

The Midden

by Chuck Snyder

Galveston Bay Area Chapter - Texas Master Naturalists

February 2020

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President's Corner by Susette Mahaffey

As I have thought back about the past year for the chapter, it was a busy one that was highlighted by many awards and volunteer opportunities. I had not realized how truly privileged we are as a chapter with the number and variety of opportunities that we have until I spoke with people at the state conference. The biodiversity that surrounds us offers us so many unique opportunities to work in nature that many chapters do not have. We can choose from so many different environments and types of animals with which to work and observe. There is truly a stewardship opportunity for everyone!

As I look forward to the coming year, we have one big opportunity that will require time and leadership from our chapter. In October, the Texas Master Naturalist state conference will be in Houston. Seven chapters were asked to help and we volunteered to cover the registration and help desk. The registration/help desk is open to conference goers from Friday morning until the conference ends on Sunday morning, and we will be looking for people who will be able to help staff the registration/help desk. We are great ambassadors for the Texas Master Naturalist program, and this is a perfect fit for us! Beginning in January, there will be a call for presenters at the conference. Please give some thought to volunteering to make a presentation.

The new class members have been chosen, and planning for the training is nearly complete. If you have not volunteered as a greeter, provider of a breakfast treat, mentor, or support person, you might consider this as part of your spring volunteer service. It is an awesome opportunity to meet the new class members and to help them feel welcome and become valuable assets to our chapter. We are fortunate to have a committed team who plans and volunteers for the new class members!

As this New Year begins and a new executive board begins its work for the chapter, I ask you to please let us know if you have ideas or suggestions that you want to share. Our work is our way to touch the future and leave the planet a better place for future generations. Although we may not see significant results from the work that we do each day, that volunteer work will be our legacy to future chapter members as well as the generations who come behind us. As I told the potential new class members in November, you will notice so many things that have always been around you and that you just didn't see. What I think being a master naturalist is all about is best summed up in this quote from Marcel Proust, "The real voyage of discovery consists not in seeking new landscapes, but in having new eyes."

Next Chapter Meeting

February 6

Wetland Restoration

By

Colleen Ulibarri
Wetland Restoration Team

At
Extension Office*

**** BREAKING NEWS ****

Julie Honored With Distinguished Agent Title

See page 2 for details.

Julie Honored With Distinguished Agent Title

By Sara Carney, Texas Sea Grant Communications Manager

Texas A&M University College of Geosciences - In recognition of her longstanding service, Texas Sea Grant Extension Agent Julie Massey has earned the prestigious title of distinguished agent.



Photo credit: Texas Master Naturalists

Long-time extension agent with Texas Sea Grant and Texas A&M AgriLife Extension Service, Julie Massey, has been designated a distinguished agent. The new title recognizes Massey's outstanding efforts and service to her community in her role as an extension agent in Galveston County.

Massey was nominated for the award by her Regional Leadership Team at AgriLife Extension. She was recognized for this accomplishment at the 2020 AgriLife Conference on Jan. 9, 2020.

The designation was developed in 2017 and is only held by a select few extension agents with at least 20 years of experience. Distinguished agents are selected based on their excellent programming, agency leadership, community engagement and peer mentoring.

Massey advises and works closely with the Galveston Bay Area Chapter of the Texas Master Naturalists, which contains over 200 volunteers and contributed over 46,000 service hours in 2019. She also organizes the National Ocean Sciences Bowl's Dolphin Challenge, a



Photo credit: Texas Sea Grant

competition to teach high school students about the oceans.

"I am thrilled to receive this recognition," Massey said. "I am fortunate to work with Master Naturalist volunteers, who inspire and challenge me as we address Texas coastal resource issues."

In 2014, Massey received the Superior Service Award from AgriLife Extension and was a member of a team awarded the Superior Service Award in 2012. In 2016, Massey received the Distinguished Service Award from the National Association of County Agricultural Agents. She was also a member of the team at Texas Sea Grant that received the Assembly of Sea Grant Extension Program Leaders Superior Outreach Programming Award for their Hurricane Ike response efforts.

"This designation is a reflection of Julie's exemplary service over the course of her career," said Cynthia Lyle, Texas Sea Grant senior associate director and extension leader. "She is truly deserving, and we are proud to have her at Texas Sea Grant."

Congratulations Julie!

Wetland Wanderings: A Celebration of Diversity by Lana Berkowitz

This year's theme for World Wetlands Day is biodiversity.

The global event celebrated annually on Feb. 2 promotes awareness about the value of wetlands, which include any land areas saturated or flooded with water either permanently or seasonally. The list includes inland wetlands (marshes, ponds, lakes, fens, rivers, floodplains and swamps), coastal wetlands (saltwater marshes, estuaries, mangroves, lagoons and even coral reefs), and human-made wetlands (fish ponds, rice paddies, and saltpans).

To mark the event, WorldWetlandsDay.org shares a poster, a coloring page for kids, infographics and a PowerPoint presentation to download.

Highlights from the biodiversity presentation:

- Wetlands are vanishing three times faster than forests due to agriculture, construction, pollution, over-exploitation of resources (such as overfishing), invasive species and climate change. Thirty-five percent of wetlands have disappeared since the 1970s and 87 percent have been lost since the 1700s.
- Forty percent of the world's plant and animal species live or breed in wetlands. More than 100,000 freshwater species have been identified. Coastal wetlands are among the most biologically diverse places.
- Since 1970, 81 percent of inland wetland species and 36 percent of coastal and marine species have declined.
- Species are declining faster than at any time in human history, and the pace is accelerating. Climate change is making it worse.

- To end biodiversity loss, we need to restore, conserve and promote wise use of all wetlands, which means don't drain, don't build over and don't degrade the wetlands.

The source for most of the statistics is Ramsar, the Convention on Wetlands, an intergovernmental treaty that provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources. There are 2,375 Ramsar sites. The only one site in Texas is Caddo Lake.

More info: www.ramsar.org.

Wetlands Conference

It may be of interest to some that lawyers will discuss "Resiliency, Regulation & Policy" at the Texas Wetlands conference Feb. 27-28 in Houston. The event is sponsored by Continuing Legal Education (CLE) International.

The conference blurb says: "Streams, wetlands, and coastal resources – the lifeblood of our community, ecosystem, and industry alike – are in the headlines now more than ever. Join the debate over the push and pull of conservation, regulation, and development."

The featured presentation is "Texas's Coastal Resiliency Master Plan" by Tony Williams of the Texas General Land Office. More information: www.cle.com/



Prairie Ponderings: Year of the Bison by Diane Humes

North American bison (*Bison bison*), the iconic symbol of grasslands and prairies, numbered between 25 and 40 million a mere 200 years ago. They were nearly extirpated by 1900 due to a combination of factors, mostly driven by human actions. But humans did not allow bison to go extinct; they now number >500,000 in 1,236 public and private herds.

All the bison alive today descend from <500 individuals – the remains of two remnant wild herds and six private herds – including bison saved by Charles and Mary Ann Goodnight in Texas, now the Texas State Bison Herd at Caprock Canyons State Park.

Bison, also called buffalo, should not to be confused with water buffalo (*Bubalus bubalis*), an Asian species. North American bison originally ranged from northern Canada to central Mexico and New Jersey to Oregon. They were nomadic, often roaming their grassland range in very large herds. In addition, they inhabited forests, steppes, and tundra.

Although domestic cattle have generally replaced bison throughout the modern landscape, many ranchers have now switched to raising bison. These animals are managed for slaughter, not conservation. However, approximately 8,500 bison live in 11 conservation herds managed either by the National Park Service or US Fish and Wildlife Service. None truly roam freely, except the 1,000 or so living in Yellowstone National Park. Bison leaving the park, however, are shot.

When bison thundered across the plains, they were part of – and created – the prairie ecology. They wallowed, rubbed, pounded, and grazed the land and vegetation, creating great heterogeneity of habitats as they lived, died, and moved across the landscape. Animals of their size and large numbers effectively controlled the flow of fire, water, soil, and energy. Many details of prairie ecology have been lost and may never be known. How many unforeseen consequences may have accrued from removing bison from the environment?

One change is the great increase in bronze-headed cowbirds (*Molothrus ater*), which have spread across the continent, following domestic cattle far beyond their original range on the Great Plains. Cowbirds could have been called “buffalo birds” as it is believed that they evolved following bison herds, feeding on insects and seeds kicked up by their hooves. These much-despised birds build no nests, but lay their eggs in those of more than 200 species. Their young often out-compete or kill the young of their hosts, and have caused serious

declines in many species. What if we still had huge bison herds?

Photo by Nils Axelsen, courtesy of the Dept. of the Interior



The Wildlife Conservation Society – prairie enthusiasts, for sure – would like to see bison herds re-established and is studying the possibilities for a longterm plan that: “Over the next century, the ecological recovery of the North American bison will occur when multiple large herds move freely across extensive landscapes within all major habitats of their historic range, interacting in ecologically significant ways with the fullest possible set of other native species, and inspiring, sustaining and connecting human cultures.”

In Montana, the American Prairie Reserve (americanprairie.org) envisions stitching together 3.5 million acres in which large bison herds (>1,000 individuals for long-term genetic viability) might roam free with prairie dogs, swift foxes, black-footed ferrets, elk, and wolves (and cowbirds?). This is an ambitious vision, but is not impossible for dedicated people.

Closer to home, Armand Bayou Nature Center has two bison, which are not likely to be set free to roam any time soon, and asks everyone to join in celebrating the Year of the Bison in 2020. Come on out and visit the bison in your own backyard.

American Bumblebee - 2020 Pin by Diane Humes

The 2020 Texas master naturalist re-certification pin is the American bumblebee. Are you feeling competitive or acquisitive? You could try to earn your new pin by the February meeting! As you contemplate the joy of wearing your well-earned reward, here are a few tidbits to share with anyone who asks about your shiny new bling.

As you would expect from the name, the American bumblebee (*Bombus pensylvanicus*) is native to the United States. It was identified in 1773 by Charles De Geer, a Swedish entomologist. As there is no indication that De Geer ever left Europe, the specimen he identified was likely sent to him in Sweden and probably still



resides in his Uppsala collections following Linnaeus' "new-fangled" binomial nomenclature system.

This was one of the most abundant bee species in the Thirteen Colonies, but is now quite uncommon.

A bumblebee (bumble bee, bumble-bee, or humble-bee) is one of 250 species worldwide belonging to the Bombidae family, found mainly in temperate regions of the Northern Hemisphere, except a few lowland tropical species in South America. The names "bumble" and "Bombus" refer to the buzzing sounds the bees make. Most bumblebees are social insects forming a colony with a single queen but usually with fewer than 50 individuals in a nest.

The American bumblebee follows the typical bumblebee nesting lifestyle. A new queen emerges from winter diapause underground in the early spring and chooses a suitable colony site. She lays her previously fertilized eggs in wax cells, which she creates. They hatch and become the colony's female workers and male drones. Each nest lasts one year, with workers, drones and queen dying in the cold weather. Before the nest dies, a new queen hatches, but undergoes diapause, a form of dormancy. Only she survives the winter to form a new nest.

Bumblebees have long, hairy tongues that enable them to reach into flowers for nectar, and they gather pollen to feed their young. They are very important pollinators.

Charles Darwin noted in 1859 that he had, "[...] reason to believe that humble-bees are indispensable to the

fertilisation of the heartsease (*Viola tricolor*), for other bees do not visit this flower. From experiments which I have tried, I have found that the visits of bees, if not indispensable, are at least highly beneficial to the fertilisation of our clovers; but humble-bees alone visit the common red clover (*Trifolium pratense*), as other bees cannot reach the nectar."

All bumblebees are relatively large insects, with bodies divided into three segments: head, thorax, and abdomen. Dense hairs, in varying patterns of yellow and black, cover most of their bodies. In attempting bumblebee identification, concentrate most on the pattern of black and yellow on the thorax and abdomen. Queens and workers have abdomens composed of six segments, whereas a male bumblebee abdomen has seven segments.

Our American bumblebee has a similar band pattern on thorax and abdomen – upper thorax and abdomen banded in yellow with the remainder black. The most closely-related bumblebee species, *B. sonorus*, has a very similar appearance. Its range, while mostly in Mexico, overlaps in Texas with our American bumblebee. The two species can hybridize and produce fertile offspring, so *B. sonorus* may actually be a subspecies of *B. pensylvanicus*.

Bumblebees have predators and parasites, but are in serious decline around the world due to habitat loss, mechanization of agriculture, and pesticide use. Earn your pin and wear it proudly, watch for American bumblebees, and tell everyone about them. Do what you can to help.

Treasures of the Bay Award Recipients 2019

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

The 2019 recipients who were recognized at the December chapter meeting are:

Dick Benoit Leadership Award - Chuck Snyder

Beth Cooper Service Award
 Susette Mahaffey
 Keith Mahaffey
 Davis Clay
 Robin Kendrick-Yates

Non-Profit Award - Clear Lake City Water Authority

Sara Snell Education Award - Maureen Nolan-Wilde

Sammy Ray Researcher Award - Alan Wilde and John Wright

Chapter Service Awards
 Carlos Rios
 Joanna Mendoza
 Terry Gaustad
 Dave Bary
 Lynn Smith
 Mitch Philpot

Making a Difference Awards
 Chris Anastas
 Candice Annen
 Bobette Brasfield
 Rick Becker
 Karen Scott

Green Team News by Sally Pachulski

Last year the Green Team introduced a new method of dealing with waste at our various events. A series of bins was set up and attendees were guided as to where their trash belonged. Was it recyclable? Compostable? Just plain trash? By the end of spring, most of our members were tossing in the correct receptacle.

One interesting observation, however, was that people who brought food in their own cookware or dinnerware generally took the container and leftovers home. Those who purchased prepared food in its own packaging often seemed to leave it or toss both container and leftovers in the trash.

As the new year starts, the Green Team would like to introduce a new concept, *pack in/pack out*. This idea is simple. Whatever you bring to a meeting, you take home from the meeting. If there are leftovers, you can take them home to share with family or co-workers. At home you may feel you have a time and a place to rinse out some of those containers and recycle. The Green Team's thinking is that this new approach may result in a more significant reduction of waste overall.

Those of us lucky enough to have spent time in wilderness areas know very well the mantra "Pack In. Pack Out." seen on signs posted at trailheads and campgrounds, many so remote that trash cans cannot be maintained. These signs urge us to take responsibility for our footprint and make us rethink disposal. In some parts of the country, such signs now adorn spotless beaches and parks that have easy access. The people using these natural areas value the pristine habitat and have no problem carrying in and carrying out. East Beach in Galveston now posts these signs, a nod toward a movement of self-responsibility.

As master naturalists, we are aware of the interconnectivity of all things in our environment. We all want to leave a smaller footprint, but with everything wrapped in plastic, that can seem impossible. A wonderful video opinion piece posted recently by *The*

New York Times suggests that we should buy as if nothing was recyclable (The Great Recycling Con, 12/9/2019). That is a wonderful aspiration and something we should all attempt, but what about when circumstances prevent that?

We ALL will buy plastic or goods wrapped in plastic at some point. If you are reading this and you have figured out how not to, please, please, please let us know! Let's say we are going to the chapter meeting. Our plan was to bake cookies, but that afternoon the car breaks down and the time we planned to bake is spent sitting at the garage. We need to get to the meeting! As we know, all the good cookies at the supermarket are in plastic containers. But we are running out of time, so we buy them and bring them to the meeting. Once there, we may even think that we don't want plastic displayed, so we shuffle the cookies onto a plate and present them. After the meeting we need to wash the plate, which means we need to use energy to heat some water. We pack the leftover cookies into the plastic and take them home.

So what happened here? Life happened. While the original no plastic plan was probably the best, and, usually with time and planning that's possible, sometimes we just are not able to go with the best plan. If possible, don't buy food in plastic, but sometimes we don't seem to have a choice.

Let's adjust to that reality and adopt a carry in, carry out strategy for our events. If you bring it to a meeting, you take it home to reuse or recycle. And you get to eat or share the leftover cookies!

Editor's note: The Green Team has provided us with food for thought. I also recommend study of Susan Strasser's enlightening book *Waste and Want: A Social History of Trash*. The word "wastebasket" is very modern, as is the concept. In a wilderness park setting, the park has removed the "wastebasket" to put responsibility and expense of trash removal on its original consumer.



AT: Why Ecology Still Matters, Part 4 by Mike Petitt

We are master naturalists. We find beauty and meaning in the natural world of which we are a part. Further, we seek to restore and preserve the natural habitats of this world. We plant prairies with native grasses, we establish pollinator gardens for native arthropods, we track dolphins in our bays and birds in our sky. At the end of the day, how do we determine what we have accomplished? If we are to assess our work, we must generate quantitative results of what we do. This is precisely what Cindy Howard presented in her course: Points and Plots and Transects, Oh My! How We Study Populations and Communities in the Field.

Many in our class had some experience with plot transect sampling at Armand Bayou Nature Center. Even so, discussion of the implicit assumptions we make in this type of sampling was an interesting exercise. Also, additional interpretation of the quadrat data to include relative density, relative coverage, and relative frequency were discussed along with calculated relative value of a plant in a community.

The quadrat we throw on the prairie does not work effectively to measure trees in the forest. It certainly does not work for measuring the population of rodents! It became apparent to each of us in the class that different sampling methods would be required to effectively quantify different species.



Photo by Chuck Snyder

Our first field exercise was point-quarter sampling in the woods at Carbide. This began with the establishment of an 80 meter transect line. Our class was then divided into four teams, which were assigned in sequence to the 10

meter, 30 meter, 50 meter, and 70 meter points on the transect. We established a perpendicular to the transect at each point to determine four quadrants at each point. We measured the distance to the closest tree in meters, determined its species, determined its circumference in centimeters at DBH (diameter breast height) which is 1.5 meters, and estimated the basal area covered by the formula: circumference in centimeters squared divided by 4 pi. This data can then be utilized to calculate the relative density, frequency, and coverage of each species. These three numbers can be added to determine the "importance value" of each species.

Moving on from plant assessment, we considered animal population estimates. Animals in a given area can be measured in terms of relative density (that is, relative quantitative variation in population) or absolute density (that is, total counts or sample counts to calculate estimated total count).

Our next exercise was to estimate a total population by the Lincoln-Peterson method of mark-recapture sampling. In this method a sample of a species is captured and marked. As you may imagine, there are innumerable ways to capture and mark an animal, all of which bias the data. While it is a physical truth that measurement disturbs that which is measured, the clever biologist will capture and mark a species in a manner that will result in negligible disturbance. In any case, the marked animals are released back into the population and allowed to thoroughly randomly disperse. A recapture of the species is then collected. We may then assume that the ratio of the total population (N) to the marked population (M) will be equal to the ratio of the total recaptured population (n) to the marked recaptured population (x). That is: $N/M = n/x$. Therefore: $N = nM/x$. We did this exercise with lima beans marked with a Sharpie in a much larger population of pinto beans. All beans were treated humanely, but were ultimately sacrificed.

Biologic demographics add dimension to our study of ecosystems. The mathematical modeling and statistics involved allow us to track populations in time and space. Ultimately, this provides us with better understanding of our ecosystem and our impacts upon it.

The Midden Deadline for the next issue

February 23

If you have Advanced Training or Volunteer Opportunities, please submit information to Mike Petitt, mpetitt_houston1@comcast.net.

2020 Board of Directors

| 2019 Board of Directors | |
|-------------------------|------------------|
| Elected | |
| President | Susette Mahaffey |
| Vice President | Mike Petitt |
| Treasurer | Cindy Liening |
| Secretary | Beverly Morrison |

| Appointed | |
|-------------------------|---------------------|
| Service Director | Jo Monday |
| Training Director | Ellen Gerloff |
| Membership Director | Patty Trimmingham |
| New Class Director | Janet Mason |
| Communications Director | Maureen Nolan-Wilde |
| Training Class Rep. | Tiffany Cummings |
| Training Class Rep. | Monica Duran |
| Sponsor | Julie Massey |
| Past President | George Kyame |

The full chapter organization chart and a list of the committee chairs can be found at <http://txmn.org/gbmn/board-of-directors/>.

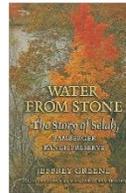


Photo by Monica Duran

Heritage Book Study - Review of *Water From Stone: The Story of Selah, Bamberger Ranch Preserve* by Madeleine K. Barnes

What do a vacuum cleaner salesman, fried chicken CEO, and an internationally recognized conservationist have in common? If this sounds like the beginning of a weird joke, stick around and continue reading.

One man, David Bamberger, is the answer to the riddle. So, then the question becomes; how does this transformation happen? Sounds bizarre, doesn't it? This metamorphosis is detailed in *Water From Stone: The Story of Selah* by author Jeffery Greene, who is a professor, author, poet, as well as related to David Bamberger. The story's poetic sense is like a stream that wanders throughout the book, detailing the piece of hill country land named "Selah", meaning to pause and reflect. Greene describes Bamberger's reclamation process starting with his purchase of a hard scrabble 5,500 acres and how he came to choose it to be his model of ethical stewardship. He writes, "David, who restored the land and created a nature preserve, would say that the story of Selah is the story of water."



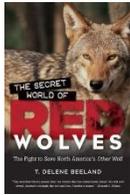
Greene chronicles both Bamberger's successes and failures. As a passionate visionary, Bamberger chose to use his financial wealth and his interpersonal skills to develop a network of human resources and turn the worst piece of land in Blanco County into an amazing wildlife preserve and educational center. David Bamberger does not waver in pursuit of his main mission and accomplishes what he set out to do as an example

for others to learn from and become ethical land stewards. While not always successful, certain of his special projects (bats and a non-native species), offer a cautionary tale that reminded me that just because you can do something, does not always mean you should. You may have had some similar insights in your volunteer efforts.

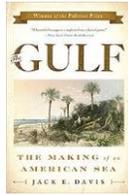
As master naturalists, we have a common cause and value the principles that support it. We may not have started out with that understanding and passion, but this is where we are now in our journey. We may recognize things that propelled us along the way, perhaps a pivotal person, experiences, or a connection, reading or other learning event, that resonated within ourselves. The same can be said for David Bamberger. I recommend this one for your reading list, especially when you need a motivational boost and add the following quote that we can all identify with from the website: <https://bambergeranch.org/>

"After leaving the Ranch, many visitors are inspired to change consumption habits and better conserve natural resources. They leave with a vision of harmony with the land. They realize that the Ranch tells a story of hope: Given the chance, Nature can heal itself. Nature can heal us."

We will meet on Monday, February 3 to conclude our discussion of *The Secret World of Red Wolves: The Fight to Save North America's Other Wolf* by T. DeLene



Beeland, reading pages 115-127. The next meeting will be on Monday, March 2, to begin the discussion of the 2018 Pulitzer Prize winner, *The Gulf: The Making of the American Sea* by Jack E. Davis, pages 1-177. Join us



in discussing both of these interesting books.

We welcome your participation each month for two hours on the first Monday of the month starting at 10 am at the *Extension office. 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 please let us know if you have read any good naturalist books lately. Happy trails!

The Midden

Published bimonthly by the Galveston Bay Area Chapter - Texas Master Naturalists. The purpose of *The Midden* is to inform 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.

Texas AgriLife Extension Service
4102 B Main (FM 519) Carbide Park
La Marque, TX 77568

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@ag.tamu.edu.

Midden Team

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

Let's talk about Raptors by Lynn Wright

If you are interested in seeing hawks, the Sylvan Beach Spring Hawk Watch is the volunteer opportunity for you.



Photo by John Wright

This is the 25th year of the hawk watch at Sylvan Beach in La Porte. Dick Benoit began the hawk watch in 1996. Over the past 24 years, the average number of hawks counted over the course of the spring migration is over 18,000. That is a lot of raptors. Last year hawk watchers saw over 10,000 Mississippi Kites and a myriad of other raptors - Broad-winged Hawks, Swainson's Hawks,

Swallow-tailed Kites, Bald Eagles, Cooper's Hawks, Osprey, Peregrine Falcons, Sharp-shinned Hawks, Turkey Vultures, Crested Caracaras, Northern Harriers, Red-tailed Hawks and Black Vultures.

Hawk Watch volunteers count one day a week from March through April usually from 9 or 10 am to 12 or 1 pm. We have 7 hawk watch teams, one for every day of the week.

If you are interested in joining a hawk watch team, email Lynn Wright at lynn-wright@comcast.net. You do not need any prior experience, just an interest in learning about hawks and a pair of binoculars.

Hawk watch hours are the best volunteer hours EVER. Come to Sylvan Beach, sit next to the bay, drink coffee, and watch for raptors. It doesn't get any better than that. Check Activities page for training session information.

Editor's note: In honor of the Spring Hawk Watch we have included a top ten quiz of the Galveston Bay Area diurnal raptors. The quiz begins on the next page and the answers are on page 12.

The quiz was developed over a decade ago and the author's name has been lost over time.



Trash Bash - March 28, 2020

<http://www.trashbash.org/2020-trash-bashreg.html>

Top Ten Quiz Galveston Bay Area Diurnal Raptors



1. _____



4. _____



2. _____



5. _____



3. _____



6. _____



7. _____



8. _____



9. _____



10. _____

Possible Answers

- American kestrel
- Black vulture
- Crested caracara
- Cooper's hawk
- Osprey
- Red-shouldered hawk
- Red-tailed hawk
- Swainson's hawk
- Turkey vulture
- White-tailed kite

February and March Activities

ADVANCED TRAINING OPPORTUNITIES

Chapter Meeting - Feb. 6; Wetland Restoration
Presenters - Colleen Ulibarri, Wetland Restoration Team
6:15 Social, 7:00 Meeting, 7:30 Speaker
Extension Office*; 1 AT hour

Diurnal Raptors of the Galveston Bay Area -

Monday, February 24. 1-4pm; 3 hours AT
Location: Extension Office*
Presenters - John and Lynn Wright
Register with Emmeline Dodd txdodd@aol.com

Is Taxonomy Really Taxing? - Tuesday, April 21

12:30-3:30pm. 3 hours AT
Location: Extension Office*
Presenters - Emmeline Dodd and Cindy Howard
Register with Emmeline Dodd txdodd@aol.com

Ongoing

Galveston Island SP (Winter suspension until March)
10am at the Welcome Center
Every Saturday - Prairie Adventures
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: Madeleine Barnes 281-474-9406
See Pg. 7 for meeting dates and books.

STEWARDSHIP OPPORTUNITIES

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

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, see the chapter calendar at <https://txmn.org/gbmn/events/month/>

Committee Meetings

Advanced Training - Third Monday, 10-noon
Education/Outreach - Third Tuesday, 1-2:30pm
Communication - Meets quarterly, check calendar
Midden Team - Feb. 24, Monday, 9-noon



Texas A&M AgriLife Extension provides equal opportunities in its programs and employment to all persons, regardless of race, color, sex, religion, national origin, disability, age, genetic information, veteran status, sexual orientation, or gender identity. The Texas A&M University System, U.S. Department of Agriculture, and the County Commissioners Courts of Texas Cooperating.



Answers to Diurnal Raptor Top Ten Quiz

1. Turkey vulture
2. Red-tailed hawk
3. Osprey
4. American kestrel
5. Crested caracara
6. Black vulture
7. White-tailed kite
8. Swainson's hawk
9. Red-shouldered hawk
10. Cooper's hawk