Red-eared sliders by Diane Humes

Galveston Bay Area Chapter - Texas Master Naturalists April 2018

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**Next Chapter Meeting**

April 5th

TMN Training at the Texas Department of Corrections Ellis Unit Horticulture Program - A Pilot Project

By

Scott Ball
(Heartwood Chapter)

and

James Langley
(Lee College)

At Extension Office

# President's Corner by George Kyame, President 2018

Greetings Fellow Naturalists.

Those that have seen the two latest issues of *Coast Monthly* magazine, published by Galveston Newpapers, Inc., will have seen some familiar names and faces. There are nice articles on our own master naturalists at work and "play". Do check it out. This is great awareness press, so hooray to all.

The spring season is upon us. Opportunities to volunteer abound in preservation and conservation at all of our work locations. Here is a short list: Armand Bayou, Sheldon Lake, Galveston Island State Park, Texas City Prairie Preserve, EIH, and Exploration Green. Plastic pollution and general refuse needs constant attention on our shorelines and riparian woods. Please read all of your emails from the chapter's Constant Contact and refer to our webpage for changes and updates. Now is prime time.

Speaking of the season, the Training Class is halfway through its training curriculum. Please support this worthy and enthusiastic bunch in every way possible.

I would like to mention a couple of upcoming projects and events. Remember our speaker, Stephen Curtis, TPWD, and his presentation on Gulf Eels? Well, I will be scheduling some Eel Mop Parties in the near future. We will be constructing the apparati for the capture and monitoring of the juvenile eels' movement in our creeks and bayous. By "parties", think quilting bees or sewing circles, you know, social and productive.

Another event is the City Nature Challenge. This is basically an all species count, with photographs, uploaded to iNaturalist.org. It is a four day event, lasting from April 27-30. My goal is for the entire chapter to participate. The details can be viewed at http://citynaturechallenge.org/. Houston Greater Metropolitan Area won last year. Observation is a naturalist's best friend. Documenting and identifying are close seconds!

As I write this, there are several hundred cedar waxwings in the backyard. Excelsior!

See you all soon in the field, GJK.

# Wetland Wanderings: Pop quiz! by Lana Berkowitz

Here is a short quiz to test your wetland knowledge. Good luck. And remember more than one answer can be correct.

1. Who said: "Environmentalists changed the word 'jungle' to 'rain forest,' because no one would give them money to save a jungle. Same with 'swamps' and 'wetlands.' "?

A) Ellen DeGeneres
B) George Carlin
C) Swamp Thing

2. Nineteenth-century scientists used other terms to describe the land that is now called wetland, including:

A) Bog
B) Fen
C) Mire


Photo courtesy of Wasowski Collection

3. A pretty plant that should be pulled because it is on the invasive/exotic list:

A) Southern blue flag *(Iris virginica)*
B) Yellow flag *(Iris pseudacorus)*
C) Swamp lily *(Crinum americanum)*

4. When are you most likely to get stuck in muck, tip over and fill your boots with water?

A) When it starts raining
B) When it is 45 degrees Fahrenheit
C) When everyone is waiting and watching you work your way back to the pond's edge.

5. When a class of middle-schoolers arrives to help plant, you know:

A) The boots will be left paired in their correct containers after they leave
B) There will be no complaints about weather, walking or wet clothes
C) The students' chances of falling in the water goes up with the temperature

6. Who wrote: "When I would re-create myself, I seek the darkest wood, the thickest and most impenetrable and to the citizen, most dismal, swamp. I enter a swamp as a sacred place, a sanctum sanctorum."

A) Rachel Carson
B) Ralph Waldo Emerson
C) Henry David Thoreau

7. "*Wetland life is really the best*
*Migrating birds stop here to nest*
*It's a restaurant and a fine hotel*
*It's a habitat that serves life well*
*There are wetlands the whole world round*
*In every continent and country wetlands can be found*"

These are the opening lyrics of "Let the Wetlands Stand," which is performed by:

A) The Wiggles
B) The Beatles
C) Banana Slug String Band

8. Folklore has many names for mythical wetland monsters, including:

A) Skunk Ape
B) Jenny Greenteeth
C) Chupacabra

9. The Wetland Restoration Team's first mission was at Armand Bayou Nature Center. The team was formed:

A) In 2000
B) To celebrate Dick Benoit's birthday
C) On the first World Wetlands Day

10. On a typical wetland workday, if the spriggers are working at warp speed and the planters are working at half speed, how many plants will be in the ground at the end of two hours?

A) More than you realize
B) Fewer than you thought
C) Who knows? Nobody kept count.

Answers on page 10.

# Prairie Ponderings: The Battle Continues….
# Attwater Prairie Chicken "A" team vs. Deep-rooted Sedge by Sandy Parker

Did you know that the Galveston Bay Area Chapter has a volunteer "A" team? Yes, we do! The NASA team has the most dedicated, hard-working volunteers, tirelessly toiling in the prairie at the Attwater's Prairie Chicken pens battling the constant assault of the dreaded Deep-rooted Sedge. The team has also planted native grasses for the birds - by dividing existing Gama grass clumps and replanting them throughout the pens, we've provided much-needed cover for females to hide, rest, and build their nests. Each pen except number 7 has three Gama grass clumps. We've sown turnip and rape seeds to grow and hold the bare soil and serve as nutritious food for the birds to eat during breeding season. But specifically, what HAS the "A" team accomplished this year? Well, here is a synopsis of our efforts:

Each spring the team must allow its beloved prairie chickens some privacy in which to breed and lay their eggs, so, between April and June of 2017, we had to "chill out". However, from June 12, 2017 to January 8, 2018 we were back in all 24 pens, cutting off the heads (seed heads, that is!) of Deep-rooted Sedge plants, in hopes of preventing their spread via their ridiculously numerous seeds. The pens had become seriously infested, so we were on a mission!

During our second onslaught, after beheading Deep-rooted Sedge plants, we began digging them up. We dug in heat, cold, wind, and, sometimes, even rain. All told, from January 6, 2017 to December 11, 2017, we removed our nemesis plant from 17 pens.

Searching for "friendly" ways to eradicate unwanted weeds, the team has experimented in several pens. Pen 7 is our "pilot pen" and was covered with thick, black plastic on September 19, 2016 and not uncovered until January 8, 2018, in hopes that no plant, especially the dreaded Deep-rooted Sedge, would survive. Presently, the only hint of green color in the pen belongs to weeds that sprouted up along the perimeter. Showing no mercy at all, they will be sprayed with a 20% acetic acid (concentrated vinegar) solution soon. We are looking forward to seeing the results of this experiment this spring - hoping that not one Deep-rooted Sedge plant sprouts.

Another such experiment began in Pen 1 on September 26, 2016, when it was treated with a complete spray with 20% vinegar in addition to a blanket of black plastic. We removed the plastic on December 19, 2016 and, since that time, have cut the Deep-rooted Sedge seed heads twice –once in 2016 and once on June 19, 2017. We haven't seen much further Deep-rooted Sedge growth in this pen and haven't had to dig out any plants!


Photo by Sandy Parker

Our third experiment was in pens 2 and 8, each heavily infested with Deep-rooted Sedge. Pen 2 was sprayed with 20% vinegar on October 17, 2016, but the sprayer malfunctioned. Since that time, we've had to cut seed heads four times and dig plants out twice. Pen 8 was sprayed with 20%vinegar - sprayer working correctly - and we've only had to cut seed heads once (June 26, 2017) and dig out the plants once. So, the bottom line is that a 20% vinegar is effective at decreasing the Deep-rooted Sedge population. Covering the area with plastic for at least one growing season may also prove to be an effective terminal treatment for this incredibly invasive plant.

During the first month and a half of 2018, we seeded six pens with turnip and rape seeds and nine pens with rye grass just to hold the soil.

Overall, it's been a very successful year in the pens and, dare I say it, maybe next year our hard-fought battle against Deep-rooted Sedge will be won. If not, the A team will be back for another year of battle after this year's eggs are laid and the chicks are hatched.

# Beach Patrol: American Oystercatcher Study by Alan Wilde

If you happen to be out and about in the Galveston Bay complex at this time of year, you may hear the characteristic "peep, peep, peep" of a pair of American oystercatchers as they defend their territory from all-comers.

Easily distinguished by their long, reddish-orange bills, these large shorebirds are currently nesting, using shallow scrapes created by the males on islands throughout the bay. After the female has laid her eggs, the pair has to overcome all manner of threats, including predation, weather events and human disturbance, so that their chicks can fledge. If the nest fails – and many do! – the pair may repeat the process as many as four more times.


Photo by Alan Wilde

The oystercatcher is considered to be a species of high concern, with an estimated population of fewer than 500 birds along the Texas coast. Prior to 2011, minimal research had been conducted on local oystercatchers; however, that changed when Dr. Susan Heath of the Gulf Coast Bird Observatory (GCBO) began her American Oystercatcher Study to learn more about their habits and threats.

A key requirement for Dr. Heath's research was to band as many adults and chicks as possible so that she would be able to identify and track individual birds. Heath has been conducting regular monitoring trips by boat during nesting season and, backed by banded bird sightings by members of the public, has been studying where young birds go when they leave the nest, whether adults are territorial all year, how often birds switch mates (think Peyton Place!), and much more.

Our chapter began partnering with GCBO in 2015, documenting banded bird sightings and helping to capture and band birds. In 2016, lack of funding meant that Dr. Heath would be unable to continue her studies in the Galveston Bay complex, so GBAC Captains John Wright and Tim Long began using their own boats to carry Dr. Heath and other volunteers around the bay. John and Tim ran their boats on to oyster reefs, got stuck in the mud, and braved extremes of cold and heat, while having to keep a weather-eye on wind, lightning and fog. Great work, guys!

In 2017, an injury to Tim meant that John had to conduct all the monitoring trips himself in order to keep Dr. Heath's research alive. This year, however, GCBO has received the funding necessary to buy its own boat, so John and Tim can go back to fishing for trout and redfish. However, chapter members will still be accompanying Dr. Heath around Galveston Bay in 2018, photographing banded birds – it's sometimes easier to determine the identity of a bird from a photograph than it is using binoculars – and helping to band additional birds.

# Dire Diseases in Deer, Part 1 by Madeleine K. Barnes

When I was watching the local televised news late last year, the newscaster began speaking about Chronic Wasting Disease (CWD) found in Texas deer that was leading to changes in deer hunting regulations and meat processing. Recently, while watching a TV series about Maine wildlife wardens, I also saw the impact that this disease had on a moose. I love watching deer in my area and I'm concerned about their health and safety, so I did some research to learn more. There are 3.9 million free-ranging white-tailed deer in Texas. Deer hunting is a large industry, serving 700,000 hunters, translating to $2.1 billion annually, while the captive deer breeding/production operations across the state generate


Photo courtesy of Warden Micheal Hopper
Kansas Department of Wildlife, Parks & Tourism

another $650 million a year. Recreational hunting provides significant financial support for Texas Parks and Wildlife Department (TPWD) each year and all mule deer, white-tailed deer, and other native species are under their jurisdiction and management.

CWD is a progressive, degenerative, and fatal neurological disease belonging to the family of diseases known as transmissible spongiform encephalopathies (TSEs), according to the Texas Animal Commission website. CWD is found in members of the Cervidae, the family including elk, deer, and moose; white-tailed deer appear highly susceptible. It can take a year or more before an infected animal starts showing symptoms, which can include drastic weight loss (wasting), stumbling, listlessness, and other neurologic symptoms. CWD can affect animals of all ages and some infected animals may die without ever developing outward disease symptoms. There are no treatments or vaccines. CWD basically turns healthy brain tissue into sponge-like lesions.

The infectious agent is a prion - a small, abnormal, folded protein. An infected deer sheds prions through its bodily fluids - feces, urine, blood, and soft antler materials. Other deer can then become infected by contact with these fluids or through eating vegetation that has the microscopic prions from the soil. Prions are very hardy, remaining infectious for more than a decade. So, deer become infected from other deer or from contamination in their environment.

First recognized in 1967 in captive mule deer in Colorado, so far CWD has been found in 23 states and 2 Canadian provinces. According to the TPWD website, a total of 50 CWD positive deer and elk have been discovered in Texas - 32 white-tailed deer either in, or originating from, captive deer breeding facilities, 16 free-ranging mule deer, 1 free-ranging elk, and 1 free-ranging white-tailed deer. See: CWD Positives in Texas for details and chronology of CWD detections in Texas. Monitoring programs involve removing the brain stem of a dead deer for examination. There is a live test (rectal biopsy); however, it is less reliable, has to be repeated on live, restrained animals, and takes longer to get results.

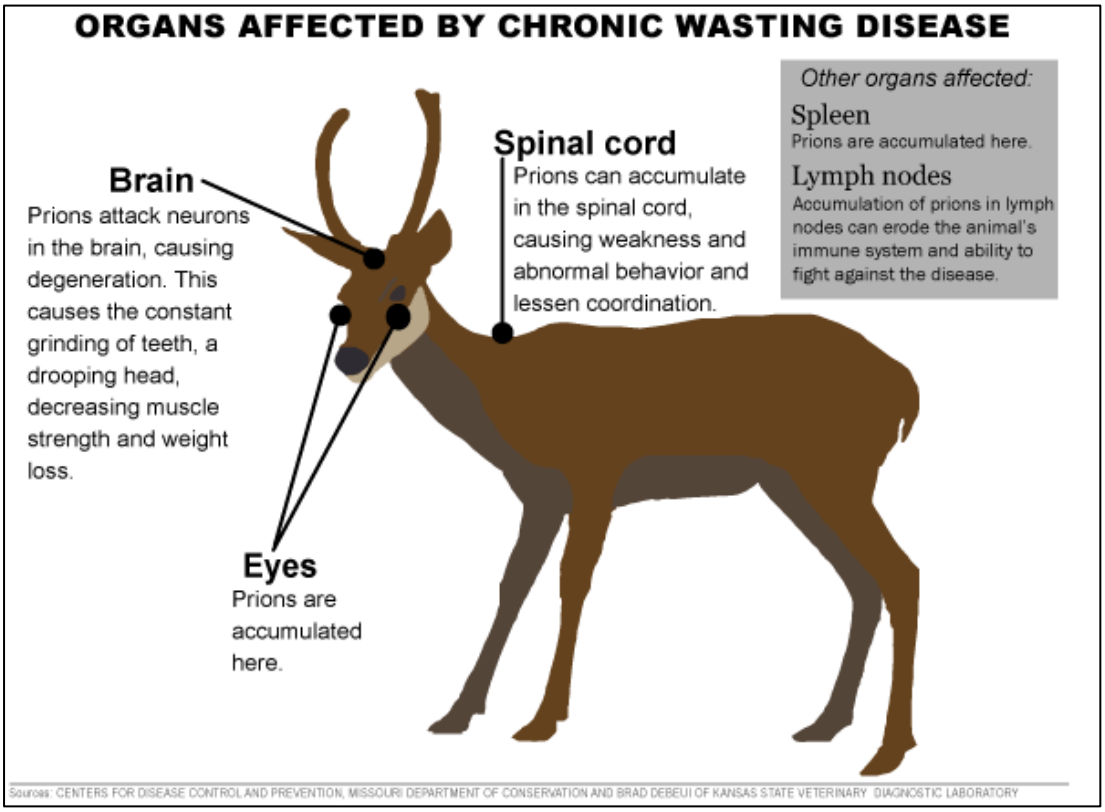
Since 1997, the World Health Organization (WHO) has recommended that it is important to keep the agents of all known prion diseases from entering the human food chain. As a precaution, the WHO and the Center for Disease Control and Prevention (CDC) recommend that people should not consume any part of a deer or elk with evidence of CWD or feed parts to other animals.

**To date, there have been no reported cases of CWD infection in people.**

For more information, go to the Texas Park and Wildlife Website:

Under https://tpwd.texas.gov/ open the Wildlife tab, click Wildlife Menu, click diseases, and then click Chronic Wasting Disease or go to https://tpwd.texas.gov/huntwild/wild/diseases/cwd/

For more information, while you are in the Chronic Wasting Disease section, click on any of the links in the article. For hunting information, open the For Hunters tab or click the link: Common Sense Precautions for Handling and Processing Deer or https://tpwd.texas.gov/huntwild/wild/diseases/cwd/#hunters



# The Big Picture by Diane Humes

*"Think globally, act locally."*

Perhaps "thinking globally" takes on galactic meaning when you have the capability of observing the entire globe! NASA, NOAA, and USAF partnered to launch the DISCOVR spacecraft on February 11, 2015 to monitor Sun activity and the solar wind. Its mission is to detect and warn Earth of impending solar storms that disrupt power grids, communications, aviation, and GPS.

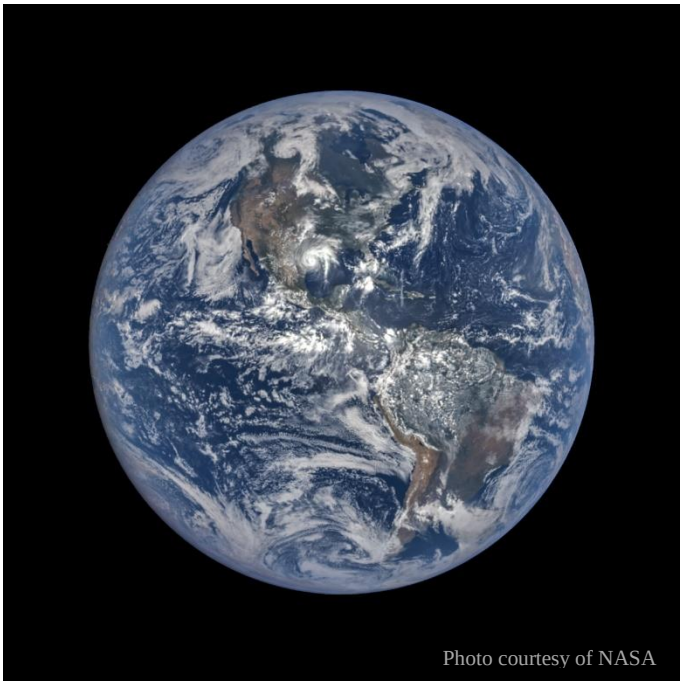


Photo courtesy of NASA

The DISCOVR satellite orbits Earth at the Earth-Sun LaGrange -1 (L1) point - a stationary "parking space" of neutral gravity between Earth and Sun, located about one million miles from Earth. From its vantage point, the satellite has taken spectacular pictures of Earth using its EPIC (Earth Polychromatic Imaging Camera), including this one taken on August 25, 2017, in which Hurricane Harvey is clearly visible!

Beyond its ability to take pretty pictures, the EPIC data is used to track aerosols, ozone, cloud reflectivity, cloud height, vegetation, and UV radiation. If you wish to check out what's happening from an "out of this world" global perspective, see: https://epic.gsfc.nasa.gov/.

For a local perspective, now is the time, **until April 4, 2018 at 4 pm**, to comment on the Galveston Bay Plan, 2nd Edition. In 2015, the 20-year timeline for The Galveston Bay Plan expired and members of The Galveston Bay Council began analysis of its original objectives - some now obsolete, others competed, with new and unforeseen priorities, such as hurricanes and oil spills. The Plan has been completely revised, with significant input from stakeholders and the public, to define the most important goals to be achieved over the next 10 to 20 years for the health of Galveston Bay. Goals in The Plan will be, in large part, our chapter's goals for the future. See for yourself and send your ideas.

To view a draft of The Plan, go to: https://www.h-gac.com/community/galveston-bay-plan/. To submit your comments, go to **www.GalvestonBayPlan.org/Comments** . *For any questions, contact:* Kathy.Janhsen@h-gac.com, 713-993-2423.

# Diurnal Raptors of the Galveston Bay Area 2018 by Diane Humes

February 26, 2018, was the date of "Spring Training", the Galveston Bay Area Chapter's Advanced Training and refresher course for the annual Hawk Watch; watchers observe migrating hawks every day between March 1 and April 30. All 55 participants listened raptly as Lynn and John Wright described the fine points of hawk identification and counting during migration. For questions or to join the hawk watching team, please contact them: John, wrightjn@rice.edu, Lynn, lynn-wright@comcast.net.

Hawk Watch began in 1996, started by our own Dick Benoit, who, as an experienced hawk watcher from Michigan, wanted to continue counting diurnal raptors in Texas. After extensive research, he chose Sylvan Beach and Little Cedar Bayou Park in La Porte, TX as most convenient and favorable for hawk viewing during spring migration. Checking dates, you will realize that our site already has 22 years of data; Lynn and John are logging our results with Hawk Migration Association of North America. Follow us: http://hawkcount.org/SylvanBeach.

Watching hawks requires a collection of skills: spotting, identifying, counting, recording, and reporting the birds seen migrating. Also, you need to figure out which birds are locals, but usually migrants are in a big hurry to go north, so it is fairly obvious. Counters need to have a comfortable chair, sunscreen, shade, hat, binoculars, water or coffee, snacks (although it is hard to swallow while looking up!), clickers, a smart phone, and data

sheet. We keep track of the weather - no sitting out in a storm! Wind direction determines the location; north and west winds are more favorable for Sylvan Beach; winds from south and east, the birds will fly over Little Cedar Bayou Park.

Photo by John Wright

Eagles, falcons, buteos, accipiters, osprey, northern harriers, vultures, and caracaras are the diurnal raptors - those active during daylight hours. Some are year-round residents of the Galveston Bay area, but most migrants spend "our" winters in Central and South America, returning each spring, often traveling in a long and complex journey before reaching their breeding and nesting destinations. Using thermal lift to aid their flight, raptors won't fly across large water bodies (with no thermals), so our location along Galveston Bay is ideal for viewing spring migrants traveling north along the coast. Most birds travel past Veracruz, Mexico, funneled into a narrow strip between mountains and ocean; watchers there observe an incredible twice-yearly "river of raptors", should you ever wish to view a truly amazing migration spectacle.

Diurnal raptors are the stronger, fiercer birds with characteristic keen vision, hooked bills for piercing flesh, and strong piercing talons for grabbing and holding prey. In the 1970s, such bird species at the top of the food chain - peregrines, eagles, osprey (and pelicans!) - were noticeably absent in North America and found to be threatened with extinction because of the accumulation of the insecticide DDT in their tissues. DDT, now a banned chemical, disrupted egg shell production and raptor population numbers plummeted. Organizations such as HMANA set up hawk counting sites to collect data to monitor bird populations and the need for such data has not diminished!

Of the 34 raptor species found in North America, watchers in our area may see 19: Black and Turkey vultures, Bald eagles, Osprey, Red-tailed, Red-shouldered, Swainson's, Broad-winged, Sharp-shinned, and Coopers' Hawks, American Kestrels, Merlins, Peregrine Falcons, Mississippi, White-tailed (formerly called Black-shouldered), and Swallow-tailed Kites, Northern Harriers, Crested Caracaras, and, new to the list in 2018, the White-tailed Hawk. John suggests learning them one at a time.

Since raptors exhibit few colors, being mostly brown and gray, identification clues come from proportional shapes and sizes, behavior, and color patterns. Look for shorter tails and longer wings in eagles and vultures, and long tails and shorter wings in accipiters. Falcons and kites have long narrow pointed wings and long tails. On Hawk Watch the birds are often flying very far away; your best clues to their identification are shape and behavior. Falcons seldom fly together and a huge kettle will almost surely be Broad-winged hawks and/or Mississippi kites. Banding, barring, and white color patches may give the clues necessary to ID the bird. For example, a mature bald eagle will show a bright white head and tail, but a crested caracara will flash four white points at you - head, tail, and ends of both wings.

Our Hawk Watch averages 21,433 hawks counted in a season. Most of these are Broad-winged hawks (~15,000) and Mississippi kites (~3,000). Counting can be slow one day and fast and furious the next. On one extraordinary day, after we counted > 10,000 migrating birds, we went home tired, sunburned, and very happy. With hawks there are no guarantees, but once you start looking for them, you find they are all around - just keep looking up!

## Heritage Book Study - Review of *The Soil Will Save Us* by Madeleine K. Barnes

Have you ever wondered why plants that you spent time and energy planting don't grow in the soil? Maybe you are involved in a restoration project such as marsh, prairie, or planting a garden in your own yard, and you did not get the healthy plant response that you were expecting?

What is soil anyway? It is not the same thing as dirt. Two definitions of soil are - (i) the unconsolidated mineral or organic material on the immediate surface of the Earth that serves as a natural medium for the growth of land plants; (ii) the unconsolidated mineral or organic matter on the surface of the Earth that has been subjected to and shows effects of genetic and environmental factors of: climate (including water and temperature effects), and macro- and microorganisms, conditioned by relief, acting on parent material over a period of time. Maybe we need to learn more about soil and what is going in there?

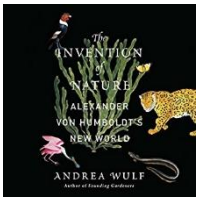

Journalist and author Kristin Ohlson takes the reader on a quest in her book, *The Soil Will Save Us*, to learn what is happening with current soil science. Picture yourself riding or walking along with her as she introduces scientists, farmers, ranchers, landscapers, foodies and others while you learn how to rebuild the biology of the soil. It took eons of time to create the healthy soils that existed 10,000 years ago - healthy until changed by poor farming and ranching methods, which morphed into the industrialized agriculture that exists today. The practice of livestock farming changed the feeding behavior of grazing herd animals that led to more loss of soil carbon and degradation of the soil. According to Ms. Ohlson, these farming and grazing methods have contributed to the loss of up to 80% of carbon from the world's soils.

Stopping the use of fossil fuels would not affect the atmospheric carbon that continues to warm the planet. How do you return this carbon back to the beneficial soil state while healing the land at the same time? Soil biology begins with plants photosynthesizing - harnessing light energy from the sun - and producing sugars that flow into their roots. Leftover sugars the plant does not utilize are interchanged or traded for water and mineral nutrients from the bacteria and fungi in the soil. This is one of life's great biological partnerships in the soil food web. Ohlson says, "Right away, I was stunned by what I learned about life in the soil—that when we stand on the surface of the earth, we're atop a vast underground kingdom of micro-organisms without which life as we know it wouldn't exist."

This pathway process supports the microbial activity that sustains not only the growth of the plant and soil on the surface, but also down below the subsoil. Organic matter is degraded into humus by a combination of saprotrophic fungi, bacteria, microbes and animals such as earthworms, nematodes, protozoa and various arthropods. Humus is the organic, non-cellular, long-lasting component of soil. It is organic because it is composed of chemicals containing carbon. It is mostly extremely stable carbon compounds with no phosphorus or nitrogen. Humification is the fixing of carbon in the soil.

Kristin Ohlson's investigation identifies an ecological approach to return atmospheric carbon back to the soil in a stable carbon state and halt global warming. The prospect of carbon sequestration in the soil resulting from improved soil science appears to offer hope for our future and our relationship to the Earth. In addition, this exploration of soil science and the building of healthy soils offers help in addressing drought, flooding, erosion, air and water pollution, food quality and health issues.

This is a brief peek into this book. It is a must read for anyone interested in conservation, restoration, land management, gardening, healthy food and learning more about how this natural process works. It will give you a different perspective of how important healthy soil is to us and our environment.




Our next reading selection is *The Invention of Nature, Alexander Von Humboldt's New World* by Andrea Wulf. We will meet on April 2, 2018 to discuss the first 134 pages, on May 7, 2018 to discuss pages 135-268 and on June 4, 2018, we will discuss pages 269-402. We welcome your participation each month for two hours on the first Monday of the month starting at 10:00 a.m.at the Agrilife Extension office. We look forward to seeing you and let us know if you have read any good naturalist books lately! Happy trails!

# Forensic Botany: A Tale of Two Berries by Diane Humes

This story begins with a simple question: Do you know what this plant is?

Jesus Suarez and I are looking at a photo on his phone of a mystery plant with white berries that he got from Trees for Houston. Uncertain what it is, but assuming that it is a native, Jesus observes that no creature seems interested in eating this plant or its fruits, so do I know what it is? It is puzzling, because it should be American beautyberry, *Callicarpa americana*, but appears different. I consider whether it might be pokeweed, *Phytolacca americana*, but need to find out whether that plant even grows in Texas! And so the tale of two berries begins.

An internet search quickly confirms that pokeweed does, indeed, live in Texas and its berries could be white, although usually are purple. Also, Japanese beautyberry may be a possible identity - it looks like the picture. Perhaps it is time to dig a little deeper and do some real botany. This can get complicated, but I know we are up to it.

The *Manual of Vascular Plants of Texas* contains accurate botanical descriptions of Texas plants - no pictures - and it is handy to have *The Illustrated Glossary of Botanical Terms.* I open both books and learn right away that *Phytolacca* is a small genus of mostly tropical and warm-temperate region plants, containing 35 species in their own family, Phytolaccaceae.

Members of the Phytolaccaceae may be herbs, shrubs, vines, or trees. They have **alternate leaves,** with **no stipules**, and perfect or unisexual flowers. (We don't have any flowers, so can't use this clue.)


Photo by Jeff McMillian,

Pokeweed, *Phytolacca americana*, our Texas species, is a **smooth** plant, with an unpleasant odor and large (15cm diameter) perennial rootstock, from which stout leafy stalks up to 3m tall arise. Leaves are up to **25cm long and 10 cm wide**, **pointed** at the tip, and **wedge-shaped or rounded at the base**, with a petiole about 1 cm in length. Flowers are small, with 5 sepals, 5 white to pinkish rounded petaloids, only 2-3 mm, 10 stamens and styles, and green ovaries.

Pokeweed fruits are dark purple, although they may go from green to white to purple, arrayed on a long **raceme** - a **long, unbranched stalk with flowers on little pedicels**, flowers maturing from the bottom up - that is, flowers appear in various ages on the stalk, with the oldest at the base.

How does beautyberry compare? Beautyberry, *Callicarpa*, is a genus of 147 species - several widely cultivated and with tendencies toward escaping - 54 named forms and varieties, and one known hybrid. *Callicarpa americana*, our beautyberry with exquisite purple fruits, is a bush or shrub up to 3 m tall. Usually much branched, its branches are covered with **stellate** (star-shaped) **hairs and scurfy** (small bran-like) **scales** - might need a hand lens for these features. Leaves are **opposite,** with petioles to 38 mm, **thin leaf blades, oval to elliptical**, 8-23cm long, with **pointed tips** and **coarsely serrated edges**. Flowers are small, bluish, pinkish, reddish or white and **funnelform**, arrayed in a multi-branched **cyme**; terminal flowers bloom first. Fruits are showy, pink, red, or blue, **globose** and 3-6 mm long and wide. This native beautyberry also grows in a variety with white berries - *Callicarpa americana* var. *lactea*.

As of now, I still haven't actually seen the unknown plant and with the recent freezes, we'll be lucky to find a stick! But, clues to look for will be opposite or alternate branching, and smooth or hairy and scaly stems and branches, and whether the fruits are along a straight raceme or in clusters. Just to complicate the issue, eight non-native varieties of beautyberry are readily available from plant nurseries. *Callicarpa* species from China and Japan - *C. japonica* 'Leucocarpa', *C. dichotoma* 'Shirobana', *C. dichotoma* 'Albifructis' and *C. dichotoma* 'Duet' - each bear white fruits.

According to my sources, American beautyberry belongs to the Vervain family, Verbenaceae. Members of this family may be herbs, shrubs, woody vines, or trees, distinguished by mostly **tetragonal** branchlets and twigs, mostly **opposite leaves**, which are deciduous, simple, with **no stipules**, and may be either entire or variously toothed. A large family of 3375 species and subspecies in 76 genera, vervains are widely distributed around the world, except in polar regions, and include *Verbena*, *Lantana*, *Phyla* (frog fruit), *Duranta*, and *Vitex*.


Photo courtesy of Missouri Botanical Garden

But, hold the phone; the Missouri Botanical Garden says that *Callicarpa americana* belongs to the Mint family, the Lamiaceae. I do not believe that the good botanists in St. Louis would willfully commit so egregious an error as to mistake the family name, so I continue digging. The Angiosperm Phylogeny Group, website hosted by, you guessed it, the Missouri Botanical Garden, has reclassified *Callicarpa*, but not *Verbena*, *Lantana*, *Phyla*, *Duranta*, or *Vitex* - without telling me! Furthermore, they have just published an amazing resource - a 2,600-page online plant checklist, *Vascular Plants of the Americas* - a continuously updated, publicly searchable database.

Beginning 500 years ago, European (mostly) explorers brought home multitudinous objects during their journeys of discovery. There are now about 22 million plant specimens stashed in the world's herbaria - a great challenge to botanical organizational skills. With this new database plant lists from 12 regions and countries have been merged - also cleaned up and verified in the process - to yield a list of the 124,993 vascular plant species native to the Western Hemisphere. This flora -

flowering plants, gymnosperms, ferns, horsetails, clubmosses, and spikemosses - is divided into 6,277 genera and 355 families and corresponds to one-third of the estimated 383,671 vascular plants known worldwide.

Surprisingly, 122 species are native to all areas of North and South America. Extra credit for finding which ones they are! To check out this database and other information, see: www.tropicos.org/projects/VPA. The Tropicos website contains a vast amount of botanical data, including a Flora of China. Although our mystery plant is still unknown - I will bet on a Chinese horticultural variety - we have learned so much from a simple, ordinary master naturalist question. Let's keep asking those questions and follow the trails!


# Pop Quiz Answers

ANSWERS: 1. B) George Carlin. 2. All three are correct. 3. B) Yellow flag. 4. All three are correct. 5. C) Among the chaos and complaints there will be laughing and falling. 6. Thoreau. 7. C) Banana Slug String Band, book it for your next party. 8. A and B. Chupacabra seems be land-based. 9. A is correct, but we can pretend it was Dick Benoit's birthday. 10. Wetland math is easy; all three are correct.

YOUR SCORE:
9-10 Correct: Congratulations. You are a Wetland Wonder and probably own a dibble.
3-8 Correct: Good job. You are a Wetland Mudder, and your vehicle probably smells like insect repellant.
0-2 Correct: Welcome, Wetland Newbie.


## *The Midden*

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

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
Linda Welzenbach Fries
Carolyn Miles
Chuck Snyder
Diane Humes, Managing Editor



## *The Midden* Deadline

**or the next issue**

**April 30**

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

# Guppies from Julie - It all adds up!

Hello Master Naturalists,

I would like to encourage you to record on VMS the contacts you make within the community as you conduct your stewardship and education activities.

These contacts and the diversity of the audiences you educate tell the story of the impact you make to inform and educate people on our local natural resources! Your contact numbers and diversity information are used by the Texas Master Naturalist Program sponsors, Texas A&M AgriLife Extension Service and Texas Parks & Wildlife Department (TPWD), to share your impact with the Texas State Legislature.

Texas A&M Agrilife Extension and TPWD are funded by the Texas State Legislature.

**In 2017, the chapter recorded 18,567 contacts while 2015 had 45,510 contacts.** In two years, **the numbers indicate a 59% decrease in the stewardship and education contacts made by the chapter.** I really don't believe that the chapter was less active in working with the public in 2017 as indicated by the numbers. I think the diversity and number of contacts were just not recorded.

One of the ways the Texas State Legislature knows that we are meeting the mandate "to serve all of the people of Texas" is by the reflection of the audiences educated by our "Master volunteers" such as Texas Master Naturalists. The audiences we work with should be reflective of the wonderful diversity of our great state! Without data, we cannot tell that story.

Please consider recording the diversity of the contacts you make in 2018 into the VMS. Complete data can then be shared with our funding organizations including the Texas State Legislature and the Commissioners Court of Galveston County.

There are a variety of ways to implement this data collection and I look forward to discussing options with you. If you have any suggestions or questions, please contact me at 281-309-5063 or julie.massey@ag.tamu.edu.

Many thanks for "Being the Change You Wish to see in the World!"

Julie

**VMS Screen Shots**

Do you have impact data to add to the opportunity? (Add only once per event) No Yes

Do you have new acreage to report? (Add only once per event) No Yes

Do you have new trail miles to report? (Add only once per event) No Yes

***Opportunity Impact***

Please complete the following for the number of attendees:

Adult:
Youth:
---
Male:
Female:
---
White:
Black:
Hispanic:
Asian:
American Indian:

***Acreage***

Total new acreage impacted during this event:

***Trail Miles***

Total new trail miles maintained or developed during this event:

# April and May Activities

## ADVANCED TRAINING OPPORTUNITIES

**Chapter Meeting** – April 5; TMN Training at the Texas Department of Corrections Ellis Unit Horticulture Program - A Pilot Project
Presenters – Scott Ball (Heartwood Chapter); James Langley (Lee College)
6:30 Social, 7:00 Meeting, 7:30 Speaker
Extension Office; 1 AT hour

**iNaturalist Training** – April 6 (Wait List)
12:30-3pm; 2.5 hours AT
Location: Extension Office
Presenters – Marsha May
Register with Emmeline Dodd txdodd@aol.com

**Leafcutter Bees** – April 28
9am-Noon; 3 hours AT
Location: Extension Office
Presenters – Mel Measeles and Rick Becker
Register with Emmeline Dodd txdodd@aol.com

**Parasite Safari AT** – May 10
1-3:30pm; 2.5 hours AT
Location: Extension Office
Presenters – Dr. Chuck Blend
Register with Emmeline Dodd txdodd@aol.com

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

Heritage Book Study Group
First Monday of every month. AgriLife Extension Office
10am-Noon; 2 hours AT
Contact: Elsie Smith (409) 392-7003
See Pg. 7 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

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**
Advanced Training – Third Monday, 10-Noon
Education/Outreach – Third Tuesday, 10 to 11:30am
Communication – May 2, Wednesday, 9-noon; Location TBD



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