball season. With a little planning, you can hit all the Triple-A and Double-A ballparks this summer and strike off some must-see nature sites on your list.

Image courtesy of MiLB.com

Here are some ideas to get you started. When you plan your itinerary, check the teams' schedule and be aware of park closures, hours and admission costs.

Triple-A Pacific Coast League

Round Rock Express: Houston Astros' minor league affiliate plays at the Dell Diamond.

Round Rock is surrounded by Hill Country outdoor opportunities. In the city itself, check out Memorial Park to see the town's namesake. Yep, there's a round rock in Brushy Creek. The rock was used a marker for a low-water crossing for cattle drives and migrating settlers. Chisholm Trail Crossing Park commemorates the route with sculptures and historical markers. At dusk a colony of Mexican Free-Tailed bats emerges at the McNeil Overpass, intersection of Interstate 35 and McNeil Road.

El Paso Chihuahuas: San Diego Padres' affiliate plays at Southwest University Park.

Franklin Mountains State Park and Hueco Tanks State Park will keep you busy before game time. Also schedule time to see Rio Bosque Wetlands Park. The 370-acre city park along a former bend of the Rio Grande is managed by a partnership led by a University of Texas at El Paso environmental resource team.

San Antonio Missions: Milwaukee Brewers' affiliate plays at Nelson W. Wolff Municipal Stadium.

The Missions team is named for the Alamo and four churches that are part of the San Antonio Missions National Historical Park. Government Canyon State Natural Area has hiking, biking, camping and dinosaur tracks. There are several city parks, with Friedrich Wilderness, Eisenhower, and Comanche Lookout being among the favorites. For a wetlands connection, visit Mitchell Lake Audubon Center, which is touted as one of the best spots for birding in San Antonio.

Double A Texas League

Corpus Christi Hooks: Houston Astros' affiliate plays at Whataburger Field.

Nearby state parks are Mustang Island and Lake Corpus Christi. Oso Bay Wetlands Preserve and Learning Center, a 162-acre nature sanctuary, has two miles of walking trails and nature center with wetland exhibits. The South Texas Botanical Gardens & Nature Center features a butterfly house, parrots, themed gardens and trails through native mesquite forest.

Amarillo Sod Poodles: San Diego Padres' affiliate plays at Hodgetown.

The new team with a ridiculous name (an apparently beloved old-fashioned name for prairie dogs) plays just up the highway from fabulous Palo Duro Canyon State Park in Canyon. The Souncy Hiking Area is near the Wildcat Bluff Nature Center, a smaller natural area.

Frisco RoughRiders: Texas Rangers' affiliate plays at Dr Pepper Ballpark.

Beavers Bend Park, is a basic city park, but if you go up across the state line you can visit Beavers Bend State Park along the shores of Broken Bow Lake and Mountain Fork River in Broken Bow, Okla. The Colony Shoreline Trail travels along the edges of Lewisville Lake.

Midland RockHounds: Oakland Athletics' affiliate plays at Security Bank Ballpark.

A must-see is the I-20 Wildlife Preserve and Jenna Welch Nature Study Center, which is touted as a "treasured ecotourism destination and a scientific-educational resource of the Permian Basin." The wild space includes a riparian forest, playa lake, wetlands, floodplain, thickets and prairie. For more trails and exhibits, visit Sibley Nature Center

Prairie Ponderings: Prairie Kingsnakes by Diane Humes

I have a large prairie library, but sometimes I like to go back to the basics -- in this case, a very large unabridged Random House dictionary that lists several definitions for the word "prairie."

First and foremost, a prairie is "an extensive, level or slightly undulating, mostly treeless tract of land in the Mississippi valley characterized by a highly fertile soil and originally covered with coarse grasses, and merging into drier plateaus in the west." Second, a prairie is "a tract of grassland; meadow." Third, in Florida, a prairie is "a low, sandy tract of grassland often covered with water," while in the Southern U.S. a prairie is a "wet grassland; marsh."

Add these definitions together and you have a succinct description of our prairies -- flat, nearly treeless, often wet, former grasslands. Intact prairies, usually small, mostly remain along railroad tracks, in old cemeteries, or on land too steep or rocky to plow.

The dictionary alludes to the species richness of prairies by listing names: prairie button snakeroot, prairie chicken, prairie clover, prairie coneflower, prairie crabapple, prairie dock, prairie dog, prairie falcon, prairie flax, prairie fowl, prairie lily, prairie mallow, prairie owl, prairie phlox, prairie pine, prairie rattlesnake, prairie rose, prairie smoke, prairie wakerobin, and prairie wolf.

I am sorry to say that the prairie kingsnake was omitted from my huge dictionary, but kingsnakes were there: "any of several New World constrictors of the genus *Lampropeltis*, that often feed on other snakes." Any snake that eats other snakes is a "king."

The prairie kingsnake, *Lampropeltis calligaster*, is a common snake. It lives in grasslands or forested areas with loose soils, preferably near bodies of water. This snake is shy and secretive, usually diurnal, but hiding in a burrow or other refuge when not hunting or during hot or cold weather; it is not often seen. It hunts for small mammals, rodents, reptiles, or other snakes, killing its prey by constricting. This is a non-venomous snake that is highly adaptable. It has been found in abandoned buildings, sawdust piles, barnyards, and on barrier beaches, in addition to its usual habitat.

A medium-sized and slender snake with a rounded head, the prairie kingsnake is light brown or gray with reddish brown blotchy markings along its entire length. This snake may be confused with a rat snake; the two species share similar appearance and habitat.


Photo by Matt Jeppson

Not much is known about prairie kingsnake mating habits, but it seems males and females pair for life. The female constructs a nest with leaves and lays five to 17 eggs. She does not care for her young; hatchlings are fully independent when born and colored like adults. When threatened, a prairie kingsnake will coil and rattle its tail or may emit a foul-smelling musk. For all that toughness, it can quickly slink away into the grass without being heard. It is immune to the venom of other snakes such as copperheads and cottonmouths and, being a kingsnake, it can eat them!

Prairie kingsnake populations are stable with at least 100,000 individuals; it is considered a Species of Least Concern. The prairie kingsnake is a docile animal, easily kept in captivity. To see one, visit Armand Bayou Nature Center and either search the prairies or go to the visitor center, especially during a snake demo, to meet "Kingsley, the Prairie Kingsnake."

Celebrate Earth Day on April 22!

Coastal Corner: The Great Fishing Line Tube Adventure by Maureen Nolan-Wilde

The Great Fishing Line Tube project team from our Galveston Bay Area Chapter has scoured the Galveston area to document all the fishing line tubes currently being used to collect discarded fishing line. These tubes were numbered and photographed, and their locations recorded in a Google Maps format. Finally, their condition was assessed and ranked (#1 means the tube is in great condition; #5 means it needs to be replaced). In addition to functioning tubes, team members identified more than 40 bins that had been abandoned; they are in the process of being brought back into service by our chapter, to be adopted by the chapter and monitored by team members.

Moving forward, the project is now focusing on three different areas:

Outreach and community involvement

- We will be launching a Facebook page for outreach purposes. In addition, we are partnering with Audubon Texas to extend our reach. Plans are in place to create temporary displays for use at fishing tournaments and school events.
- As part of our focus on community involvement, we are meeting with Marathon Oil and hope to have some of their employees take part in future endeavors.

Monitoring and emptying the tubes

- We recently held a training session, during which monitor extraordinaire Ann Anderson provided an amazing step-by-step approach to monitoring, while also sharing a wealth of memorable experiences.

Tube repair

- The tube repair team has been in the field numbering bins and working out how to refurbish tubes identified as non-useable, while also identifying tubes that must be moved.

Stay tuned for updates as we move forward with our goal to make a difference, one piece of discarded fishing line at a time.


Photo by Rick Becker

If you would like to learn more or join our efforts, please contact project lead Rick Becker (cardsfan4ever@comcast.net).

AT: Why Ecology Matters! Part 2 by Bruce Niebuhr

The key takeaway from *Why Ecology Matters! Part 2: Lions and Tigers and Bears, Oh My! Why Are Competitors and Predators Important* is that competition and predation are different concepts.

Competition occurs between organisms utilizing the same resource, which is in short supply, and all suffer as a result of the association. Predation is the interaction between species, whereby one is totally consumed or harmed by the other.

Predation is important because it restricts distribution and/or abundance of prey populations and can influence the organization of communities. It is a major force in natural selection and can be a driver in increasing biodiversity.

About 50 people, including several schoolteachers, attended the November program presented by Dr. Cindy Howard, UHCL professor and master naturalist.

Cindy began by defining population ecology as the study of the dynamics of a species population and how it interacts with its environment and also the study of how the population sizes of a species change over time and space as they interact with other species populations.

The science of population ecology is very quantitative. It was a challenge to understand the mathematical models of population growth!

Cindy's presentation ended with a short video about the effects of reintroducing wolves into Yellowstone National Park after decades of absence. The return of these top predators controlled the elk, which had decimated the vegetation. In a trophic cascade still unfolding, elk populations fragmented into smaller groups and moved around more, vegetation recovered, beaver returned and built ponds. The entire park ecosystem changed to something not seen in a lifetime.

Ecology Still Matters Part 3: What is the Big Deal About Biodiversity? will be presented April 6, 2019. See page 12 for more information.

The Mysterious Mast Seeding of Oak Trees by Jennifer Trandell

Did you know that the largest oak forest in the world is in Texas?* And that the oak trees of North America produce more nuts than any other tree region worldwide, cultivated or wild? You may have noticed the abundance of acorns this past autumn. When a forest nut-bearing tree, such as an oak, pecan, or walnut, produces a high yield or bumper crop, the year is botanically referred to as a "mast" year.

The fruit of an oak tree is an acorn. A single giant oak tree can produce nearly 10,000 acorns in a reproductive season. However, oak trees do not bear fruit every year and some acorns require up to 18 months to mature. When all the oak species together produce a high yield like this past autumn in the Houston area, we can call it a "mast seeding" or "masting" event.

Why the term Mast?

The word "mæst" originated in old English to describe the nuts of the forest that accumulate on the ground. "Mast," more generally, refers to the fruit of forest trees and shrubs. The fruit can be hard nuts, like acorns or beechnuts, or soft, like blueberries or wild grapes, and are an important food source for wildlife. Mast seeding events are highly variable and predominantly occur in wind-pollinated species; we can also observe periodic increases in seed production in grasses and other plant species.

Like many trees, oaks have irregular cycles of high and low yields. Oak masting happens every two to five years and the reason remains a mystery. Theories to explain masting range from climate temperatures and rainfall amounts to harsh summers affecting acorn production or the availability of spring winds during pollination. The specific cause is unknown, but one undeniable evolutionary benefit of masting is to ensure future offspring.

In mast years, acorns fall by the thousands increasing food availability for squirrels, mice, birds, and other forest frugivores. During masting events, dependent wildlife populations increase. The following year, the trees will bear little to no fruit due to the abundance of energy required to produce the previous year's bountiful harvest. In subsequent low to no yield years, wildlife populations decrease as food becomes scarce. Then in a mast year, the overflowing harvest will more than feed the forest critters and ensure some seeds left to grow into future oak trees.


Photo by Jennifer Trandell

The forests are rapidly changing. Oaks are at risk due to logging, diseases, insect invaders, drought conditions, wildfires, and urban sprawl. According to OneTreePlanted.org, for every 10 oak trees planted only one survives.

As I was cleaning my winter beds to prepare for spring planting, I found three red oak acorns sprouted into tiny trees (a few that the squirrels missed). If you find any oak seedlings in your garden beds or yard, pot the tiny tree, label the species, and contact local tree planting organizations or parks to find out how you can help support oak populations.

* Monahans Sandhills State Park is home to the largest oak tree forest in the world with 40,000 acres of *Quercus havardii* or Havard oak. These tiny oak trees reach only 3 feet high, but their roots burrow through the silica sand dunes up to 90 feet to find water. Wow, that sounds like some serious carbon sequestration!

Camp Wild – WE NEED YOU! by Madeleine K. Barnes

Planning is ongoing now for another great Camp Wild. We need your help to make this year's camp a success. There are all levels of participation available: planning, set up, assisting with activities, leading activities, camp counselor, assistant counselor, security, purchasing supplies and food, etc. – which can be all week or only one day. Previous experience is not required for most opportunities. There are also opportunities for counselors in training (CIT's) for those teenagers who want to help out and learn about the program.

What is Camp Wild? Camp Wild introduces Galveston area school children to the wonders of Galveston Island State Park. It is a collaborative effort between The Friends of Galveston Island State Park, Texas Parks and Wildlife and the Galveston Bay Area Master Naturalists.

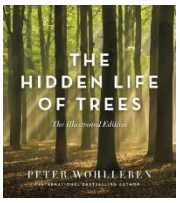
What happens there? Children experience everything from fish printing to kayaking, bird watching, learning about different animals using their skins and skulls and a whole lot more.

Photo by Chris Anastas

When does Camp Wild happen? Monday, June 3rd through Friday, June 7th, 2019

Who do I contact to sign up? Bruce Niebuhr, niebuhrb@live.com or cell# 409-771-9894

Heritage Book Study - Review of *The Hidden Life of Trees* by Madeleine K. Barnes



What do you know about trees, not the single growing varieties in your yard or neighborhood, but masses of diverse native trees growing in forests? Wait a minute, you say, aren't we living along the Gulf Coast where prairies are our focus for conservation and restoration? Yes, but let us consider that we also have riparian forests along our rivers and bayous. In addition, if we go inland a few miles, we have large tracts of diverse forested land.

With this in mind, our current reading selection, *The Hidden Life of Trees*, delves into the known and newly discovered aspects of the life of trees. The author, Peter Wohlleben, is a German forester with more than twenty years of experience managing forests in Germany. He has written several books and this one was translated into English in 2016 and went on to become a New York Times bestseller.

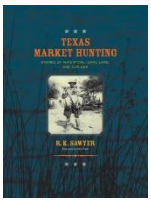
He has been described as devoting his professional life to preserving the forest rather than lumber production management. His views on accepted forestry management changed after learning more about the life of trees and the science behind these discoveries. Wohlleben addresses forests throughout the world as part of "the wood wide web".

"Trees are social and live in family bands. A tree is not a forest and trees need a forest to provide the type of (micro) climate that they need," according to Wohlleben. He introduces the concept of support without conditions within this "family" where there are interrelationships (social structure) between older trees providing support (nutrients, to the seedlings, next generations, and even to non-related or other species trees), communication, and the sharing of resources through the mycorrhizal network. While remaining easy to read, he cites experts whose research documents these discoveries.

One of the criticisms of Wohlleben's books is that he uses anthropomorphism – ascribing human traits, characteristics, and emotions to natural phenomena or objects – in writing about trees. In my opinion he is in good company here with Jacques Cousteau and others who have also used this literary technique to reach and educate others. If your objective is to educate people who have limited scientific knowledge and develop an appreciation (value) for preserving forests through readership by a vast number of people, then presenting the theme using universal concepts is a strong delivery method for connection and understanding. (National Association of Interpretation and *Interpretation* by Sam H. Ham).

I hope that I did not give too much away, as I would encourage you to add *The Hidden Life of Trees* to your reading list. It supports and adds to another book that we recently read, *The Soil Will Save Us* by Kristin Ohlson. I really enjoyed reading this one and hope you find it

provides you with new discoveries about trees to add to your knowledge and share with others. You will look at trees and a forest in a new way.



On April 1st, we will meet to discuss the last half, pages 145-251 of *The Hidden Life of Trees*. Our next reading selection is *Texas Market Hunting* by R.K. Sawyer. This book describes the waterfowl trade, in both food consumption and plumage, and the development of game laws in our state. We will meet on May 6th to discuss the entire selection of pages 1-200.

We welcome your participation each month for two hours on the first Monday of the month starting at 10am at the Extension office*. Please note that we welcome anyone to participate whether or not you are a chapter member. We look forward to seeing you and let us know if you have read any good naturalist books lately. Happy trails!

The Big Picture: Suns and Moons or Our Place in Space by Diane Humes

NASA's Jet Propulsion Laboratory (JPL) won an Emmy in the category of Outstanding Original Interactive Program! Although it is an unusual honor for engineers and scientists, these talented, resourceful, and impressively glamorous people accepted a much-deserved award Sept. 8 for their coverage of the Cassini mission's Grand Finale at Saturn. Way to go, JPL!

The Cassini-Huygens mission, launched from Cape Canaveral, FL on October 15, 1997, was the first spacecraft dedicated to exploring Saturn. The spacecraft was named in honor of Giovanni Cassini (1625-1712), the Italian astronomer who discovered four moons of Saturn -- Iapetus, Tethys, Rhea, and Dione -- and the large division in its rings -- the Cassini division. It carried the Huygens module, a lander designed to explore Saturn's largest moon, Titan. It was named to honor Christiaan Huygens (1629-1695), the Dutch astronomer who discovered Titan.

During its first three years, in the inner solar system, Cassini looped around Venus twice and Earth once for gravity assistance to boost its speed for the outward journey. Next, while traversing the asteroid belt, Cassini used its cosmic dust analyzer and reported results to JPL. It made a close approach of Jupiter -- only 6.2 million miles -- on Dec. 29, 2000, getting another gravity boost, then focused its cameras on Saturn for the first time on Oct. 31, 2002, while still 177 million miles away. Cassini began orbiting Saturn on June 30, 2004 and dropped the Huygens probe on Titan on Jan. 14, 2005 -- the first landing on a moon in the outer solar system. Huygens landed perfectly and transmitted pictures and data of the rocky surface of this alien moon for about 90 minutes. (see: Huygens: Titan Descent Movie on You Tube.)

Cassini remained in orbit of Saturn for 13 years, transmitting data and pictures that will take decades for researchers to analyze. It discovered, among other things, liquid water jets on the icy moon Enceladus, a large methane lake on Titan, craters on Rhea, a 50-mile landslide on Iapetus, and another ring of Saturn.

With its fuel reaching critical levels, mission controllers calculated a dramatic grand finale for Cassini -- a series of 22 weekly dive maneuvers between Saturn and its rings to gather the utmost possible data before plunging the spacecraft on a final collision course with the planet in order to avoid any chance of contaminating Saturn's moons, particularly Enceladus and Titan, thought to be capable of supporting life. On a mission full of firsts, Cassini collected and transmitted data until the very last before becoming part of Saturn on Sept. 15, 2017. (see: NASA at Saturn: Cassini's Grand Finale on You Tube.)

Cassini helped show us our place in space; it slipped behind Saturn's shadow and took a picture -- essentially a view of a solar eclipse by Saturn -- showing the planet and its inner rings, seven of its moons, and Venus, Mars, and Earth, barely visible in the distance. This picture, shown at the end of this article, is a marvel for our time.

All of Cassini's accomplishments depend upon over 2,000 years of technological advancements and research. Humans have looked to the sky and pondered its secrets forever. Particularly, eclipses of the sun and moon have piqued our curiosity, while providing us clues.

Photo by Allan Treiman

Aristotle (384-322 BC), student of Plato, tutor to Alexander the Great, and probably one of the greatest thinkers ever known -- after all, we are still quoting him and studying his works -- realized that Earth's shadows

cast upon the Moon during a lunar eclipse were always round. Therefore, the Earth must be a sphere.

Two hundred years later, Greek astronomer Hipparchus (190-120 BC) studied a lunar eclipse to allow him to compare positions of the stars relative to the Sun with positions previously recorded centuries earlier. Seeing that the stars' positions were changed, he knew that the Earth must "wobble" on its axis like a spinning top, a phenomenon called precession.

On Jan. 18 we were privileged to observe a total lunar eclipse -- a super blood wolf moon -- miraculously, for us, under clear viewing conditions. The moon was "super" because its orbit was closest to Earth. The moon was "blood" because it appeared red during totality due to light scattering, and it was a "wolf" moon, the Native American connotation for January. We may not have had as many profound thoughts as Aristotle or Hipparchus as we watched the eclipse; nevertheless, we also watched and wondered, and we recorded the event and communicated with others.

The missions and the science have been superb, but Aristotle, Hipparchus, and many others who came before us published their results -- their thoughts. The JPL team broadcast its findings to the world and earned an Emmy for the Cassini-Huygens mission. Our master naturalist mission is no less significant as we tell the world about our discoveries!

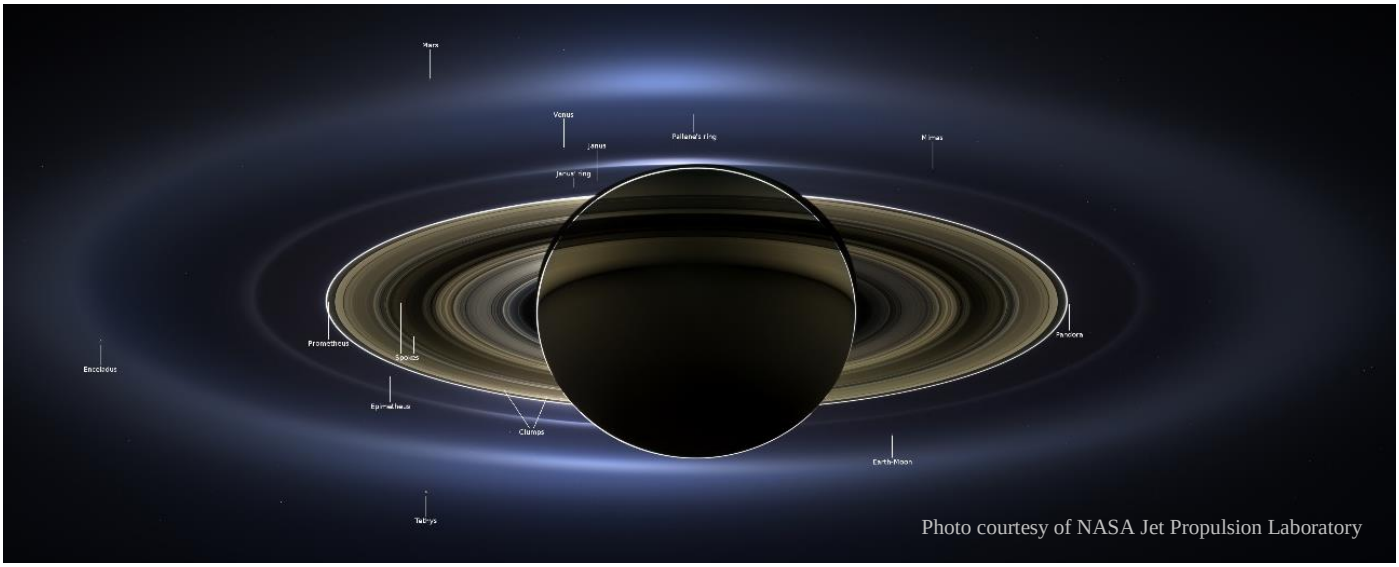


Photo courtesy of NASA Jet Propulsion Laboratory

Save the Date by Maureen Nolan-Wilde and Carolyn Miles

Chapter Sponsored Morgan Elementary School Art Exhibit

On April 17th, our chapter will be hosting an art exhibit of artistic works created by the 2nd graders at Morgan Elementary School in Galveston. Earlier this year, members of our chapter visited Morgan Elementary to share our work as action heroes of Galveston beaches.

After this presentation, the 120+ second graders were asked to artistically depict how they too were Galveston Beach action heroes. This art work will be on display at the school and our chapter and community members are invited to attend the exhibit on Wednesday, April 17th from 5:00 to 7:30 pm.

Please join us in supporting these young stewards by attending the art exhibit and showing your support for their commitment to being Galveston Beach Heroes. If you would like more information or would like to be part of this team, please contact Maureen Nolan-Wilde.


Photo by Carlos Rios

Adopt a Beach

April 13, 2019 Spring Cleanup. The Texas Adopt-A-Beach program, an all-volunteer effort, is dedicated to preserving and protecting Texas beaches.
Sign up at http://www.glo.texas.gov/adopt-a-beach/volunteer/cleanups/index.html

City Nature Challenge

On April 26-29 cities around the world will be competing to see who can make the most observations of nature, find the most species, and engage the most people in the 2019 City Nature Challenge.
https://www.inaturalist.org/projects/city-nature-challenge-2019-houston

Whooping Cranes by Nancy Saint

Whooping cranes breed in Canada's Northwest Territories and Alberta, mainly in shallow wetlands. When their weather turns cold, they set their GPS for the Texas Gulf Coast, more accurately, Aransas National Wildlife Refuge. We were watching the weather reports for Rockport/Fulton area, after we had selected the end of January for an excursion to see the whoopers in Texas.

Our reservations were with Capt. Tommy Moore and his boat, *The Skimmer*. "We don't let a little drizzle stop our trips," we were told at check-in for the 9:30am departure. Wow, there was a line of birders ahead of us in their finest foul weather gear eager to board the 42-foot motor vessel. We proceeded down to the lower enclosed area with rows of benches on both sides and nice big windows. After Capt, Tommy's safety briefing, he climbed to the upper deck navigation station. His mate cast us off, and we were underway!

Immediately Tommy began identifying the birds we were seeing near the docks. His commentary continued the entire trip in a most helpful, educational mode. It was evident he loved his work. He would slow for special sightings and then throw it into high gear to get to our destination, the wildlife refuge and the whooping cranes. He explained that the cranes are monogamous, forming pairs at age 2 or 3 years. They are very territorial with quite large territories. We first spotted the huge white birds feeding at one of the small basins in the marshes. They are about the size of the great blue heron, we often see around here, but much heavier. They show a red patch of skin on top of their heads when they are threatened

A little farther north three whooping cranes were spotted doing their high-stepping walks through the marsh with their long spindly black legs. One of them had a rusty brown head and some of the same rusty coloring in his body. Tommy explained that this was the immature plumage, probably a teenager, although it was almost the same size as mom and dad. Tommy warned us to be very quiet as he nudged the boat, with 2.5-foot draft, onto the bank. The clicks of the cameras were about the only noise heard as we were within 15 to 20 feet of these beautiful endangered birds. We could watch junior patiently waiting for mom to catch a blue crab for his lunch.


Photo by Nancy Saint

As the rains were picking up, a whole flock of us chose to huddle on the top deck under the awning that covered the captain and his navigation station. Even farther north, a large gathering of colonial nesting birds was spotted, including white pelicans, bright pink roseate spoonbills, great egrets, and some others that were beyond my birding skills. The heavier rain was hitting us now, so it was down to the lower level where we were treated to hot drinks, snacks and a fast trip back to the pier. In spite of the weather, all four of us came away with a feeling of awe and amazement at seeing so many wild birds so very close.

The Midden Deadline

for the next issue

April 29

If you have Advanced Training or Volunteer Opportunities, please submit information to Cindy Liening, calieni272@msn.com.

When Iris Eyes Are Smiling by George Kyame

The germination of this introduction to our regionally native irises began at the 2014 Prairie Friday potting table of Armand Bayou Nature Center, where there is never a lack of robust conversation. As often the case, the topic of native flora actually reared its beautiful head.

As a budding master naturalist, I questioned the seasoned veterans on everything green and colorful that I saw; mostly of the "what is it?" identification variety.

In our immediate proximity was a ditch full of yellow flowers, fleur-de-lis; *Iris pseudacorus* they were called. Turned out, these irises had a Eurasian pedigree. Now this is a storied flower, mind you, the symbol of European royalty, adorning flags and crests, and even some NFL helmets, but alas, non-native to even our own continent. My quest for knowledge of native irises had begun!

I was fortunate to have an Iris expert, and longtime Iris Society member, Ray C. Parker (GBAC-TMN, 2008), to whom this article is dedicated, at our very own potting table. He was willing to expound on Iris virtues for hours, in addition to furnishing all literature Iris related.

Irises are plants of the Northern Hemisphere, in mostly temperate to subtropical climates. They can be found, latitudinally, worldwide in these ranges. Their name comes from the Greek, for rainbow. Irises present a wide array of colors - violets, blues, yellows, whites, and coppers to reds. The flower structure makes them easily recognizable. What appears as six petals, upward and outward to downward, is correctly three petals (above) and three sepals (below). In Irispeak, these are standards and falls, respectively.

There be two kinds of irises, bearded and non-bearded. Bearded refers to hairlike projections. In the plant world, the observer encounters many such references. *Pogon*, Greek for beard, appears in several scientific names. In our discussion, only *apogon*, or beardless irises apply.

Taxonomically speaking, we can descend the rabbit hole of subgenera, sections, series, and cultivars. In this introduction, we shall not. Suffice it to say that *Irises*, the genus, are in the large family Iridaceae, also containing *Crocus* and *Gladiolus*. In addition, our topical irises are limited to the rhizomatous perennial kind. This takes us to the regionally and expanded regionally native *Iris* species we are likely to encounter in our explorations.

What will we see? We will see four species (of five) Louisiana Irises, so named for the somewhat localized region where all five can naturally hybridize. And we will see a close cousin from a similar taxonomic series. So, the discerning naturalist eye should basically be on the lookout for these five most prevalent native irises.

Probably the most common is *Iris virginica*, Southern Blue Flag, the only non-Hexagonae series Iris listed. In the light violet to blue, with yellow signals, it can be seen in all lake, pond, and marsh-like habitats near us

Photo courtesy of USDA-NRCS PLANTS Database

Of the next four, is the first named by botanists, which also names the series - *Iris hexagona*, Dixie Flag - so named for the six-angled seed head, another of the violet-blues with yellow signals. Exploration Green (EG) propagates this one and the previous.

Let us step away from blue hue and mention *Iris fulva*, the Copper Iris, the most famous cultivar, lauded with producing most of the bright yellow, reds, and oranges. Of note also, it famously shares an Audubon print with the Northern Parula! Spy this at ABNC.

Lastly are: *Iris giganticerulea* and *Iris brevicaulis*. The former is the largest and usually in the violet range with well accepted white occurrences. The latter is the latest bloomer, usually violet, smallest, with the flower always below the tallest leaves. I've seen both of these at ABNC, El Franco Lee, and *I. brevicaulis* at EG.

I hope this little introduction opens the field discussions of our own, living in lakes, marsh flower, the Iris.

Of Monarchs, Milkweed, & Migrations AT by Mike Wehrman

Spring is around the corner and it's time to update our monarch butterfly knowledge. We are fortunate to have our fellow master naturalists, Chris Anastas and Candice Annen, as our experts, since they are the only two certified monarch community scientists in Texas. Their scholarly presentation March 1 on the monarch life cycle, migration, threats, pests, and diseases informed and inspired their eager audience of master naturalists. Aside from their vast knowledge of the monarch butterfly, three themes inspired the class: practical information to help this butterfly's recovery, how to become a monarch community scientist, and their jaw-dropping videos of their wintering butterfly adventures in Mexico's small oyamel forest.

In our area, *Ophryocystis elektroscirrha* (OE) is a natural, but pernicious parasite of monarchs. When the monarch ecloses, or hatches, during the first instar stage, it immediately begins eating its own eggshell. If the egg has any OE, it becomes hopelessly infected. OE cannot be detected on caterpillars even when infected. It doesn't kill the butterfly, but greatly weakens it. OE can only be seen with a microscope, but, swollen abdomens are a good indication of infection.

We must be very careful when adding milkweed to our yards because tropical milkweed does not lose its leaves in winter and provides a host for OE to proliferate. Cut it in the fall to avoid perpetuating infections of monarchs by OE. Better yet, Chris and Candice prefer the Texas native milkweeds such as the slim milkweed, green milkweed, zizotes, and aquatic milkweed. Indigenous milkweeds are dormant in the winter and lose their leaves and most stems which removes OE from the plant. OE cannot survive in the soil. Plants such as lantana, salvia, primrose, tropical sage, Mexican hat, winecap are excellent sources of nectar for adult monarchs.

Other major threats to monarchs include wasps, habitat loss, pesticides, herbicides, and severe weather such as ice storms. An ice storm in Mexico killed about 6.2 million butterflies, about 7.4% of the 84 million butterflies that wintered there in 2016. And, the wintering monarchs in California have declined 97% from various causes, from 4.5 million in 1980 to only 30,000 at last count.

Chris and Candace emphasized that the knowledge accumulated on monarchs is still young, but growing quickly. For example, only recently another butterfly colony was discovered in Mexico near the Nevado de Toluca volcano. Also recently, from isotope analysis of butterflies' bodies, scientists discovered that the south-central States were breeding grounds for a previously underestimated 5th generation (extra breeding generation) of monarchs, with 20% of the tested Mexico butterflies hailing from this area.

Community scientists are tagging, testing for OE, and counting monarchs to improve data. In fact, since the year 2000, over two thirds of papers on monarch field research has relied on community science data.

There are about twenty community scientist programs available that study monarchs. Chris and Candice are involved with Journey North, Monarch Larva Monitoring Project, Integrated Monarch Monitoring Project, Project Monarch Health, and Monarch Watch.

The details of this phenomenal multi-generational migration of the monarch from Mexico to Canada and back riveted the class. These migrations to the north and east thru Texas have survived so far. In fact, researchers found that the monarch count in the 15 core acres in the oyamel forest in Mexico has more than doubled from last winter's count. Oyamel fir trees only grow above 8,000 feet in cool humid summers and dry winters. Monarchs congregate in such a forest near Mexico City. The Mexican people have done an admirable job of protecting the oyamel forest for monarchs. Joining the World Wildlife Fund's expedition to this area, Chris and Candice experienced this spectacular show of monarchs.

Chris and Candice supplemented their program with an enriching array of books, microscopes, bug shields, children's projects, free seeds, free milkweed plants, and displays. Everyone lingered quite a while after the program to soak it all in.

The Midden

Published bimonthly by the Galveston Bay Area Chapter - Texas Master Naturalists. The purpose of *The Midden* is to inform communicate and educate chapter members and the community. If you have an article that contributes this purpose or want to join the team, please contact Diane Humes, treimanhumes@gmail.com.

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April and May Activities

ADVANCED TRAINING OPPORTUNITIES

Chapter Meeting – April 4; Great Monofilament Adventure
Presenters – The Monofilament Team
6:15 Social, 7:00 Meeting, 7:30 Speaker
Extension Office*; 1 AT hour

Ecology Still Matters – Part 3 – Saturday, April 6
9:30 – noon; 2.5 hours AT
Location: UHCL Bayou Bldg. Rm 3332
Presenters – Dr. Cindy Howard
Register with Emmeline Dodd txdodd@aol.com

Beginners Guide to Solitary Bees – Saturday, April 27
9 – 12:30; 3.5 hours AT
Limit: 20 attendees; Fee: $15.00
Location: Extension office*
Presenters: Mel Measeles & Rick Becker
Register with Emmeline Dodd txdodd@aol.com

Ongoing
Galveston Island State Park
10am at the Welcome Center
Every Saturday- Beach Explorations
Every Sunday- Bay Explorations
Tours 1 to 1 ½ hours long. Bring water and family.

Heritage Book Study Group
First Monday of every month. Extension Office*
10am-noon; 2 hours AT
Contact: Elsie Smith (409) 392-7003
See Pg. 6 for meeting dates and books.

STEWARDSHIP OPPORTUNITIES

Ongoing Activities:
Mondays – Galveston Island State Park, Contact: Chatt Smith chattsmith@gmail.com

Tuesdays –
- Sheldon Lake State Park, Contact: Tom Solomon crandtr@sbcglobal.net
- Texas City Prairie Preserve, Contact: Jim Duron wishkad@yahoo.com
- Environmental Institute of Houston at UHCL, Contact: Wendy Reistle reistle@uhcl.edu

Wednesdays – Wetland Restoration Team, Contact: Charriss York cyork@tamu.edu

Thursdays –
- Stormwater Wetland Team, every Thursday, 9am - noon. Contact: Christie Taylor cctaylor@tamu.edu
- San Jacinto State Park, Contact: Jim Duron wishkad@yahoo.com

Fridays – Prairie Friday, ABNC, 8:30 – 11:30am, Contact: Chatt Smith chattsmith@gmail.com

EDUCATION - OUTREACH VOLUNTEER OPPORTUNITIES

Bay & Island Adventures - Volunteers teach six in-class hands-on modules on a once a month basis in Dickinson and Galveston Schools. Presenters and helpers are needed for eleven 4th and 5th grade classes. Contact: Sara Snell snellsw@verizon.net.

Education and Outreach Committee - We can use your help in supporting outreach efforts, responding to requests for exhibit booths and presenters, planning Treasures of the Bay; and developing a library of education-outreach materials. Contact Sara Snell snellsw@verizon.net.

Partner and Associate Programs - Many organizations sponsor guided walks and education programs or need volunteers to staff their nature center. Go to http://txmn.org/gbmn/partners/ for the list, then click on the link to the organization's website.

BOARD AND COMMITTEE MEETINGS
(At Extension office* monthly unless specified)

Board Meetings – usually First Tuesday, check calendar

Committee Meetings
Advanced Training – Third Monday, 10-noon
Education/Outreach – Third Tuesday, 10-11:30am
Communication – Meets quarterly, check calendar
Midden Team – May 6, Monday 9-noon

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*Extension Office = Texas A&M AgriLife Extension Service – Galveston County Office (Carbide Park)