



Carnivorous Plants courtesy of the National Park Service

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President’s Corner by Pam House

I recently heard an interview with Elizabeth Gilbert, the author of *Eat Pray Love* discussing the advice of “follow your passion.” She explained that she is often misquoted as recommending this. She said that what she has found more useful in her life is “following your curiosity.”

This was enlightening for me because I have often felt the thrill of new discovery fueled by curiosity but haven’t found a clear path defined by passion. Texas Master Naturalists seems to be a perfect place to answer both exhortations.

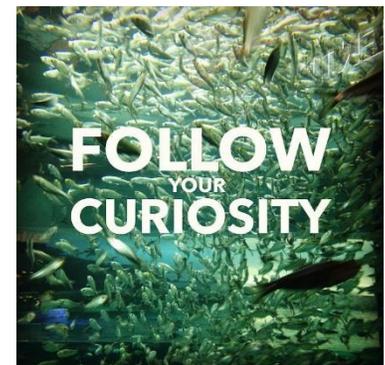
As our new class of 2022 joins our fold, they will be exposed to the myriad of projects and places that we offer for us to explore our curiosities and perhaps discover a passion. Whether it is sea life, birds, prairies, or marshes – counting, observing, measuring, or planting – Galveston Island State Park, Armand Bayou, Exploration Green, or High Island – canoeing, walking, or standing quietly to observe – the introduction to opportunities for the celebration of the natural are huge. Join me in welcoming our new fellows on their MN journey.

Spring is the time when all of our activities begin to percolate. A short list that George Kyame gave in 2019 is still pertinent: “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.”

Fueling passion or curiosity are the amazing posts to our Facebook page coordinated by our communications committee. If you haven’t yet, be sure to check them out. They can be seen on our web page, even if you don’t participate in Facebook. (Patty Trimmingham does yeoman service in so many ways – the website is updated by her).

Our Chapter Meeting on April 7 will be by zoom. Chapter Chat on May 5 will also be by zoom. I hesitate to say it, but it looks like our chapter meeting on June 2 will be IN PERSON! WOW! Keep your fingers crossed, but that is the hope.

Please enjoy the longer and the warmer (but not hot) days. The season for investigation and discovery is upon us.



Next Chapter Meeting

April 7

Introduction to the
Big Thicket

By

Andrew Bennett

Biologist

Big Thicket
National Preserve

Via Zoom

Texas Naturalists: Jacob Boll 1828-1880 by Sheron Evans

Jacob Boll, a soft-spoken naturalist and entomologist, was born in 1828 in Switzerland and educated as a pharmacist in Switzerland and Germany before making his mark as a naturalist with his discoveries in Texas.



While he stayed in Switzerland, Jacob's parents and siblings moved to Texas in 1856 to join the La Reunion commune in Dallas. La Reunion was a utopian socialist community created by French, Belgian and Swiss in 1855 on the Trinity River. It only existed 18 months, then collapsed due to several factors. Jacob's family left the commune and lived on a farm in Dallas.

Jacob arrived in America from Switzerland in 1869, stopping in Cambridge, Mass., to meet his friend Professor Louis Agassiz. The professor wanted a large collection of animals from Texas and persuaded Jacob to collect specimens for the Museum of Comparative Zoology at Harvard. Jacob showed that he was an excellent collector, finding nearly 200 species new to science, and he was the first person to discover vertebrate fossils in the Permian red beds of north-central Texas and south-central Oklahoma.

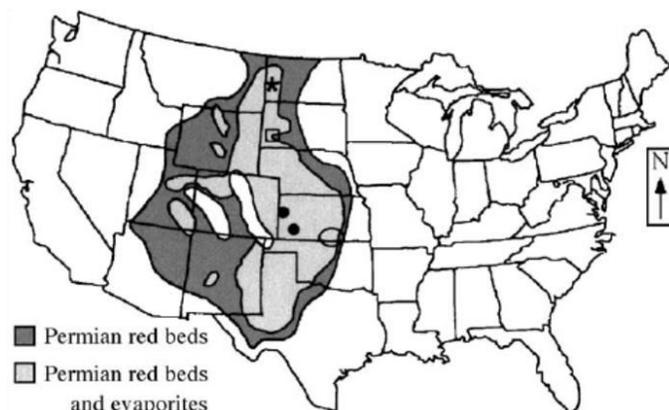


Illustration by Benison, Kathleen & Goldstein, Robert

Jacob returned to Switzerland to care for his wife, who was in a sanitarium suffering from a nervous breakdown. After she died, he returned to Cambridge to find out his friend, Professor Agassiz, had also passed away. He did not feel at home at Cambridge, so Jacob returned to Texas in 1874, making his home in the Dallas area.

In 1876 Jacob was collecting specimens of the Colorado potato beetle when he discovered vertebrate fossils in the Wichita River area. He was hired by Edward D. Cope to collect fossils in the Permian red beds between 1877

and 1880. These collections are in the American Museum of Natural History. He found 32 new, rare species of Permian vertebrates. He also made a collection of microlepidoptera, reptiles, tailless amphibians and fish at the same time he was collecting fossils.

Louis L. Jacobs, vertebrate paleontologist at SMU, states that Jacob Boll's discoveries "opened up an entirely new chapter in vertebrate evolution some 280 million years old. Boll's finds include some of the oldest close relatives of mammals whose evolution eventually led to humans."

During his time collecting, Jacob also enjoyed writing poetry. He wrote an ode to fossils in German, which has been translated by SMU biology professor Pia Vogel and Louis Jacobs:

Now you will with some few others
Trek to the professor's seat.
Awakened through his careful thought,
Be reassembled from your fragments,
To tell to others yet to come
From the sculpting of your teeth
How you lived and disappeared,
Name you he will,
And what he found.

In *Naturalists of the Frontier* Samuel Geiser includes accounts of two acquaintances of Jacob Boll's. One said: "I can remember him so plainly riding upon his little yellow pony Gypsy to his home at the corner of Swiss and Germania avenues. We thought him peculiar because he caught butterflies and snakes. And yet he was very good to us." Another said: "He was so kind to us little children and used to let us feed his silkworms and look at the Mastodon skeleton when we had found insects for him. I never knew him to speak unkindly of anyone. His one passion was music, which affected him deeply."

Jacob was 52 when died in 1880 at a collection camp on the Pease River near the Red River. He was bitten by a venomous snake and died of peritonitis. Boll loved science and found his calling for collecting in Texas, so far away from his birthplace. He left a legacy of curiosity and kindness to the people who knew him, and trained and inspired others to carry on with natural science discoveries.

Beach Heroes by Maureen Nolan-Wilde

Capes, hats, and knowledge-sharing - in February, the Beach Hero Program outreach team launched its newest season in Galveston Independent School District (GISD) elementary and middle schools.



Photo by Carlos Rios

Beach Hero team members wear hats and hero capes when presenting to our future stewards. With five programs focusing on plastic pollution prevention and our area's sea turtles and oysters, we challenge students to join us and become true Beach Heroes and have added an on-the-beach adventure for schools.

In partnership with Galveston Own Farmers Market (GOFM) and Gulf Coast for Sea Turtle Research (GCSTR) in February we created a program for students participating in after-school gardening programs. With them, we focus on the importance of turtles having something green to eat. These students are now creating sea-turtle gardens to provide green vegetables for the green sea turtles rehabbing at GCSTR at Texas A&M, Galveston.

One day at Crenshaw elementary school on Bolivar, our team delivered an impromptu "sea turtle" experience for some very curious and interested pre-K students. We equaled their joy at learning about sea turtles and joining in the sea-turtle dance as an amazing prelude to our scheduled presentation for second- and third-graders.

After each presentation, the team shares donated art supplies with the school for students to share, artistically, what they are doing or may do to become a Beach Hero. We then collect and exhibit their artwork for all to enjoy and publish it via approved social media outlets.

Our 2022-2023 season continues; would you like to join us? Everyone is welcome and don't worry - not everyone has to wear a hat and hero cape but once you do, you won't forget the smiles and joy they bring.

Bayside Park Timeline by Laurinda Kidd

Piles of dirt without an entrance - that was the site seven years ago of Bayside Regional Park in Bacliff. A former red drum fish farm, it had long been neglected.

Master naturalist Stennie Meadours learned from Mark Fox, native garden designer and Bacliff native plant nursery owner, about a new Galveston County park being developed in Bacliff. Fellow master naturalist Sandy Parker also loved the idea of including a native plant garden project at the new park, along with baseball fields, playground and community center.

Stennie and interested parties met with county parks department personnel in 2016 on how to start a native plant project, as they solidified plans for the park - the first of many meetings. An ambitious plan, the wheels moved slowly and often stalled. However, Stennie and Sandy persisted; the project took five years to get approved.

On Jan. 25, 2017, Stennie and Sandy reviewed plans with a group including the county engineer and discussed a native plant area. They also gained enthusiastic support, a budget and volunteers from our GBAC-TMN.

Also in 2017, Stennie obtained Dr. Floyd Waller's list of plants. Botanist Dr. Waller had prepared a survey of plant communities and soil types at the HL&P Robinson Plant in Bacliff in 1974. After updating to consider current plant taxonomy by Native Plant Society members, this list became the basis for the native plant project.

In 2018, Sandy and Stennie gave presentations to the Native Plant Society-Clear Lake Chapter and GBAC-TMN about the project. With approvals, Patty Pennington, Martha Richeson, Jane Lindsey, Stennie and Sandy formed a new planning committee.

A Memorandum of Understanding (MOU) prepared by the Galveston County Parks Department outlined responsibilities of the county and GBAC-TMN for this project. Without this signed document, no work could begin.

The MOU authorizes the GBAC to use one acre of land in the park to establish and maintain a native plant area. The plants are limited to Dr. Waller's plant survey. The county agreed to do tasks within their routine activities such as providing water, use of space in the

maintenance building, and laying a sidewalk. The MOU would last one year, then could be reviewed and renewed every two years. The MOU was submitted for GBAC signature in November 2018. The county signed in July 2019.

Finally, a half-acre site at Bayside Regional Park, 4833 10th St., could be staked out for development of a pocket prairie. The county workers constructed a 5-foot-wide walkway roughly 137 feet long. On one side of the walk is 12-foot-wide bed, on the other the bed is 8 feet wide.

COVID led to some delays; however, in 2021 garden preparation and planting began with herbicide application to the grass by county workers. Volunteers put down layers of newspaper and mulch on either side of the sidewalk.

“When we were finally able to begin planting in April 2021, I was amazed at how many native plants the ‘plant people’ had growing for this garden,” said Stennie. “GBAC and NPSOT volunteers planted over 1,000 plants in a very short time and with scheduled watering, the plants flourished! Shortly afterward we began to see more dragonflies, butterflies, and even a killdeer nesting in the garden, proving once again, plant it and they will come!”

Today the native plant exhibit garden is 75 percent planted, with more planting scheduled for spring. A hardy bunch of master naturalists is constructing a permanent border of pavers and concrete around the garden perimeter. Future plans include features to attract birds; community outreach activities start in May.



Photo by Carlos Rios

“This was a perfect project for both the GBAC-TMN and Native Plant Society members,” said Sandy. “Here is an area that we have sole responsibility for planting and maintaining. Both Stennie and I have experience working with government agencies and non-profit organizations, so we knew that the long pole in the project would be the development and approval of the MOU and the associated paperwork. It took a little longer than we would have liked, but we stuck with it and saw it through!”

A native plant garden at a park with the county and master naturalists collaborating to use the land, allowing GBAC master naturalists to create, maintain and further develop the area, has provided a unique opportunity with a satisfying result. “In contrast to getting the garden going,” said Stennie, “the efforts of many have been rewarded sooner than expected!”

Bayside Native Plant Garden by Laurinda Kidd

Those who walk through the native plant garden in Bacliff’s new Bayside Regional Park might not be aware of the careful and intense thought that went into its design. Meet Patty Pennington, a master naturalist and chemical engineer who also has a master’s degree in environmental design. She spent her 2019 summer during COVID quarantine reading, researching and designing the garden.

Patty’s interest in native plant gardens was inspired by a master naturalist advanced training session at the Galveston Bay Area chapter where she viewed a documentary titled *Five Seasons: The Gardens of Piet Oudolf*. Oudolf is famous for creating acclaimed gardens around the world using grasses and perennials. After watching the documentary, Patty was “on fire” to design a native garden for her backyard. When all the forces came together for the creation of the Bayside Regional

Park garden, Patty was more than willing to take on the big project of designing it.

As part of her research, Patty read *Planting: A New Perspective*, by Piet Oudolf, and *Planting in a Post-Wild World*, by Thomas Rainer and Claudia West, two books that greatly inspired her. As an engineer she likes to see the process rather than just the end result and reading these two books did just that for her.

Before anything was planted Patty developed a large master plan with each type of plant in a specific spot with attention to four zones and four plant criteria: structure, seasonality, dynamic filler and groundcovers. She color-coded and laminated the design plan to use on planting day. Patty was limited to native plants on a spreadsheet developed from a 1974 plant survey completed by botanist Floyd Waller for a company once located in the park area.



Photo by Laurinda Kidd

The garden is about 130 feet long, with a sidewalk running down the middle. Patty divided the long garden into four zones on either side of the sidewalk.

The larger side of the sidewalk is the prairie side, as prairie plants tend to be larger. The 8-foot side of the garden is for pollinator plants. These plants tend to be smaller and produce flowers (or forbs).

The plants smaller in size would be located in Zone 1, at the beginning of the sidewalk. Plants would get gradually bigger and taller as one walks down the sidewalk through the zones, with Zone 4 at the end of the sidewalk containing the largest plants. Dividing the garden into zones, made designing easier rather than planning for one large space, Patty said.

When Patty decided to split the garden into four zones, she knew that each zone would contain the four groups found in *Planting in a Post-Wild World*, by Thomas Rainer and Claudia West: structural plants, seasonal plants, dynamic filler plants and groundcover plants.

Structural Plants are the architectural plants that display textures and form. Grasses and plants such as rattlesnake master leave an impression of shape that anchor the design.

Seasonal Plants are flowers, or forbs, that have their moment to shine. Their moment comes and then it goes. This is especially true of native plants because they have not been bred for long blooming seasons, and they typically bloom for only short periods.

A good example of a seasonal plant in the garden is seaside goldenrod planted in Zone 1 on the pollinator side. It puts on a great show in the fall, but for most of the year no one pays any attention to it. "A lot of seasonal

plants had to be planted in the garden to fill out the calendar, so people will see something interesting in the garden all the time, and it will be something different," Patty said.

Dynamic Fillers are the annual plants. They are dynamic because they might be planted in one spot, but they are going to find their own place after that. One example of a dynamic plant is Texas bluebell. This annual plant cannot be nailed down to one spot like a perennial plant that returns in that same spot year after year.

Groundcover Plants stay low to the ground and are very important to help keep the weeds from taking over a garden before the other plants are able to get established. Frog fruit is a good example of a groundcover plant.

When asked how the garden will change over time, Patty said, "That will be the fun part!"

This is the interesting thing for me," Patty said. "Doing this project we are not just doing Indian blanket flower, and coneflowers, and other very common plants. We are trying to find some of those plants that were in this area that are becoming harder and harder to find and having a place for them here in this garden."

Patty hopes visitors will get a feeling of place, like they are in Texas, not in an English cottage garden. "They are in a prairie setting, and perhaps they can visualize what it would have been like if they were one of those early pioneers traveling across the Gulf Coast. I want people to understand what this area was like, and in a way that you can actually get up close to the plants. Most people are not going to go walk in a prairie. But they can walk down this sidewalk when they are here with their family."

"For me," Patty said, "one of the most satisfying feelings is when I come into the garden and the Savannah sparrows are running around in the grasses. They didn't have that opportunity to do that a year ago, and now they have a safe place where they can forage and find shelter available from the grasses. That's my reward – that makes me feel really good. That's why we are doing this." "We must be doing something right! Come and see it. It's a four season garden," she said. "When we get the benches in, I really hope that people come and just sit and listen to the grass blowing in the wind. I think that's the most calming thing."

The Midden Deadline
for the next issue

April 25

Junk Bugs: Undercover Predators on the Prowl by Rebekah Gano

Have you ever seen a bit of dust crawling across your front door, a sidewalk or across a leaf? Of course, debris gets caught in spider webs and wiggles in the wind, but what about a piece of dirt that seems to have a mind of its own? I spotted just such a clump, jerkily moving one way and then another on my mailbox. A closer look at the tiny trash pile revealed legs, which told me there truly was some sort of animate critter hiding in all the detritus.

The cleverly disguised creature was a junk bug, also known as a trash bug, aphid lion, or aphid wolf. Junk bugs are the larvae of green lacewings (*Crysoperla* sp.). The immature insects are often described as miniature alligators with pinchers for mouths instead of toothy jaws. Brown, white and yellow spots cover their bumpy backs, and, like alligators, they have a taste for other animals. Junk bugs are rarely seen, however, because they camouflage themselves with bits of plants, lichen, dust and the remains of their meals. Those remains include body parts of the invertebrates the junk bugs have recently eaten!

Junk bugs have a voracious appetite for soft-bodied prey, such as aphids, small caterpillars, thrips, mites, and insect eggs. Much like spiders, these predators use their jaws to hold their prey and inject venom and then suck out the body fluids. Once they finish a meal, junk bugs add a piece of exoskeleton, wax, sand, moss, silk or even frass to the stack on their backs. Long spines on their abdomens keep the camouflage in place.

Scientists have discovered that not only is a junk bug's camouflage useful for keeping the larva safe (after all, not many animals want to eat trash) but it also allows the predator to sneak closer to its prey. Entomologist Michael J. Raupp studied junk bugs that preyed on aphids being cared for by ants. He writes: "They easily sneak past the ants and enjoy an aphid feast much the same way Aesop's wolf snuck past the shepherd for a tasty lamb dinner." The smells and appearance of aphid wax and body parts mixed with other organic materials allow the junk bugs to sneak past the ant guards.

Lacewing larvae are all predatory, but not all lacewing larvae are junk bugs. So-called "naked" lacewing larvae do not display their recent meals on their backs. Instead, they must be swift and ambush their prey. "Naked" lacewing larvae include all brown lacewings and some green species. According to TAMU, 15 species of green lacewings, all native, live in east Texas and only some of these have larvae that camouflage themselves. Lacewing larvae experience complete metamorphosis; that is, the junk bugs eat, shed their skins and grow larger, eventually ceasing eating once they reach about 7mm in length to spin white silken spherical cocoons. Most form cocoons on the underside of leaves, though

some dig into the soil before making their cocoons, especially in the fall. Some lacewings will overwinter in their cocoons, but in warm weather, they will pupate for only five days. Houston area lacewing larvae and adults can typically survive the relatively mild winters, hiding under leaves or in thick shrubbery during cold weather and reappearing when temperatures rise.



Lacewing adults typically live for 20-40 days and are mostly nocturnal, often seen flying near lights in the evening or resting during the day. They have see-through wings like others of the order Neuroptera. Unlike their younger selves, they have no interest in gathering trash, and many species are herbivores. All species of lacewings enjoy sweet treats such as nectar and honeydew (from aphids) as well as pollen.

Females will lay up to 30 eggs a day with each egg placed on a single stalk of silk. This protects eggs from hungry siblings, since larvae consume any available eggs but, newly-hatched lacewings cannot eat the eggs on the stalks. Older larvae that have gone through an instar can and will, however, devour eggs and smaller larvae of their own species along with other prey. Lacewings and junk bugs are considered beneficial insects, and some garden sites even sell the larvae for natural pest control. Keep an eye out for the delicate looking adults and double-check any odd dust clumps in your own neighborhood; perhaps you will be the next to spot one of these unique and helpful bugs!

Softer, Safer, Smarter Outside Lighting for the Birds and You! by Doris Durbin Heard

Smart outdoor lighting can benefit wildlife. An estimated two billion birds migrate through Texas each year. Since they travel at night, some lights can attract and disorient these birds, which often results in collisions with buildings. Starting April 19 through May 7, Houston Audubon sponsors a Lights Out campaign during the height of spring migration. You can help by turning off outside lights during this time or using shields to direct lighting downwards. This helps the birds and helps keep the sky dark and the stars visible.

Take a walk around your neighborhood while it is dark and notice the street and outdoor house lighting. You will be surprised by all the differences you find. Some lights will actually make it more difficult to see the surrounding area.

When you drive at night have you noticed that some of the car headlights are so glaring and bright that it is difficult to see oncoming cars? Those bright headlights have a "blinding" effect on eyes. You can only see the glare of the lights, not the surrounding area. The same holds true for the lighting around your home. The bright white LED lights can make the surrounding area less visible. Your "security light" may give someone lots of places to hide in plain sight. Can you see the intruder in the first photo below?

Check out the website of Soft Lights Houston. There you will find a wealth of information on what is the best outdoor lighting to use. <https://www.softlighthouston.com/>

Street lights using 2700 Kelvin bulbs provide excellent lighting without glare and have a warmer color with less blue. Same is true for your front door lighting. Those homes using the bright white LED lights at their front door appear harsh and unwelcoming compared to the front doors with 2700K bulbs. Notice that the homes having bright white flood lights attached just under the roof shining down are not as effective as those homes using the softer light bulbs. In addition, considerate neighbors will consider installing shields on their flood lights to direct lighting so that it does not shine into their neighbor's windows, since not only sleep but overall health can be impacted by poor lighting. There is a wide selection of light shields available on the Internet.

After you have looked around your neighborhood at night, you might decide that you can improve the appearance and safety of your home lighting. Neighborhoods with street lamps that have non-glare lighting and downward shields are fortunate because these lamps are not only attractive but safer for you and the migrating birds.



[Outdoor-Lighting-Crime-and-Safety-English.pdf \(darksky.org\)](#)

Connections: One Can Make a Difference - Good or Bad by Diane Humes

Approaching the third year of coronavirus, we decided to spend a long weekend with our first-born in San Francisco. We wanted to see whales and our kids and to spend a lot of time outdoors exploring. Travel is always enlightening, and this trip was no exception.

Our quest for whales began at an historic farm/ranch overlooking the Pacific Ocean at the Tule Elk Herd

Preserve at Point Reyes National Seashore. Our journey took us through a beautiful countryside; it was an easy drive from the city. We traveled through rolling hills with dairy farms, passing through artsy towns with cheese shops and cafes.

Although we gave the whales several opportunities, they did not surface. Instead, we found coyotes, hawks - red-

tailed, red shouldered, and rough legged - seals and lots of tule elk - 34 females and one male - right there at the trailhead, no less. Glorious!

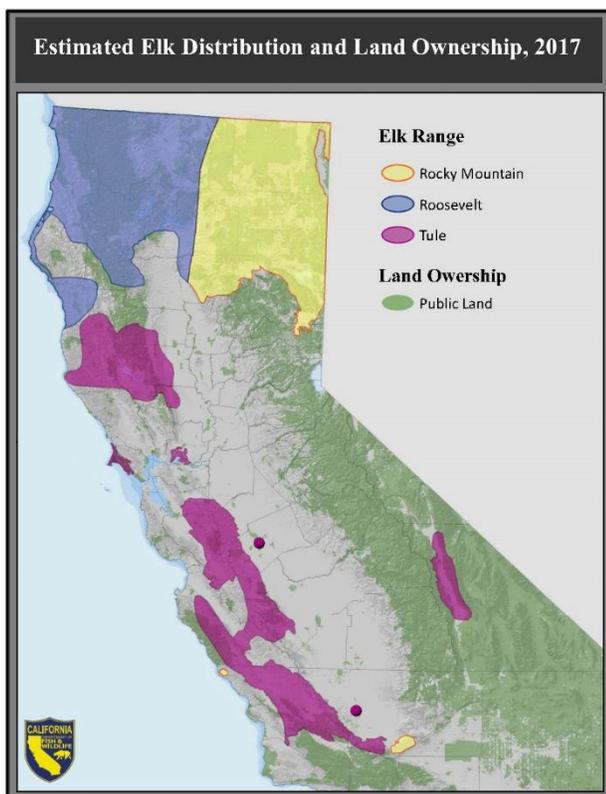


Photo courtesy of the National Park Service

The ranch buildings on the preserve were more than 100 years old, no longer in use and quite interesting; I began to ponder the elk herd and wonder how it was possible for it to exist so close to an area that had been settled for well over 200 years. How had the elk survived the 1849 Gold Rush and subsequent settlement?

They almost didn't.

By 1874 most of the half million tule elk - a California subspecies, (*Cervus elaphus nannodes*) - were gone - hunted nearly to extinction and their habitats cleared for agriculture and livestock grazing.



But, rancher Henry Miller (1827-1916) found 10 elk on his land. Realizing that he had not seen any other elk for 4 years, he decided to protect them on his ranch. His herd grew to 140 and by 1905 Miller began relocating groups of elk to other locations.

The state legislature gave these elk legal protection in 1971. Today, state and federal governments manage elk preserves, including at Point Reyes where we hiked. "Our" elk herd was established in 1978. California's tule elk herd has grown to over 5,700 animals in multiple locations, even though room for elk to roam is not so easy to find in today's world.

As Henry Miller saved California's elk, Charles (1836-1929) and Mary Ann (1839-1926) Goodnight saved bison in Texas. In 1876, bison (*Bison bison*) - usually the adults - were being slaughtered at a great rate all around their ranch and the rest of North America. Mary Ann pleaded with her husband to round up the calves, instead of leaving them to starve - the usual practice. Charles agreed and the Goodnight bison herd was begun, which eventually grew to 250 animals. Fast forward to 2022; those Texas bison were the founders of our Texas State Bison Herd at Caprock Canyons State Park, as well as other herds around North America.

In addition to the Goodnights, a few other people each saved a few bison - usually calves - but extinction was a near thing, with only about 300 individuals saved from an estimated original population of 40 million bison. Bison today number about 15,000 living in private and public herds.

Dig a little deeper into these stories and you find that Henry Miller and Charles Goodnight were wealthy, powerful cattlemen who owned huge tracts of land. Neither man acted solely from altruism toward another species, but their motives matter less than the facts; tule elk and plains bison did not go extinct because these men took action!

Charles Goodnight, famous for his cattle drives, owned most of Palo Duro Canyon. He wouldn't have tolerated bison interfering with his cattle business and had a plan to breed the two species to produce "catalo".

Miller's holdings covered the San Joaquin Valley; he owned 1.4 million acres in many parcels and was called the "King of Cattle". A current map shows tule elk herd locations that dot the valley and I'm guessing that he relocated groups of elk around on his property and they are still there. Perhaps he valued conservation; maybe he liked to hunt elk, but Henry Miller also saved the species because he could.

A contemporary of Miller and Goodnight, Benjamin Vernon Lilly (1856-1936), had a simple but very different relationship with wildlife. Ben Lilly believed that his

mission, given to him straight from God, was to rid the world of predators. He and his hound dogs indefatigably tracked grizzly bears and mountain lions until they were dead. He made his own brand of deadly knife and often preferred using it to his rifles.

Although he married twice and fathered children, he abandoned both families to return to the wild. Occasionally he traded in cattle, hogs and wild honey but invariably returned to hunting. Becoming almost feral himself, Lilly knew the animals he hunted better than anyone.

Ben Lilly lived 50 years in Mississippi and Louisiana, hunting in the canebrakes and swamps. In 1906, he crossed the line into Texas and never looked back. He hunted the Big Thicket, saying it had only 15 bears left - with 40 remaining in Louisiana and Mississippi - down to Baytown and the coast, heading to Mexico which was full of lions. Hunting in the mountains for the rest of his life, he killed probably 1000 mountain lions and at least as many grizzly bears in his career - including the last grizzly bear in the Gila Wilderness of New Mexico.

Unlike Miller and Goodnight, Lilly was never wealthy, although toward the end of his life he collected high bounties from ranchers and the government for predator

control. He also worked for the U.S. Biological Survey, finding and sending many specimens to the Smithsonian Museum, including some of the last ivory-billed woodpeckers from Arkansas.

Ben Lilly, revered by many for his hunting prowess and knowledge of wildlife, wiped out the last apex predators of the South and West.

Times have changed; to early settlers of this fair land, elk, bison, bears and mountain lions were considered useless, dangerous or tasty. Today we treasure species diversity, preserve remnants of wilderness and understand that predators are keystone species. Yet, most of us live in the city. We praise nature but are also safe from it.

A century and a half ago, Henry Miller, Mary Ann and Charles Goodnight, and Ben Lilly played important roles in creating our world. We are creating the future now for the next 150 years. And, quite clearly, one person can make a really big difference.

As Wallace Stegner said, "We are the only species which, when it chooses to do so, will go to great effort to save what it might destroy."

Women in Nature: Susan Fenimore Cooper, America's first female nature writer

by Meade LeBlanc

If I ask you to name a famous book from the mid-1850s, written by someone who spent a great deal of time in quiet contemplation studying and describing the natural world around them, you might immediately think of Henry David Thoreau, who wrote *Walden* in 1854. But, in 1850 Susan Fenimore Cooper, considered America's first recognized female nature writer, wrote *Rural Hours*, cited in Thoreau's journals, describing her observations of plants and animals. Scholars are unsure whether she actually influenced Thoreau, but her book, published anonymously "by a Lady", was praised by contemporaries, including Charles Darwin, and was reprinted nine times by 1887.

Susan Augusta Fenimore Cooper (1813 - 1894), was born in Scarsdale, New York, the eldest surviving daughter of James Fenimore Cooper, novelist best-known for *The Last of the Mohicans* in the "Leatherstocking Tales" and his wife Susan Augusta DeLancey. That same year, the family moved to Cooperstown, New York, founded by Judge William Cooper, her grandfather.

Susan attended a private school before the family moved to France in 1826. For the next five years they traveled

throughout Europe; Susan attended boarding school in Paris and had a private tutor in Italy, before returning to America and Cooperstown. She studied literature, art, languages, botany and zoology.

When Susan was 23, she became her father's literary secretary, editing his works, writing introductions to his books, and organizing his notes. Her father encouraged her to write and edited her works. He did not, however, encourage her to marry. It is believed that his overbearing nature and her attachment to him contributed to her remaining single. He found fault with all of her potential suitors, including Samuel Morse, the inventor of the telegraph.

Susan's first novel, *Elinor Wyllys*, was published in 1846, under the pseudonym Amabel Penfeather, with her father given credit as editor. It is the story of an unattractive but virtuous country girl whose fiancé abandons her after falling in love with another friend. He later returns to Elinor, and they are eventually reconciled. The novel was poorly received; she did not publish anything else for several years.

In 1850, she published *Rural Hours*, considered her best work. It was formed through a daily diary kept by Cooper and included lengthy discussions of nature, drawings of birds native to her area as well as flowers and other plants. The book was unique for its time - nearly scientific, with descriptive details of the specimens she studied and with artwork considered to be hers, showing remarkable attention to detail and accuracy in natural historical observations.



Susan warned of the dangers of human damage to the environment and the danger of overexploiting natural resources; she was one of the first writers to do so. As she wrote in *Rural Hours*: "It is not surprising, perhaps, that a man whose chief object in life is to make money should turn his timber into bank-notes with all possible speed; but it is remarkable that any one at all aware of the value of wood, should act so wastefully as most men do in this part of the world. Mature trees, young saplings,

and last year's seedlings are all destroyed at one blow by the axe or by fire; the spot where they have stood is left, perhaps, for a lifetime without any attempt at cultivation, or any endeavor to foster new wood.

She wrote about the decline in birds like the passenger pigeon. "At that time they passed over the valley in its length, large unbroken flocks several miles in extent succeeding each other," she wrote. "There have not been so many here since that season." The species, famously, soon went extinct—by 1900, passenger pigeons had disappeared from the wild.

Shortly after publishing *Rural Hours*, Susan's father died and she became his literary executor, editing his unpublished works and writing introductions to the reprints of his novels. She didn't give up on writing, though. She published essays and articles in popular publications such as *The Atlantic Monthly*, *The Freeman's Journal*, *Graham's Magazine*, *Harper's New Monthly* and *Putnam's Magazine*. She edited five additional books, anthologies of her father's works, and several monthly magazines.

She remained single her entire life and lived with her sister in a home built mainly with bricks and materials from the ruins of Otsego Hall in Cooperstown, which her paternal grandfather had built. Susan was an accomplished naturalist of her time, despite publishing her most famous work anonymously. She died in her sleep, at age 81, in Cooperstown.

Memories of the 2022 Green Sea Turtle Cold-Stunning Events by Maureen Nolan-Wilde

In January and February, our chapter's trained and permitted sea turtle volunteers helped the Gulf Center for Sea Turtle Research (GCSTR) rescue, rehabilitate and release cold-stunned sea turtles. Here are some of their memories.

Emily Incerto picked up six sea turtles rescued by Texas Parks and Wildlife (TPWD) from local bays. One turtle had an oyster growing on its carapace. Since the rescue, the oyster has been removed and the turtle, now known as "Pearl", is now rehabbing at the GCSTR hospital at TX A&M Galveston (TAMUG).

Janet Mason and Robert Mason joined the effort at TPWD in Dickinson, where they did initial evaluations of rescued sea turtles, transported turtles to the hospital at TAMUG, and, in Janet's words; "tucked the turtles in at night with wet towels in their totes." Robert's role was photographing the process and he was impressed with the passion and care Master Naturalists and TAMUG students gave to the sea turtles.

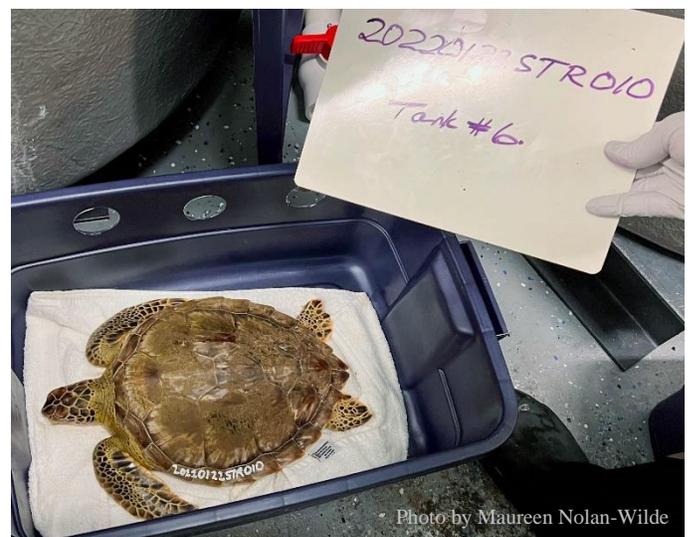


Photo by Maureen Nolan-Wilde

Maureen Nolan-Wilde and Lynn Wright participated in the swim testing of these turtles. Each tester is assigned a sea turtle that must be monitored for 30 minutes

ensuring it can swim and dive in a large tank filled of water. They found themselves cheering when the sea turtle known as Algernon (due to the algae growing on his plastron) took his first dive and passed the test.

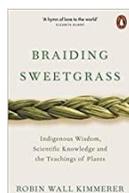
Patty Trimmingham and Jo Monday had the honor of releasing rehabbed sea turtles into the surf at Corpus. Patty says there is no feeling like seeing turtles in the clear, green surf swimming to freedom. It was a beautiful sight!

So, what is "cold stunning"? This is a condition whereby a sea turtle becomes very weak and inactive due to

exposure to cold water temperatures for a period of time. It generally occurs when water temperatures fall below 50°F (10°C). When a sea turtle becomes cold-stunned, it is unable to swim and dive and becomes vulnerable to predators and possible drowning. In some cases, if not rescued, the sea turtle can develop secondary health conditions or die.

This is the second year chapter members have been involved in cold-stunning events with our partner, GCSTR. As Patty observed, it was awesome to see everyone working together and seeing the sea turtles released.

Heritage Book Study - Review of *Braiding Sweetgrass: Indigenous Wisdom, Scientific Knowledge, and the Teachings of Plants* by Madeleine K. Barnes



What is the significance and why should you care about braiding sweetgrass? The act of braiding sweetgrass is to divide the harvested sheaf into thirds and then interlace these three strands to form a flat braid. The braid is a gift. The title of this book is like the braiding of sweetgrass; it combines indigenous wisdom with scientific understanding interlacing both the ancient cultural and scientific knowledge of plants.

This is our second book selection written by Dr. Robin Wall Kimmerer - mother, botanist, decorated professor and member of the Citizen Potawatomi Nation. In her writing, Kimmerer describes the duality of worlds, having one foot rooted in indigenous tribal culture passed down through generations of sharing and the other foot anchored in accepted scientific knowledge obtained, tested and verifiable using scientific methods. She seeks to educate us about the natural world as seen, experienced and understood by people whose lives were interwoven with nature and whose survival depended upon its continuity and sustainability.

Kimmerer describes the connections and relationship that the indigenous tribes had with nature - the same connection you feel whether you dig in the soil, watch a bird in flight or plant a seed. With her almost poetic lyrical writing, she describes both the beauty and science of the land and plants around her and helps us understand the value of these gifts.

We see and hear about all types of environmental damage; as master naturalists, it can be challenging to focus on our goals to preserve and restore our natural resources or "gifts" and to strive to educate others about them. Kimmerer writes of the possibility and potential for plants and nature to begin to heal itself with a little help from us - a hopeful perspective. I hope that you find time

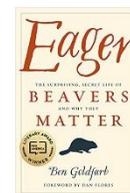
to read this book as her passion for indigenous people, plants and ecology resonates on each page and I found her words to be very inspiring and motivating. I would like to share some quotes below from Robin Wall Kimmerer.

"To become naturalized is to live as if your children's future matters, to take care of the land as if our lives and the lives of our relatives depend on it. Because they do."

"The moral covenant of reciprocity calls us to honor our responsibilities for all we have been given, for all that we have taken. It's our turn now. Long overdue."

"As we work to heal the earth, the earth heals us."

Our next Zoom AT will be held on Monday, April 4 to begin our discussion of *Eager: The Surprising, Secret Life of Beavers and Why They Matter* by Ben Goldfarb (2 months reading), pages 1-128 plus the Foreword. On Monday, May 2, we will meet to close our discussion of this book with pages 129-243. If you want to join us for either or both of these AT opportunities, please contact Madeleine Barnes at Mad2Btmn@aol.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 10am 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!

April and May Activities

ADVANCED TRAINING OPPORTUNITIES

Chapter Meeting - April 7; Introduction to the Big Thicket
Presenter - Andrew Bennett, Biologist at Big Thicket
National Preserve
6pm Social, 6:30pm Meeting, 7pm Speaker
Via Zoom; 1 AT hour

Monarch Butterfly Topics for the Gulf Coast

Wednesday March 30; 2-3:30pm via Zoom
Presenter - Chris Anastas and Candice Annen

Oysters

Tuesday April 26; 2pm via Zoom (length TBD)
Presenter - Shane Bonnot

Ongoing

Heritage Book Study Group

First Monday of every month via Zoom
10am-noon; 2 hours AT
Contact: Madeleine Barnes 281-474-9406
See Pg. 11 for meeting dates and books.

STEWARDSHIP OPPORTUNITIES

For a complete list of stewardship activities, see our chapter website, <https://txmn.org/gbmn/what-we-do/>.

EDUCATION - OUTREACH OPPORTUNITIES

For a complete list of education - outreach activities see our chapter website, <https://txmn.org/gbmn/what-we-do/>.

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.

CHAPTER INFORMATION AND RESOURCES

Calendar - <https://txmn.org/gbmn/events/month/> Includes meetings, AT and volunteer activities

Board - <https://txmn.org/gbmn/board-of-directors/>
Contact information for the Board of Directors. **Board Meetings** - usually first Tuesday of each month (via Zoom), verify on the calendar

Committees - <https://txmn.org/gbmn/board-of-directors/>
Contact information for the Committee Chairs

Volunteer Service - <https://txmn.org/gbmn/volunteer-service/> Volunteer Opportunities

Advanced Training - <https://txmn.org/gbmn/advanced-training/>

Midden Archives - <https://txmn.org/gbmn/> Go to The Midden on the top menu.

Facebook - <https://www.facebook.com/gbactmn>



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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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