

The Midden

Photo by Vena Densmore

Galveston Bay Area Chapter - Texas Master Naturalists

December 2017

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Next Chapter Meeting

December 7th

Annual Awards Celebration and Officer Election

6:30pm

At Walter Hall Park

President's Corner by George Kyame, President 2017

Greetings, fellow naturalists. Welcome to the last Midden of 2017! It is with great pride that I confidently proclaim that our chapter has had and is still in the midst of a banner year! Everyone should get that proverbial pat on the back for a job well done. As always, stand out performances and solid teamwork have produced what can only be described as a winning record.

On the third weekend of October, our Texas Master Naturalist State Conference was held in Corpus Christi. By most accounts, it was the biggest and best yet. I thought our State leaders, Mary Pearl Meuth and Michelle Haggerty, and their teams, put on a wonderful 3-day convention. It was my first, and I look forward to returning next year in Georgetown, outside of Austin. Let me just say that in addition to fun, food, and camaraderie, the educational enrichment was beyond rewarding.

For the second year in a row, our chapter's Project of the Year won 1st place! This was the culmination of a lot of coordinated hard work. Our photographers also made a nice showing as well. There will be more on this topic inside.

Currently, our Chapter is hosting the EPA film crew, here to capture video for the Gulf Guardian Award ceremony in Point Clear, AL at the end of November. I hope to have seen many of you at the filming worksites!

Our December Chapter Meeting/Gala Award Supper is right around the corner. Please consider your Naturalist friends and organizations that have gone above and beyond so that we may recognize them on that evening with the Treasures of Bay Awards. Julie Massey is taking nominations with a link from her recent email.

I'm looking forward to our upcoming celebration, and hope to see you all there. Our 2017 class has been working very hard to put on a great show. Congratulations to all of you and thanks. George J. Kyame.



Wetland Wanderings: Planning for Anahuac project by Lana Berkowitz

After 14 years of work at Sheldon Lake, Marissa Llosa is preparing to take her Wetland Restoration Team to Anahuac National Wildlife Refuge next year to replicate the experimental excavation/restoration process.

“Having a second site to compare to Sheldon is a really, really important thing. And that’s why I have been working really hard to get this off the ground,” said Marissa, Texas AgriLife Extension Service’s wetland restoration team leader.



Photo by Rick Becker

Sheldon Lake State Park & Environmental Learning Center is the first site in Texas to use historical geological maps and aerial imagery to map where original wetland beds were located so the land can be excavated to restore freshwater wetlands. Scraping away the fill-in soil that was used to level the land for farming reveals original basins. The natural contours give nature a chance to sustain diversity with little maintenance.

Sheldon’s 400-acre project is winding down. Marissa says the last section, Phase 5, will be completed this summer.

Although it got a slow start, the Anahuac project won’t take as long, Marissa said. Discussions with the Anahuac manager and biologist began about three years ago. The Anahuac staff believes the methodology will work on

Pintail Marsh. It is a unit in the middle of Chambers County that was used for rice farming for a long time but has been fallow for several years.

The first attempt to get funding for the project failed, but the refuge’s longtime partner, Ducks Unlimited, never lost interest. Recently DU got a North American Wetlands Conservation Act grant with about \$415,000 earmarked to restore approximately 350 acres at the Anahuac refuge.

The plan calls for a mix of prairie and wetland plants similar to Sheldon’s restoration. “You need both in the mix to create that special matrix,” Marissa said.

Typically when a refuge wants to restore or offer habitat for ducks and geese or other birds, the plan is to flood a field and make it a moist soil unit, Marissa said. “This is different and a much more permanent type of solution to restoration. The idea is to keep it minimal in the type of maintenance but still provide that critical habitat resource but not just for geese and ducks. It’s really geared for herons, egrets and other birds. Shorebirds for a little while because the area takes time to vegetate, but once it is vegetated, it’s going to be utilized by a variety of different birds.”

Mapping Anahuac’s Pintail Marsh should begin in January, followed by design and excavation work. Planting would start next fall, she estimates.

“But that doesn’t mean that we wouldn’t be prepping stuff. We would be working with the refuge probably in the spring and summer to stage plants and start collecting material and getting things ramped up. So when construction is complete we can get in there quickly and get plants in the ground,” Marissa said.

There will be some overlap with Sheldon’s completion and Anahuac’s prep work. “It may be that once a month we go out to Anahuac to collect some material and stage some stuff out there. But the majority of our time will be working at Sheldon and completing Phase 5,” she said.

While the DU grant covers construction and excavation, Marissa has applied for a separate grant to cover her costs as a project liaison and for vanpool costs, boots, and other equipment for volunteers and students.

The Wetland Restoration Team, which was formed in 2000, also has worked at Buffalo Bend Nature Park and Mason Park. If you are interested in joining the team or keep up with its projects through the newsletter, contact Marissa at MLlosa@tamu.edu.

Prairie Ponderings: Texas State Bison Herd by Diane Humes

Bison bison, the American bison, roamed the North American continent in numbers estimated at 20 - 30 million animals - maybe as many as 60 million. What is certain is that from 1874 - 1878, the Southern bison herds were nearly exterminated and, by 1884, all bison were nearly extinct, after being slaughtered by the millions, their hides sold for machinery belts, their bones used for fertilizer, bone china, and to refine sugar. Living bison numbered 325. By chance, 25 lived wild in Yellowstone, the remainder, in five small herds - one each in Canada, Montana, South Dakota, Kansas, and Texas.

As with the prairie, so with the bison: acres of prairie are now farms and ranches; today, about 90 million head of cattle replace the bison. Far less than one percent of either bison or prairie remain in a natural state. Prairies and bison were saved either by chance or by the grace of individuals who witnessed their demise and took steps to rescue them. The "Father and Mother of the Texas Panhandle", Charles and Mary Ann Goodnight, saved the Southern bison from extinction.



Photo courtesy of TPWD

Born in 1828 in Illinois to a German family that had settled in Virginia in the 1750's, Charles Goodnight moved to Texas with his family when he was 10 years old. Near today's downtown Dallas, he saw his first buffalo along the banks of the Trinity River. In his day, he was a Texas Ranger, trail driver - with Oliver Loving driving cattle along the Goodnight/Loving Trail to New Mexico - cattle rancher and breeder, and inventor of the chuck wagon. He participated in the rescue of Cynthia Ann Parker from the Comanches; he dealt fairly with all people and became a lifelong friend of Quanah Parker.

Charles married Mary Ann Dyer, a strong and independent woman who had raised her two brothers after their parents' deaths. Her family had included a former governor of Tennessee. She had been a

schoolteacher and Charles had never learned to read or write; he always thought he had married above himself.

Mary Ann and Charles Goodnight lived through the early settlement of Texas, Comanche Indian raids, the Civil War, World War I, railroads, automobiles, motion pictures - Charles filmed the last buffalo hunt with the Indians in Palo Duro Canyon in 1916. Both were familiar with massive bison herds and watched their decline and near demise.

Witnessing the incessant shooting of bison in 1876 - 1877, Mary Ann Goodnight asked Charles to rope her a few orphans that she might try to save. He complied and she bottle-fed six calves which became the start of their bison herd, called the Goodnight herd from the JA Ranch near Palo Duro Canyon - one of five foundation herds of today's existing bison. Charles sold or donated bison to people and conservation organizations. By the time he died in 1929, the herd had grown to 250 animals.

The Goodnight bison changed ownership several times over the years and didn't always like to stay on the JA ranch - they kept wandering back to Palo Duro Canyon. The owners of the JA Ranch donated the bison to the Texas Parks and Wildlife Department in 1996; DNA testing revealed that this herd is unlike any other bison group in North America and is thought to be the last of the remaining Southern Plains Bison in existence.

These magnificent animals, now the Texas State Bison Herd, are comfortably ensconced in their new home at Caprock Canyons State Park and Trailway, formerly part of the JA Ranch, with 15,000 acres to roam. Every winter each bison receives a "well-bison checkup" and genetics testing - important for bison long-term survival. Their grassland has been restored and is also regularly monitored.

American bison - our National Mammal since 2016 - were nearly lost for all time. Today, there may be as many as 500,000 bison in North America, a 1,000-fold increase over the population bottleneck of 1884. The National Bison Association dreams of a million bison by 2025! Texas bison are increasing; the Texas State Bison Herd expected 35 new calves this summer!

As Master Naturalists, we work hard restoring our remaining prairies, the ancestral stomping grounds of Southern Plains Bison, but we have a lot of work ahead of us if we wish to see these "charismatic megafauna" galloping across the gamagrass. Maybe we can take inspiration by visiting the descendants of Charles and Mary Ann Goodnight's rescued baby bison.

Beach Patrol: Kayaker's View of Our Coastal Wetlands by Maureen Nolan-Wilde

On a recent kayak trip at Galveston Island State Park, chapter members experienced a morning of adventure and discovery in the park's coastal wetlands.



Photo by Maureen Nolan-Wilde

These wetlands provide a range of ecosystem services to both the community and environment, including:

- Flood protection
- Erosion control
- Food and habitat for wildlife
- Water quality enhancements
- Recreational opportunities

In late summer and early fall, plants are in bloom providing beautiful vistas for paddlers to enjoy. We also spotted White Ibis, Roseate Spoonbills, Great and Snowy Egrets, Great Blue Herons, Ospreys and more among the grasses as Brown Pelicans soared overhead. Blades of smooth cordgrass hosted a number of Marsh periwinkles that were attempting to avoid not only the high tide but also their predators. However, we did not see the fiddler crabs that usually hang out on the salt flats; they must have plugged up their holes and were waiting for the tide to drop before venturing out again.

It's said that every day at the park can provide a different experience and this was definitely true for us. Due to the high tides, we were able to paddle directly to the observation deck, since the surrounding salt flats were temporarily under water. After this uncharted paddle, we climbed to the top of the deck, allowing us to take in the beauty of the park and the surrounding area.

As true adventurers, we took a different path home, exploring the marsh maze and other sites along the way. The maze is always a fun part of a paddling trip at the park, especially if you can find your way without getting stuck. We are happy to report that everyone made it back that day.

Special thanks to Chuck Snyder, our gadget guy, who helped chart our course and quelled fears that this might turn from a three-hour tour into a true Gilligan's Island adventure.

Nature is calling - experiencing it from a kayak can be both fun and amazing.

Pandemonium on the Prairie by Diane Humes

Prairies have been under attack since the 1870's when Charles Dana Wilber promoted settlement of the West by asserting that "rain follows the plow." It worked until it didn't, but in the meantime prairies were plowed for farming, towns, business, roads, railroads - the list goes on. So, here we are 150 years later, clinging to the remaining few patches of undisturbed prairie and trying to restore some combination of original species in the disturbed, but extant sections.

This takes a lot of manpower. So, 11 years ago, Mark Kramer at Armand Bayou Nature Center envisioned an event that would entice volunteers to spend a morning - preferably a gorgeous, sunny, cool day in fall - planting native prairie grasses and forbs, thereby helping restore the prairie. And, if everyone has fun at this Prairie Appreciation 101, so much the better. Imagining the

potential chaos of about 100 volunteers out in the field with several thousand plants, the event was dubbed "Prairie Pandemonium."

Prairie Pandemonium has always ended with lunch and a t-shirt for all volunteers; sometimes door prizes, also. Many of us regular Prairie Friday volunteers proudly wear our collection of ALL the shirts. This is a badge of honor.

This year the event seemed in danger of not happening, so a core group of Prairie Friday members stepped in to take care of business. We made sure the plants were ready and delivered to the field, the water containers were filled, registration happened, t-shirts and lunch were managed, the banner updated, door prizes chosen, portable potties available, and everything ready for the big event.

It all went according to plan, except the weather, which threatened to cancel it all at the last minute. But, all went well; Saturday, October 21, 2017 dawned as the calm between two storms. Planting crews put 2,250 prairie grasses into the mud, then came back and devoured Bay Area Meat Market hot dogs with all the fixings, cookies, and drinks. Everyone had a fine time, received a new clean shirt, courtesy of Quail Unlimited, and had the chance to win fantastic door prizes, graciously donated by REI.

Clean up was quick and easy; we all went home to well-earned rests.

Many thanks to Galveston Bay Area Master Naturalists and ABNC volunteers for all their help making it happen: Chatt, Larry, Tom S., Jim, Laura, Jay, Jennifer, Beth, Patty, George, Joe, Liz, Gail, Jesus, Linda, Lyman, Mark, Rob, Tom B., Diane.



See you next year!

Attwater's Prairie Chicken Post-Harvey Status by Sandy Parker

The status of the Attwater's Prairie Chickens after Harvey is quite dire, but you can play a part in Houston Zoo's efforts to help the population recover.

At the Attwater's National Wildlife Refuge at Eagle Lake, 20 birds are dead, with several still missing. Five birds are alive. Prior to the storm, 18 birds were transferred back to Houston Zoo for safekeeping. The refuge received at least 22 inches of rain from the Harvey. This year, prior to the storm, 76 birds had been released on the refuge from the captive populations.

At the Goliad private land facility, 16 inches of rain fell. They lost one acclimation pen and another one was damaged. They had released 100 birds at the site and are still assessing the population; however, it is not looking good.



Which means it is more important than ever to build up a healthy population of captive-bred birds!

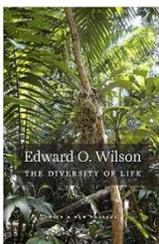
Come join us and help this beautiful, unique, endangered bird recover from this latest tragedy. We meet 9-11 am every Monday at the Johnson Space Center, where the Houston Zoo has its captive-breeding facility. We are restoring the prairie habitat in the breeding pens. Some activity to date includes cutting Deep-rooted Sedge (DRS) seed heads, digging out DRS, spraying vinegar on the DRS, plus dividing, relocating and planting Eastern Gamagrass.

As we get the DRS under control, we will continue to plant native grasses and forbs in the pens to create a natural prairie habitat for the birds. We also plan to work with the zoo to plant a pollinator garden in the vicinity of the pens pending grant funding at the zoo. If you are interested, we need to get a badge for you so you can enter the Johnson Space Center. You need a valid Texas Driver's license and another form of ID such as your Social Security card or a passport in order to obtain your badge. Please contact Sumera Ali at sumera.ali-1@nasa.gov and send her your name as it appears on your driver's license. Please copy me, Sandy Parker, at sap99@sbcglobal.net, so that I can meet you at the front gate and show you where the pens are located. It will take a few days to obtain a visitor's badge and longer to get a more permanent badge, so be patient!

We have a great group of volunteers working this effort and want you to be a part of the fun!

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

Before reading Edward O. Wilson's book, *The Diversity of Life*, I had a general idea of the concept of biodiversity - the variety of life in the world or a particular habitat or ecosystem, as defined in the Oxford dictionary. Basically, it refers to the variability of life on earth. This book, first published in 1992, reads like a textbook on conservation biology and ecology; the issues have not changed.



On the faculty of Harvard University for 30 years, Wilson began as an ant taxonomist, working to understand ant evolution - how ants escaped their environmental disadvantages by moving into new habitats and became new species. Working with mathematician William Bossert, he discovered the chemical nature of ant communication, via pheromones. In the 1960s he collaborated with mathematician and ecologist Robert MacArthur on a now-classic experiment studying species colonization of islands. *The Theory of Island Biogeography*, written about this experiment became a standard ecology text. In 1971, he published the book *The Insect Societies* about the biology of social insects like ants, bees, wasps, and termites.



Often called both "the father of sociobiology" and "the father of biodiversity studies", Wilson used sociobiology and evolutionary principles to explain the behavior of social insects and then to understand the social behavior of other animals, including humans, thus establishing sociobiology as a new scientific field.

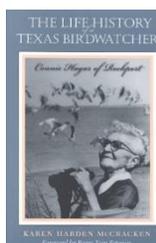
Wilson's many scientific and conservation honors include: Member, National Academy of Sciences, 1969; U.S. National Medal of Science, 1976; Leidy Award, 1979, from the Academy of Natural Sciences of Philadelphia; Pulitzer Prize for *On Human Nature*, 1979; Tyler Prize for Environmental Achievement, 1984; Honorary doctorate from the Faculty of Mathematics and Science at Uppsala University, Sweden, 1987; and

Pulitzer Prize for *The Ants* (with Bert Hölldobler), 1991, to name only a few.

The Diversity of Life is an epic of detailed analysis of the amazing inter-connectedness of life around and even upon us. Wilson's writing is scientific and very eloquent, reading more like a personal journal, allowing readers to feel like they are going along on a journey of discovery throughout the world. Exploring the last five mass extinctions occurring in earth's four billion year history, Wilson makes the case that another mass extinction is happening now and is caused by us humans, not meteors or other natural occurrences. If you read Elizabeth Kolbert's *The Sixth Extinction*, you see where she got some of her ideas.

So is it all doom and gloom or can we do something to change this scenario? This isn't a quick fix, as the loss of biodiversity is complex and far reaching. Defining a new environmental ethic - shades of Aldo Leopold - Wilson outlines the steps needed to address this threat. He advocates making biodiversity economically valuable, providing support for people, whether through ecotourism, pharmaceuticals, or new and improved agriculture products. He promotes sustainable development throughout the world. And, stressing the need to save natural ecosystems and intact biodiversity, he suggests debt-for-nature programs like those of The Nature Conservancy and World Wildlife Fund, to buy debt in exchange for creation of more reserves throughout the world, and also the return of former wildlands and forests back to their natural states.

I really cannot recommend this book enough: I feel it is a "must read" for master naturalists in order to understand the biodiversity we are committed to protect, restore, and conserve. In the words of Dr. Edward O. Wilson, "I will argue that every scrap of biological diversity is priceless, to be learned and cherished, and never to be surrendered without a struggle."



A must for birders everywhere, the final book selection for this year is *The Life History of a Texas Birdwatcher: Connie Hagar of Rockport* by Karen Harden McCracken. Due to the holiday on January 1, the Heritage Book Study will meet on Monday, January 8 to discuss the first 142 pages of Ms. McCracken's book and complete our reading in

January 2018. We welcome your participation for two hours on the first Monday of each month (except January) starting at 10 am at the Agrilife Extension office. We look forward to seeing you and please let us know if you have read any good naturalist books lately! Happy trails!

Chapter Members Attend Annual Meeting, Take Home Top Project Prizes

by Chuck Snyder

A record crowd of more than 550 Texas Master Naturalists, their guests, sponsors and partners gathered in Corpus Christi on October 20th through 22nd for the 18th Annual Meeting. Organizers offered an excellent program, including advanced training opportunities, field trips and fellowship gatherings. The topics ranged widely, from citizen science to Hurricane Harvey impacts. Sessions were lively and well attended.



Photo by Chuck Snyder

Our chapter was well represented, with 28 active members participating - the second largest contingent at this year's meeting. Members from 14 different classes, dating back to 2000 and

including members of the 2017 class, ensured our presence was both broad and deep. Several of those present were recognized for reaching milestone awards. Odie Asscherick was the only member in the state to achieve the 10,000-hour level, becoming the sixth member of our chapter to reach that pinnacle. Congratulations, Odie!

In the projects and photography awards areas, our chapter once again sparkled. Additionally, and for the second straight year, we were awarded first place in the Chapter Exemplary Project category, this time for our development and implementation of the Injured Bird Rescue Group for Galveston County. Project leaders Sandy Parker and Tim Long represented the chapter in the oral judging process that ultimately selected the project. Congratulations to all the members of the project team, with special recognition to Stennie Meadours, who

provided initial leadership and guidance, and to Sara Snell, who lent her expertise and experience in developing the project summary presentation boards.



Photo by Chuck Snyder

Our photographers also came home with awards: Debbie Repasz took home second place in the Wildlife category for her beautiful photo of a Little Blue Heron watching over its egg on the nest; Larry Brasfield won second place in the Master Naturalists at Work and Play category for his candid shot of our 2017 class members interacting with interested young people during a seining class; and Alan Wilde was awarded third place in the same category for his portrait of Scott Buckel holding a newly-banded American Oyster catcher. (See the winning photos on page 11.)

We're now looking forward to next year's meeting, which will celebrate the 20th anniversary of the Texas Master Naturalist program. We'll be heading northwest for that one; destination Georgetown, TX. Mark October 26-28, 2018 on your calendar; we're hoping for an even bigger representation next year!

Connections: Milkweeds, Moths, and More by Diane Humes

Texas Master Naturalists, somewhat prone to roaming, may wander off the reservation occasionally and, in the process, encounter new aspects of the natural world to pique their curiosity. Follow all the clues and see where they lead.

I was recently in central Vermont during the sunny days of early fall as maple and oak trees were turning scarlet and brown, goldenrods and fall asters bloomed on hillsides, water sparkled downhill over mica-schist rocks, blue jays screamed by day, and barred owls serenaded

at night. White-tailed deer, turkey, and black bear crossed the front yard where I encountered an old friend, common milkweed, *Asclepias syriaca*, a species familiar to me from my early days in Michigan, but which I have not seen since living in Texas. Thinking about invasive species and Vermont's long history, I pondered the species name of this plant, *syriaca*; where was it really from?

Turns out that it was first described in 1635 by French botanist and physician Jacques-Philippe Cornut in his

book *Canadensium planatarum* (*Canadian Plants*). At that time, Canada stretched all the way south to Louisiana, but Cornut never left Europe; he named the plant while confusing it with a similar species from Asia Minor. One hundred years later, Linnaeus, kept the name.

Species name notwithstanding, common milkweed is native to North America east of the Rocky Mountains. It may or may not be native to Texas; the USDA Plants Database lists no location data for any Texas counties; perhaps, master naturalists should find more data! As with other milkweed species, it is a favorite of Monarch butterflies, and, as it turns out, lots of other species.

Closer examination of this old friend showed me that some plants had been pretty badly chewed and others had huge populations of orange, spiky caterpillars. Not Monarch larvae - what had I found? A quick search with the computer- just google "orange spiky caterpillar on milkweed" - showed me that the creatures feasting on the milkweed leaves were larvae of the Milkweed Tussock Moth, also called Milkweed Tiger Moth, *Euchaetes egle*.

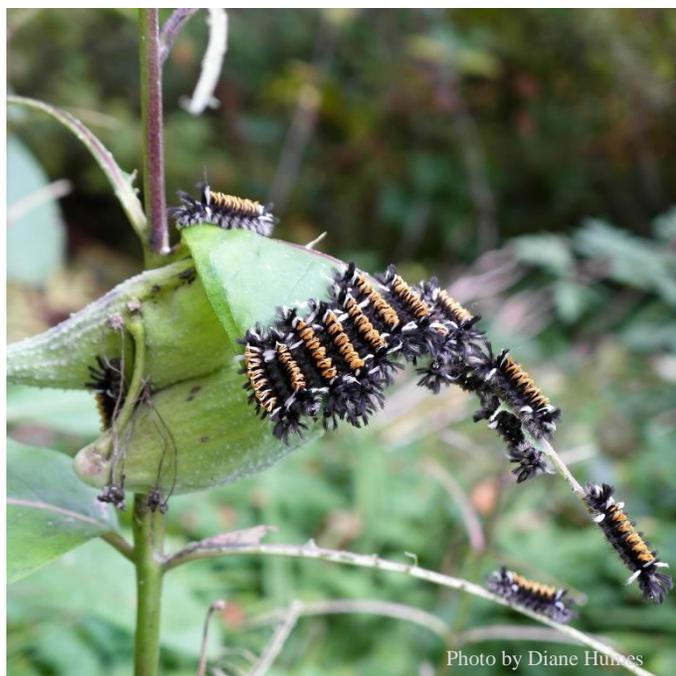


Photo by Diane Humes

Although the common milkweed probably does not live in Texas, the Milkweed Tussock Moth is found from Maine to Florida and west from North Dakota to Brownsville. In other words, this insect could be coming to a milkweed plant near you!

Tussock Moth larvae feed on milkweeds and chew entire leaves, leaving only stalks and midveins, giving the plant a decidedly skeletal appearance. The larvae have

acquired the cardiac glycoside chemicals found in all parts of the milkweed plant except flowers, as Monarch larvae do, and exhibit the warning coloration of Monarch adults to announce their distastefulness to predators.

Although larvae are brightly colored, adult Tussock Moths are mostly drab in color. Consider, however, that their predators are bats, not birds. The moths may taste bad, but have different, but clever, warning mechanisms. Special organs produce clicking sounds to warn wise bats - "this one tastes bad" - or to jam the bat's echolocation signals.

Milkweed Tussock Moths are by no means the only species to eat common milkweed. At least 10 insect species specialize on common milkweed or other members of the *Asclepias* genus; that is, they feed only on various parts of the plant. All store cardiac glycosides, but seldom significantly damage the plant, except the Tussock Moth, whose huge numbers of larvae denude the plant.

These species include: red milkweed beetle, large milkweed bug, small milkweed bug, milkweed aphid, milkweed leaf beetle, milkweed stem weevil, milkweed tussock moth, and, of course, the Monarch butterfly. These all munch on various parts of milkweed plants. Who knew? Producing toxic compounds, yet under assault by a plethora of insect species using these chemicals to their own advantage, milkweed species are fighting a war with all the other participants. At the same time, milkweed is a prolific nectar-producer; many species of bees, butterflies, and moths regularly sip from the flowers. How can we naturalists take sides in this battle of life?

It has absolutely amazed me how a simple observation of a large number of unusual orange caterpillars camping out and defoliating common milkweed plants has led to such a wealth of additional knowledge about this, obviously complicated ecosystem in our own gardens.

Of course, Aldo Leopold already knew that; "All I am saying is that there is also drama in every bush, if you can see it. When enough men know this, we need fear no indifference in the welfare of bushes, or birds, or soil, or trees. We shall then have no need of the word 'conservation,' for we shall have the thing itself." Aldo Leopold, 1939 *The Farmer As a Conservationist*

For more details:

The Story of an Organism: Common Milkweed by Craig Holdrege

<http://natureinstitute.org/txt/ch/milkweed.pdf>

Heritage Book Study 2018 Selections by Madeleine K. Barnes

The Heritage Book Study has made the following reading selections for 2018:

February 5, 2018 & March 5, 2018

The Soil Will Save Us by Kristin Ohlson

April 2, 2018, May 7, 2018 & June 4, 2018

The Invention of Nature, Alexander Von Humboldt's New World by Andrea Wulf

July 9, 2018, August 6, 2018 & September 10, 2018

Junkyard Planet: Travels in the Billion-Dollar Trash Trade by Adam Minter

October 1, 2018 & November 5, 2018

Thirst for Power: Energy, Water and Human Survival by Michael E. Webber

December 3, 2018 & January 7, 2019

Texas Tears and Texas Sunshine: Voices of Frontier Women edited by Jo Ella Powell Exley



More Good Reads for the New Year - Happy 2018! by Diane Humes

More scientists and authors are alive and writing now than in all of history combined and have an incredible body of accessible knowledge at their fingertips. More tantalizingly interesting books are being published than we can possibly read. But, if you like to keep a good book handy, here is an assortment of recently published books for Master Naturalist edification.

Spineless: Portraits of Marine Invertebrates, the Backbone of Life by Susan Middleton. 2014.

This book is a stunningly gorgeous compilation of 250 photographs of marine invertebrate species taken by the author, the result of seven years of fieldwork in the Pacific Ocean. Bernadette Holthuis wrote species descriptions and "Her Deepness", Sylvia A. Earle contributed to this gem of the ocean, described by one reviewer as, "one of the most beautiful books I've ever seen, and that's saying a lot!"

Oxygen: The molecule that made the world (Oxford Landmark Science) by Nick Lane. 2016.

Put your chemistry hat back on and travel through Earth evolutionary history to ponder how it is that most life on Earth requires oxygen - a toxic gas - to sustain life. This book poses big thoughts; the reviews say, "it shows how oxygen underpins the origin of biological complexity, the birth of photosynthesis, the sudden evolution of animals, the need for two sexes, the accelerated ageing of cloned animals like Dolly the sheep, and the surprisingly long

lives of bats and birds." The thoughts presented here may redefine the way we view our world.

Drawdown: the Most Comprehensive Plan Ever Proposed to Reverse Global Warming edited by Paul Hawken. 2017.

Paul Hawken, author and activist, started a nonprofit to investigate ways to reverse global warming. Experts found 100 of the most workable solutions that, if used individually, collectively, and globally, could really work. His solutions currently exist, are economically viable, and represent a path toward drawdown - that time in which atmospheric greenhouse gases begin to decline! Read this book as a primer on the science and to see that we CAN make a difference. Since atmospheric CO2 has surpassed 400ppm, the time is now!

Lab Girl by Hope Jahren. 2016

I read *Lab Girl* last year, and found it inspiring, hilarious, and brilliant. An award-winning memoir of Jahren's struggles as a young, female scientist beginning her career, the story is interspersed with her fantastic insights about nature and plants. This is Jahren's story of her life, her friendship with her lab partner, Bill, and her description of how science "really works." The language is a bit salty; this is not for kids, but a very good read. I hope to see more from this author.

Washed Away: How the Great Flood of 1913, America's Most Widespread Natural Disaster, Terrorized a Nation and Changed it Forever by Geoff Williams. 2014.

Written for the centennial of the Great Flood of 1913 (of which I am ignorant), this book describes one of the greatest natural catastrophes of the early twentieth century. In March 1913, heavy rains over several days caused severe flooding in 14 states, with fierce winds and >150 tornadoes. Rain turned to snow, every major river east of the Mississippi overflowed, bridges washed away along with telephone and telegraph lines, isolating towns and cities. Hundreds of people died - 900 or more, actual numbers are unknown - from drowning, fires, freezing temperatures, accidents, and suicide, but among the tragedies were stories of incredible heroism. I'm sure we can relate.

American Wolf: A True Story of Survival and Obsession in the West by Nate Blakeslee. 2017

Published only weeks ago, *American Wolf* promises great drama about the wolves of Yellowstone. Hunted nearly to extinction, wolves have been re-introduced into the West, but not without controversy. This is an intimate account of a charismatic Alpha female wolf, O-Six, named for the year of her birth. I expect this story has no happy ending, since *The New York Times* published her obituary, but will detail the current status of nature issues in the western states.

The Gulf: Making of an American Sea by Jack E. Davis. 2017.

A book made for us, it seems, this one is Winner of the 2017 Kirkus Prize for Nonfiction. The reviews promise a comprehensive history of the Gulf of Mexico from the Pleistocene to present, from the Florida Keys to the Rio Grande. Beginning with the premise that everything begins with nature, this seems like a "must read" for a naturalist living on the Gulf Coast.

The Death and Life of the Great Lakes by Dan Egan. 2017.

Another recent book, this time about my home region, which contains 20 percent of the world's surface freshwater. Reporting about ecology and hydrology of the Great Lakes, Dan Egan also recounts the history of invading species, their introductions often caused by human actions with unintended consequences. Water will be a huge future issue - perhaps a limiting factor - and some drier areas have had their eyes on Great Lakes water. Will they try to siphon off Great Lakes water? It will be over my dead body; I'm just saying.

The World of Laura Ingalls Wilder: The Frontier Landscapes that Inspired the Little House Books by Marta McDowell. 2017.

I read all the Little House books by Laura Ingalls Wilder and I'm sure many of you did, too. We have less than 1% of native prairie or forest to play in, but Laura grew up in the real thing. For Laura's 150th birthday, Marta McDowell followed in Laura's footsteps, recovered details of her life in pioneer days. Including history, natural history, and daily life in the 1800's. This should be a fun read.

Monkeys Are Made of Chocolate by Jack Ewing. 2011.

Jack Ewing went to Costa Rica to run a cattle ranch and stayed to restore the rainforest. A natural storyteller, Ewing has written a wonderful book of short essays, each one a short story from the natural world. Any nature lover who has traveled to Costa Rica or the Amazon, or who would like to, will appreciate these beautiful stories.

These 10 books are an assortment like a box of fine chocolates. They should be savored; unlike chocolates, they should last until next Christmas! Please let me know what you think.

In Memory of David Bolon by Madeleine K. Barnes

David Edward Bolon, born October 1, 1955, was very proud of being a master naturalist in the class of 2010.

He was a dedicated volunteer at ABNC sharing his love of landscape/wildlife photography and nature. David died on September 21, 2017. He is survived by his wife, Carolyn, and daughter, Amy.

(Photo by Lyman Brown)



State Meeting Award Winning Photos



Photo by Debbie Repasz



Photo by Alan Wilde



Photo by Larry Brasfield

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 to this purpose or want to join the team, please contact Diane Humes, treimanhumes@gmail.com.

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The Midden is posted on the GBAC-TMN chapter website: www.gbamasternaturalist.org two weeks prior to chapter meetings. Archived issues also on chapter website. If you prefer to receive *The Midden* in hard copy and are not currently receiving it, please contact: Julie Massey, julie.massey@agnet.tamu.edu.

Midden Team

- | | |
|------------------------------|------------------------|
| Madeleine K. Barnes | Linda Welzenbach Fries |
| Lana Berkowitz | Carolyn Miles |
| Verva Densmore | Chuck Snyder |
| Diane Humes, Managing Editor | |

December and January Activities

ADVANCED TRAINING OPPORTUNITIES

Chapter Meeting - December 7th

Year-end Celebration

6:30 Dinner, Social Time, Elections, Awards, Fun

Walter Hall Park; No AT this meeting.

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. AgriLife Extension Office

10am-Noon; 2 hours AT

Contact: Elsie Smith (409) 392-7003

See Pg. 9 for meeting dates and books.

STEWARDSHIP OPPORTUNITIES

Ongoing Activities:

Mondays - Galveston Island State Park, Contact: Chatt Smith chattsmith@gmail.com

Tuesdays -

- Sheldon Lakes 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:

Marissa Llosa mllosa@tamu.edu

Thursdays -

- Stormwater Wetland Team, every Thursday, 9am - Noon. Contact: Mary Carol Edwards mary.edwards@agnet.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 - Lots of work to do and we can use your help developing a speakers bureau; responding to requests for exhibit booths, fieldtrip guides and presenters, planning Camp Wild and 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 - First Tuesday, 2-4pm

Committee Meetings

Communication - January 3rd, Wednesday, 9-Noon

Advanced Training - Third Monday, 10-Noon

Education/Outreach - Third Tuesday, 10 to 11:30am

Stewardship - Meets quarterly



Educational programs of the Texas A&M AgriLife Extension Service are open to all people without regard to race, color, sex, religion, national origin, age, disability, genetic information, or veteran status. The Texas A&M University System, U.S. Department of Agriculture, and the County Commissioners Court of Texas cooperating.

The Midden Deadline

for the next issue

January 2

If you have Advanced Training or Volunteer Opportunities, please submit information to Tim Long, tikibloke@yahoo.com

