

The Midden

TCPP Prairie in Winter by Chuck Snyder

Galveston Bay Area Chapter - Texas Master Naturalist

February 2015

Table of Contents

A Brief Look Back	2
Wetland Wanderings	3
Beach Patrol	3
Facts about Insects	4
Bluebonnet Pin 2015	5
Naturalists Then and Now	6
Last Call at the Oasis	8
Book Review: <i>Anthill</i>	9
Book Study: Current Reading	9
2014 Treasures of the Bay Award Winners	10
February/March Activities	11
Guppies from Julie	12

President's Corner by Maureen Nolan-Wilde, President 2015

Happy New Year, and thanks for an incredible 2014. As I am writing this, I am still in awe at the number of volunteer hours (36,738) that we donated to the state and our community, once again surpassing our former record. When you take into consideration the value assigned to these hours, it is equal to \$859,669. It also truly reflects the caliber of our people and their dedication to service of our community.

In mid-February, our new class starts their eleven-week journey filled with opportunities to learn, volunteer, and simply have fun with their classmates and teachers, our community, and its partners. I encourage everyone to volunteer in some capacity at one of these classes.

Each year our applicant list grows for the class. This speaks to our reputation in prairie/dune work, monitoring, and education and outreach efforts, as well as our food, fun and fellowship approach.

Don't forget to check out our website to keep track of what is going on in our chapter including volunteer and advanced training opportunities and more. Our Facebook page also has posts and pictures from our volunteer efforts as well as other state chapters and our sponsors sharing information.

Looking forward to a great 2015 - be safe, enjoy, and don't forget nature is calling!

Next Chapter Meeting

February 5th

Sea Turtles Outlook:
Upper Texas Coast

By

Ben Higgins
NOAA Sea Turtle Program
Manager

At Carbide Park



A Brief Look Back by Marissa Sipocz (Wetland Team Leader)

I remember clearly a day about 14 years ago...Mr. Dick Benoit and I stood in the parking lot behind the then-Texas Coastal Watershed Program office and spent over an hour discussing *his* notion of starting a new chapter in Galveston County. I offered my support and encouragement as I could, and to this day, I still attempt to provide that same service of support to the volunteers of the Wetland Restoration Team.

I came on-board with Texas AgriLife Extension Service to complete the "Clean Water for Armand Bayou" grant which entailed many tasks including monitoring of the management within the prairie at Armand Bayou Nature Center. All those tasks and details would require volunteer assistance to complete—and the notion of the Restoration Team began right then. It would later evolve into a group of volunteers focused on wetland restoration and bringing those skills to restoration efforts all around the Galveston Bay region.



Our wetland restoration work, incidentally, was to start in 2003 with Phase 1 of the prairie wetland work at Sheldon Lake State Park, but due to delays, we started and completed a smaller project at San Jacinto State Park before the wetlands were ready at Sheldon Lake State Park. At roughly the same time, we were completing a collaborative restoration effort at Mason Park with the City of Houston and Harris County Flood Control District, which would be known as the Bray Bayou Urban Wetland Creation project—3.5 acres of stormwater treatment wetlands along Brays Bayou. Construction for this site

was scheduled to be in 2004 but not completed until 2005, and planting began that fall.

As with all of our projects, we were learning a restoration pattern: delays, fluctuating needs, weather constraints and "demands" of the moment. It meant that our volunteer crew needed to be flexible with completing needed tasks—going from nursery work, plant collection or seed work, and finally to planting, within a week's notice. With each new project, we also potentially added a change of location—Sheldon Lake State Park, San Jacinto State Park, Mason Park, Buffalo Bend Nature Park, and Milby Park (Sims Bayou).

To make the Team work after so many years and so many changes meant establishing some consistent patterns. We established a set workday with a predictable (as much as possible) schedule and meaningful work, with time together as a Team over a meal (Mr. Benoit's Rule of 3 F's: Friends, Fun, and Food). We also offer the Wetland Plant Identification course in the middle of the summer (August) as a chance for the Team to get out of the heat. And we host a Holiday party to simply close out the year amid friends, and with at least a new pair of gloves for everyone. Today, I feel as blessed and lucky as I did in 2000 to be surrounded by friends who volunteer their time and strength to help me restore critical wetland habitat within the Galveston Bay watershed. The need for restoration in our region will remain for years to come....and I hope the Team's place within that restoration work continues as strongly for another 14 years.



Wetland Wanderings by Diane Humes

The Wetland Restoration Team, under the leadership of Marissa Sipocz, has placed a lot of plants in the local mud, and, being wetland plants, most of them have lived and thrived! We have worked at Sheldon Lake State Park (our current location), Mason Park, San Jacinto State Park, Dickinson Bayou, Sims Bayou, and Buffalo Bayou.

The Team has had many members over the years, from multiple master naturalist chapters and other organizations, beginning with Carolyn Lovell, Dick Benoit, and Nathan Veatch. Dedicated wetlanders come from all over to "restore the wetlands, one plant at a time".

Our techniques have "matured" over the last 14-odd years - we might be more mature; please don't call us odd. For example, we have learned the "un-wisdom" of trying to remove 3-gallon pots, containing water, mud, and ingrown plants, out of the bottom of a pond and up a hill. In fact, true wetland wisdom now suggests no pots larger than 1-gallon, ever, and no deep ponds to climb out of.

We have learned how to get the trailer and/or the van "unstuck", but we have also learned the wisdom of not getting stuck in the first place.

We now have proper gear - boots, waders, soil knives, dibbles, gloves, water bottles, and team clothing. Also, soap and clean water. We collect wetland plants and seeds, grow them, plant them, and mentor groups who come out to help.

We spend time each year learning about our plants; we host a Wetland Plant ID class each August - indoctrination into the wonders of wetlands! And we always enjoy each other's company each wetland

workday by having lunch together, often accompanied by Marissa's home-baked pie.

Sometimes we get a little extra creative; twice since working at Sheldon Lake State Park we have cranked homemade ice cream in the van on the drive over. What a coincidence that the drive time is just about right for preparing ice cream.



Although we already had our Team Christmas party, on our last Wednesday workday of 2014 we ended the year with food, fun, friendship, and flair, as the team celebrated with cake and van-cranked ice cream to bid a fond farewell to Park Ranger, Laura Babcock, who is returning to her home state of Pennsylvania. We will greatly miss her and Tom Olson, who has recently retired.

So, if you seek an activity where you get to wear boots and play in the mud, go exploring for plants, mix food, fun, and friendship, and get pie and ice cream, while restoring the world, this just might do it.

Beach Patrol – Sand Replenishment on Galveston Island by Steve Alexander

Galveston Island's beachfront has been sand-starved since construction of the North and South Jetties long ago, structures that now make occasional sand renourishment projects necessary.

The last large-scale beachfront sand renourishment project began in December 1994, exactly 20 years ago. This 8.5 million dollar project deposited 750,000 cubic yards of sand on beaches between 10th and 61st streets. Unfortunately, the majority of that sand has now been carried off down the coast by alongshore currents.

So it's now time again to replenish sand along Galveston Island's beachfront. Thankfully, several areas along the seawall are now receiving attention, one area extending from about 25th to 61st Street. These beaches are now covered in a fresh layer of sand and seaweed.

During 2014's heavy seaweed invasion, cleanup crews picked up a mix of seaweed and sand, depositing it in large piles at the base of the seawall, piles often higher than the seawall itself. This sand and seaweed mix has now been spread out along the shoreline, thus

replenishing not only sand, but also seaweed to help build the beach.



But the most ambitious renourishment project now taking place is occurring at the western edge of Galveston's seawall. This 4.8 million dollar project will build beachfront and a massive dune system extending from the seawall's western tip to the RV Park just to its west. The project is deemed essential to protecting FM 3005, the only roadway that travels the full length of west Galveston Island.



These projects and those in the future are essential in maintaining the beachfront of Galveston Island, and for that reason alone, must be considered a good thing.

Little-Known and Seldom-Used Facts about Insects by Emmeline Dodd

This past summer, I enrolled in an in-depth entomology program in Austin designed for those who wanted to become state certified entomology specialists. I learned so many things, like the importance of insects on Earth as suggested in this statement by the biologist Jonas Salk: "If all insects on Earth disappeared, within 50 years all life on Earth would end. If all human beings disappeared from the Earth, within 50 years all forms of life would flourish". This puts us in our place, doesn't it?

But I will not attempt to include all my new knowledge in this article, just some of the more fascinating facts that caught my attention.

- When cockroach males fight, they chop off the other roach's antennae. The one left with the longest antennae will be the dominant male.
- Mosquitoes cause more deaths in humans than any other animal.
- When planting a butterfly garden, avoid plants with double blooms. They are not as good a nectar source as single blooms and are often sterile.
- Rubbing the scales off the wings of Lepidoptera (butterflies and moths) does not hinder their flight.
- Sixty percent of pesticides used in this country are for water treatment and water quality.
- If plants are stressed, they will produce their own pesticides, ones that are stronger than applied pesticides.
- If growth regulators (hormones) are sprayed on fleas, the hormone affects the larvae. They do not develop a "horn" so they cannot peck out of the egg.
- If attacked by a honeybee, remove the stinger as soon as possible. It can continue to pump venom.
- Forty percent of householders have zero tolerance for spiders (not insects) in their homes, yet we are probably never more than 5 feet away from one.
- A queen fire ant mates once. She lays 1,000 eggs per day for the next 15-20 years without mating again.
- The law allows 200 insect parts per jar of food and 225 insect parts per cup of flour.

- In forensic entomology, toxins or drugs can be detected in the maggots of the decomposing body. Cocaine causes maggots to grow faster and larger.
- Orb weaver spiders take down their webs each night and rebuild every morning so they are fresh. They can reuse what they took down in the rebuilding.
- The male moth has more feathers in its antennae than the female moth because it is his job to find the female.
- Hay shipment is a concern in fire ant control. Fire

ants are present in the hay, and there is no treatment option because the hay will be food for animals.

Joseph W. Krutch once stated “Two-legged creatures we are supposed to love as we love ourselves. The four-legged, also, can come to seem pretty important. But six legs are too many from the human standpoint”. I hope that this statement is not indicative of your attitude about insects. The more you study them, the more you love them.

Bluebonnet Pin for 2015 by Lana Berkowitz

The race is on for 2015 recertification!

Some hard-working, eager GBAC master naturalists will be recertified before the February meeting. The rest of us will take a bit longer to accumulate 40 volunteer hours and eight advanced training hours to qualify for recertification.

In addition to that feeling of accomplishment, recertification comes with a tangible: the pin.

The first recertification pin, which depicted the post oak leaf (*Quercus stellata*), was awarded in 2002. The tradition continued: 2003 Lindheimer daisy (*Lindheimera texana*), 2004 green tree frog (*Hyla cinerea*), 2005 belted kingfisher (*Ceryle alcyon*), 2006 prickly pear cactus (*Opuntia engelmannii* var. *lindheimeri*), 2007 grass shrimp (*Palaemonetes vulgaris*), 2008 Texas purple sage (*Leucophyllum frutescens*), 2009 Southern red-backed salamander (*Plethodon serratus*), 2010 wood duck (*Aix sponsa*), 2011 Texas horned lizard (*Phrynosoma cornutum*), 2012 Mexican free-tailed bat (*Tadarida brasiliensis*), 2013 Monarch butterfly (*Danaus plexippus*) and 2014 nine-banded armadillo (*Dasypus novemcinctus*).

The symbol on the 2015 recertification pin is our state flower, the bluebonnet (*Lupinus texensis*).

“The bluebonnet was chosen after reviewing input from many, many TMN volunteers received over the TMN listserve, emails to me and Facebook input,” said Michelle Haggerty, TMN state program coordinator. It was chosen for its iconic Texas symbolism and what it means to people of Texas, she said.

The brown pelican, bobcat and Kemp’s ridley sea turtle were among the favorites nominated for the 2015 pin, but

the bluebonnet has a longtime fan base.

In 1901 the National Society of Colonial Dames of America in Texas persuaded the Texas Legislature to designate the bluebonnet as the state flower. Alas, the Dames and the lawmakers chose *Lupinus subcarneus*, which planted the seeds for a showdown because most bluebonnet fans wanted the state flower to be *L. texensis*, which is showier than *L. subcarneus*.

Seventy years later the Legislature ended the bluebonnet war by lumping both species of Lupines together and naming them the state flower. The politicians also said “any other variety of bluebonnet not heretofore recorded” would also be considered the state flower. So *L. havardii*, *L. concinnus*, *L. plattensis* and *L. perennis* won’t feel left out.

Our new pin celebrates the bluebonnet that provides the spring carpet of blue in Central Texas. The iconic flower is familiar to us, but here is a quick review of its characteristics.



The favorite of tourists, artists and songwriters is the easiest of the species to grow.

The Texas lupine is an annual with sharply pointed leaves and numerous flower heads.

The leaves are light green and velvety. The palmate compound leaves usually have five leaflets on 6- to 18-inch stems, according to the Lady Bird Johnson Wildflower Center. It has a taproot.

On the stems there are clusters of up to 50 fragrant pea-like blue flowers with white tips. During the winter, when bluebonnets form rosettes,

bluebonnet watchers begin predicting the quality of the spring blooms, which peak in March, April and May. Most wildlife steers clear of bluebonnets because plants in the genus *Lupinus* can be toxic to animals if ingested.

However, Hairstreak and Elfin butterflies use bluebonnets as larval hosts.

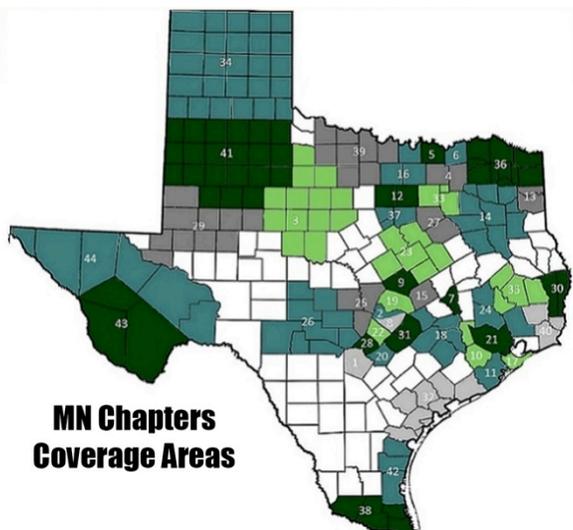
And native bees and bumblebees like the blue meadow flowers as much as roadside photographers.

Naturalists Then and Now by Diane Humes

Texas is BIG - second only to Alaska in size - with 267,000 square miles of dry land, plus 367 miles of coastline. Texas is second only to California in ecological diversity; within our borders we boast 5,500 plant species, 600+ bird species, 184 mammals, and 29,000 insects.

Most Texas land is owned by private Texas citizens. With a population of 25,145,561 individuals (2010 census) and growing, the enormous job of managing the land and its species for the good of all is overwhelming. But, Dr. Barron Rector, professor of rangeland ecology, Texas A & M, posited a partnership between TPWD and AgriLife Extension to channel the energies of concerned citizens and landowners, educate them about Texas' environmental concerns, and enlist their aid; thus, was born the Texas Master Naturalist program.

The idea has been a great success; since its inception, the TMN organization has grown to 9,000 members in 44 chapters, as depicted on the coverage map below. Members contributed 1 million volunteer hours just last year. Said TPWD Director Carter P. Smith, "Their talents are many. Their time is a godsend. And, if they were an army, they would be a formidable one."



We have become Texas Master Naturalists, but what is a naturalist? According to Dr. Rector, a naturalist is an observer, recorder, collector, and student, a dedicated environmental steward, who tells good life stories from his life with nature. Although, as he says, "no one has ever learned it all", we must learn about this land in order to make good decisions about our environment, because its future (and ours) is being planned now. All the great naturalists are keen observers of the natural world and outdoorsmen. They pass on their curiosity and love of nature and leave us their observations to compare with ours.

Probably the greatest naturalist who ever lived was Charles Darwin (1809 - 1882). Born in England on the same day as Abraham Lincoln, but a world apart, he became a naturalist, geologist, and biologist. From childhood until the end of his life, he spent time outdoors, with a boundless curiosity about everything and an "inordinate fondness for beetles". His father despaired that he would ever amount to anything, "You care for nothing but shooting, dogs, and rat-catching and you will be a disgrace to yourself and all your family."

Darwin studied barnacles, orchids, plant fertilization, leaf mold, and earthworms, and formulated the theory of evolution by natural selection; he kept copious notes (in his famous notebooks) and corresponded prodigiously with people throughout the world. His collection included 1,500 bottled specimens and nearly 4,000 dried specimens. In his last paper, Darwin established, by careful observation, a means by which clams might be distributed between freshwater ponds with no obvious connections. He had received a specimen of water beetle with a clam clamped to its leg from amateur naturalist, Walter Crick; the beetle could have flown to another pond with clam attached. Walter Crick's grandson, Francis Crick, would uncover the structure of the DNA molecule 70 years later.

Aldo Leopold (1887 - 1948) was an American naturalist who also spent his childhood outdoors. Said his sister, "He was very much an outdoorsman, even in his extreme youth. He was always out climbing around the bluffs, or going down to the river, or going across the river into the woods." Leopold was a prolific author, scientist, ecologist, forester, and environmentalist. He founded the Wilderness Society in 1935 and pioneered the science of restoration ecology. He is best known for his book *A Sand County Almanac* and the philosophy of the land ethic: "A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise."

Edward O. Wilson (1929 -) is probably the greatest living naturalist and biologist. Ants became his lifelong specialty; during his academic career at Harvard University, he was the first to use the terms "biodiversity", "biophilia", and "sociobiology". In addition to his scientific papers, he has written more than twenty books. Growing up in south Alabama and the Florida Panhandle, he spent his boyhood exploring the region's forests and swamps, collecting snakes, butterflies, and ants, as described in his book *The Naturalist*. In *Biodiversity* Wilson said, "The drive toward perpetual expansion - or personal freedom - is basic to the human spirit. But to sustain it we need the most delicate, knowing stewardship of the living world that can be devised."

Texas has had remarkable naturalists; in the early days before independence from Mexico, two energetic naturalists explored and studied the Texas flora and fauna. Ferdinand Lindheimer (1801 - 1879), whose home in New Braunfels is now a museum, is known as the Father of Texas Botany. He collected over 1500 plant species - most new to science. One genus - *Lindheimera* - and 48 species and subspecies bear his name - Lindheimer's muhly, Lindheimer's rat snake, Lindheimer's beeblossom, and white guará, to name a few, and the Lindheimer Chapter of TMN.



Lindheimera texana (TMN 2003)

Gideon Lincecum (1793 - 1874) was a physician and self-taught naturalist in Washington County who would spend "countless hours observing birds, insects, weather, rocks, and plants" and opined that, "ignorance is such a terrible, stubborn, throat-cutting thing". He published numerous articles in scientific journals and regularly corresponded with like-minded individuals, including Charles Darwin, who sponsored Lincecum's paper about agricultural ants to the *Journal of the Linnaean Society* in 1862. Recognized as an astute naturalist, his collections reside in the Philadelphia Academy of Science and Smithsonian Institution. He is the namesake of the Gideon Lincecum Chapter TMN.

These great naturalists continue to inspire and teach us, but our task is great. Of Texas' 5,500 plant species, 26 are invasive, 239 endangered, and 425 endemic plant species (found nowhere else), and probably 2,000 are introduced. Endangered animals include the black bear, whooping crane, jaguarundi, gray wolf, ocelot, and Attwater's prairie chicken; the Brown pelican, however, was recently removed from the endangered species list!

Thinking globally, the World Wildlife Fund's recent Living Planet Report 2014 states that 52% of the world's wildlife populations have been lost between 1970 and 2010, based on population studies of over 10,000 vertebrate species. This is not numbers of species, but actual numbers of animals lost on our watch. The worst declines are found among freshwater species. The National Audubon Society, based on their study of 100+ years of Christmas Bird Counts, has found that many bird species have moved their winter ranges northward, and predicts that 50% of North American bird species will lose half their current ranges by 2080 due to climate change. Some species, it is feared, will not be able to adapt.

These are dire words of unknown potential for the incredible natural richness found around us. As naturalists, we want to do something, but what? The issues are many; study them. Learn how to become a good steward of the earth, then do what you love. Plant grasses, whack tallow trees, track turtles, plant natives for birds and butterflies in your garden, monitor the land and water. Pass along your knowledge and set a good example. Like Gandhi, "Be the change you wish to see in the world". But, be a good Master Naturalist and keep the food, fun, and friendship!

Last Call at the Oasis AT by Madeleine K. Barnes

When we use more water than can be generated, we will run out of water.

On Monday evening, November 17th, 32 master naturalists, 11 master gardeners, and 3 guests were in attendance at the film viewing and group discussion sponsored by the Heritage Book Study Group. While many participants contributed to the refreshments, a special "thank you" is extended to Diane Humes, Julie Massey, Rose Presley, Chris Roper, Jenny Shuffield, and Nelda Tuthill. Many thanks to the AT committee for room set up and to Chuck Snyder for the electronic support.

What are the most relevant issues facing our society and the world in this decade and beyond: global warming, or increasing populations, or demand for energy to power our technologies? The one commonality in all of these is the global water crisis: water quantity, quality, and supply. As master naturalists we have learned a lot about the connections that sustain us and the other forms of life. It reminds me of falling dominoes where all the pieces are eventually impacted from a single action. Yes, the global water crisis is controversial, but global warming was and still is controversial and was not accepted as fact for a long period of time. The acceptance or denial did not change what was already happening.

Last Call at the Oasis, inspired by the book *The Ripple Effect: The Fate of Freshwater in the Twenty-first Century* by Alex Prud'homme, takes a detailed look at specific points along the scale of this water crisis, including: the falling water level of Lake Mead and its impact on the Las Vegas metropolitan area; the agricultural impact of drought in California's Central Valley; the devastation of drought in Australia; the hidden costs of water embedded in our food, energy, and merchandise; and hexavalent chromium and atrazine in drinking water.

In our country, each person uses/consumes on average 99 gallons of water per day, while in many countries people are getting by on only 2.5 gallons per day. The issue of water quality is presented by focusing on a concentrated animal feeding operation in Michigan and how one person can make a difference. From there the film shifts to Jordan to show how people who are involved in intense political conflict can join together to address the shared issue of water quality and conservation of limited supplies. The natural hydrology cycle was briefly explained and there was a lighter side in looking at the research in naming and accepting the

potential use of bottled treated wastewater for consumption.

The film presented many salient points for consideration. We have taken the continuing supply of water for granted throughout our human civilization going back nearly 10,000 years. The film depicts the impacts of both drought and floods as they continue to increase and the resulting impact to drinking water supplies throughout the world. The film makes the point that most of us in this country do not know where our water comes from, how the hydrology process works and how our actions impact that process, or how we continue to pollute or enable pollution of the very sources that we and the rest of our society drink from.

Is the future of water limitless? The facts and opinions presented in the film are both serious and complex. Between 2004 and 2009, the Clean Water Act (CWA) was violated at least 506,000 times by more than 23,000 companies and other facilities, according to EPA data assessed by the *New York Times*. How did the world's most powerful, wealthy, and technically advanced country allow our water supplies to become more polluted since 1972's Clean Water Act?

By 2008, the world's consumption of water was doubling every twenty years, which is more than twice the rate of population growth. By the year 2000, people had used or altered virtually every accessible supply of freshwater. A report by the US General Accounting Office predicts that thirty-six states will face water shortages by 2013, while McKinsey & Co. forecasts that global demand for water will outstrip supply by 40 percent in 2030. "We used to think that energy and water would be the critical issues. Now we think water will be the critical issue," Mostafa Tolba, former head of the UN Environment Programme, has declared. "On nearly every continent, groundwater in aquifers is being drained faster than the natural rate of recharge" (National Geographic, April 2010).

Now that we have the global water crisis issue identified, what can we do about it? Can we afford the luxury of remaining ignorant? Potential solutions involve water conservation and efficiency, which we can do within our homes and promote where we perform volunteer services. Other solutions require more involvement to impact food choices/hidden water costs, better crop selection based on adaptability to less water, greenhouse agriculture, better irrigation practices and exploring pioneering expert advice. The merging of food, energy and water will determine the quality of life in this century. This is already happening and will be a limiting

factor, unless we learn how to do a lot more with a lot less and reuse more to manage a sustainable water future.



We can take steps to ensure that there is a sustainable water supply over a longer period of time. To explore this issue further and look at steps you can take for sustainability, take a look at the following websites:

<https://www.youtube.com/watch?v=SejRgVhsT7c>
<http://www.sustainablebabysteps.com/water-conservation.html>
<http://www.takepart.com/last-call>
<http://www.fda.gov/Drugs/ResourcesForYou/Consumers/BuyingUsingMedicineSafely/EnsuringSafeUseofMedicine/SafeDisposalofMedicines/ucm186187.htm>
<http://www.twdb.state.tx.us/>
<http://www.tsswcb.texas.gov/>

Heritage Book Study – Review of *Anthill* by Madeleine K. Barnes

During the months of November & December, the book study had a treat in reading Edward O. Wilson's fictional account, *Anthill*. Wilson is a biologist and expert on social insects, a Pulitzer Prize-winning author, has written over twenty books, and has done groundbreaking work on the evolution of social behavior. So how does someone who is very adept at the textbook, scientific approach make the transition to fiction writing? He chooses a subject that he knows very well, ants and their social behavior, and takes the reader down to the ground level to understand and identify with two different warring ant colonies. He weaves a story around a young boy growing up in Alabama near rivers and swamps. The main character, Raff Cody, loves nature and exploring the piney woods, learning about this unique habitat and becomes

fascinated by the ants, finding that their behaviors translate to human behavior as well. This young naturalist embarks on a quest to protect nature, while balancing other humans' desires for reckless development. Perhaps there is a lesson here in negotiating balance between divergent interests; Wilson illustrates this by taking us back to the ant colonies. Reminded me of the way Aldo Leopold would address nature conservation while addressing the farmers' needs at the same time. Now, every good mystery has an element of surprise or twist, so I do not want to give that away. I will just leave it for you to discover and take away from the ending. This is definitely one to add to your naturalist reading list.

Current Book Study Reading by Martha Melcher and Madeleine K. Barnes

Clouds of buffalo drift across a sea of fat grasses. Laughter of children blend the wind with the booming of prairie chickens. This is Comancheria, a vast territory where land is free for those willing to fight. Fighting, often to grisly outcomes, is the story of nascent Texas and of the vital people who reigned before Spanish or Anglos sought their own fortunes here.

In January, the Heritage Book Study group began discussing the first half of the non-fiction bestseller *Empire of the Summer Moon: Quanah Parker and the Rise and Fall of the Comanches, the Most Powerful Tribe in American History* by S.C. Gwynne. Popular topics at this meeting included the influence of the prairie ecosystem in the conflicts among the Spanish, French,

and English in North America; the role of technologies such as the mustang horse and Colt revolver; and the incredible resilience of the many communities of the peripatetic 19th Century Southwest.

Join us February 2nd as we conclude our reading of this selection and continue to explore the compelling geographical, political, and cultural landscapes of our predecessors, which Gwynne has resurrected for us with gorgeous detail and even hand. We welcome your participation and perspective after your reading at the Heritage Book Study meetings. The next reading selection for the March 2nd meeting will be *Lone Star Dinosaurs* by Louis L. Jacob.

2014 Treasures of the Bay Award Winners by Julie Massey

Each year our chapter recognizes outstanding contributions to natural resource restoration and education by chapter members and the community with the Treasures of the Bay Awards. Please congratulate the 2014 award winners listed below! The awards were presented at the December chapter meeting.

Non-Profit Award

Jennifer Lorenz, Bayou Land Conservancy

Chapter Service Awards

Mel Measeles

Elsie Smith

Nathan Veatch

The Technology Development Team

Scott Buckel

Chuck Snyder

Alan Wilde

Maureen Nolan- Wilde

Coffee Brigade

Nelda Tuthill

Rita Smith

Arlene Laughter

Helle Brown

Mike Wehrman

Making a Difference Awards

T.J. Fox

Training Class Team

Sara Snell

Cindy Howard

Beverly Williams

Verva Densmore

Prairie Restoration Leadership

Dick Benoit

Jim Duron

Larry Brasfield

Chatt Smith

Tom Solomon

Chuck Buddenhagen Memorial Education Award

Tiffany Garcia

Sammy Ray Researcher Award

David Bulliner

February and March Activities

ADVANCED TRAINING OPPORTUNITIES

Chapter Meeting - February 5
Sea Turtle Outlook - Upper Texas Coast
Presenter: Ben Higgins, NOAA Galveston
6:30 Social, 7:00 Presentation, 8:00 business meeting
AgriLife Extension Office 1 Hour AT

Title - Workshop: Building Bee Houses - February 14
9 am - noon 3 hours AT Limit 20 participants
Location: Extension Office
Presenter - Mel Measeles
Register with Emmeline Dodd txdodd@aol.com

Title - Diurnal Raptors of the Gulf Coast - March 2
2-4 pm 2 hours AT
Location: Extension Office
Presenter - Dick Benoit, Diane Humes
Register with Emmeline Dodd txdodd@aol.com

Title - Safety/CPR/AED Training - March 28
9 am - 2 pm 5 hours AT Limit 30 participants
Location: Extension Office
Presenters - Jay Walker and team
Register with Emmeline Dodd txdodd@aol.com

Ongoing

Galveston Island State Park
10 am 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)945-4731
We are currently reading: *Empire of the Summer Moon*
by S.C. Gwynne

STEWARDSHIP OPPORTUNITIES

Ongoing Activities:

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 Sipocz m-sipocz@tamu.edu

Thursdays -

- Horseshoe Marsh Prairie, third Thursday of each month, 9 - Noon. Contact: Tom Solomon crandtr@sbcglobal.net
- San Jacinto State Park, Contact: Tom Solomon crandtr@sbcglobal.net
- Stormwater Wetland Team, Contact: Mary Carol Edwards mcedwards@tamu.edu

Fridays - Prairie Friday, ABNC, 8:30 - 11:30am, Contact: Dick Benoit RBenoitTEX@aol.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 Stennie Meadors Stenmead@aol.com

Partner and Associate Programs - Many organizations sponsor guided walks and education programs or need volunteers to man their nature center. Go to www.gbamasternaturalist.org, click on "Volunteer Opportunities," then click on "Partners, Sponsors and Associates" for the list, then click on their website for information and contact.

BOARD AND COMMITTEE MEETINGS

Board Meetings - February 3, March 3
2-4 at the Extension Office

Committee Meetings

Communication - March 2

9-Noon at Extension office

Advanced Training - February 16, March 16

10-Noon at Extension office

Education/Outreach - Meets as needed. None currently scheduled.

Stewardship - Meets quarterly. Next meeting to be determined

Guppies from Julie

Dolphin Challenge 2015 Needs You!
Join us on **Saturday, February 28, 2015, at Texas A&M Galveston!**

Can you hear the clock ticking as you try to answer these questions? Let's put a buzzer in your hand and face you off with a team of enthusiastic, determined high school students! Whew! The pressure is on!

Welcome to the fast paced, fun, exciting world of National Ocean Sciences Bowl! National Ocean Sciences Bowl (NOSB) is a nationally recognized and highly acclaimed high school academic competition that provides a forum for students to test their knowledge of the marine sciences including biology, chemistry, geography, physics, geology, social sciences and technology. Texas A&M Sea Grant sponsors the National Ocean Science Bowl competitions in Texas.

We need you to make these competitions a success! Training will be provided!

Roles include:

Moderator: essentially in charge of the round; must be able to read aloud clearly and quickly and keep the competition running smoothly; those with a background in the marine sciences are preferred

Rules Judge: must know all the competition rules; ensures quiet during the game and that the rules are consistently and correctly followed.

Science Judge: must have a technical background (preferably a graduate degree) in marine sciences and be prepared to address challenges to content by participating students.

Timekeeper: operates time clock and must know the rules that apply to timing.

Runner: runs the team challenge questions to the Judges' Appeals room to be scored.

Training will be conducted **at the Galveston County Extension Office.** Please choose one training session! (Refreshments will be provided.)

Wednesday, 2/4: 1:30 pm - 3:30 pm

Monday, 2/9: 10:00 am - Noon

Monday, 2/16: 1:30 pm - 3:30 pm

Dolphin Challenge volunteers will enjoy a great lunch, receive a terrific t-shirt and bask in the admiration of high school students from across Texas!

If you would like to volunteer and attend training, please contact **Julie Massey!**



The Midden

Published bimonthly by the Galveston Bay Area Chapter - Texas Master Naturalists.

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

Hard copies mailed and available electronically two weeks prior to GBAC-TMN chapter meetings on chapter website: www.gbamasternaturalist.org. Archived issues also on chapter website. If you prefer to receive *The Midden* electronically only, please contact: Julie Massey, jmassey@ag.tamu.edu.

Comments? Suggestions? Want to join the team? Contact: Diane Humes by email at treimanhumes@earthlink.net.

Midden Editorial Team

Steve Alexander	Comm. Team Chair
Diane Humes	Editor
Carolyn Miles	Production Editor
Chuck Snyder	Photo Editor
Madeleine K. Barnes	Proofreading Editor

The Midden Deadline for the next issue

March 2nd

If you have Advanced Training or Volunteer Opportunities, please submit information to Cindy Howard, howardc@uhcl.edu

TEXAS A&M
AGRI LIFE
EXTENSION

Texas A&M AgriLife Extension programs serve people of all ages regardless of socioeconomic level, race, color, sex, religion, disability, or national origin. The Texas A&M University System, U.S. Department of Agriculture, and the County Commissioners Court of Texas cooperating.