Galveston Bay Area Chapter - Texas Master Naturalist April 2015

Table of Contents

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

In mid-January, the board hosted its Second Annual Away Day at Galveston Island State Park. Here, we identified, prioritized, and assigned leads to the goals we wish to achieve in 2015. These goals provide a road map not only for this year, but also toward the future.

Listed below are the goals and planned start dates:

- Transition to new reporting system for hours – Lead: Jim Duron
- Enhance/grow/implement an overall communication strategy
- Increase educational outreach through our Advanced Training and Education

Outreach committees

- Provide focused training for field trips/volunteer opportunities
- Complete a speaker survey database
- Develop co-operative agreements with our partners
- Enhance recognition for chapter members
- Develop transition plans for key chapter roles

As always, our work on the beach, classrooms, community, in the prairie and wetlands, and beyond continues. Thank you for all you do -- be safe and hope to see you soon.

Next Chapter Meeting

April 2nd
6:30pm

Our Neighborhood Bats

By

Diana Foss
Urban Wildlife Biologist, TPWD

At Carbide Park

N.I.C.K Nesting Islands Cleanup by Kayak

Photo by Chuck Snyder

Prairie Ponderings: The Burn Team Fires It Up by Diane Humes

This place we call home was (and is) prairie. A grassland, often characterized by vast low wet spaces after rains, interspersed by higher pimple mounds, the original 6.5 million acres of coastal tallgrass prairie in Texas had big skies and long vistas; trees were present in clumps or mostly along the waterways. This ecosystem stretched in an arc along the Gulf of Mexico into Louisiana. Less than 1% of it remains, because most has been converted to subdivisions, farms, ranches, shopping malls, roads, chemical plants, schools, and Johnson Space Center.

Photo by Lyman Brown

If, by some chance, the land has neither been covered up nor plowed nor grazed to the ground, you can tell that it was prairie. Look closely in those out-of-the-way corners along highway intersections, along railroad tracks, along easements and notice the tell-tale prairie indicator plant species - Compass plant (*Silphium laciniatum*) - grows along the ditches in rural roads, Yellow Indiangrass (*Sorghastrum nutans*), American aloe (*Manfreda virginica*), Blue sage (Salvia azurea), Prairie nymph (Habertia lahue), Big bluestem (*Andropogon gerardii*), Eastern gama grass (*Tripsacum dactyloides*), Texas brown-eyed Susan (*Rudbeckia texana*), Indian plantain (*Arnoglossum plantagineum*), or Rattlesnake master (*Eryngium yuccifolium*) - all found at Armand Bayou Nature Center. Indian plantain is visible on Johnson Space Center fields; prairies are here.

Prairies exist in the ecotone between “moist enough to support forests” and “too dry for anything but desert”. The prairie grasses and forbs depend on disturbance by sporadic grazing - traditionally large migrating herds of bison - and periodic wildfires - set every few years by Native Americans or lightning strikes. Myriads of animal and bird species called the prairies home; some, like Attwater’s prairie chickens, are now the most endangered on the planet.

At Armand Bayou Nature Center, preserving the prairie was not sufficient to maintain it; the invasive Chinese tallow, *Triadica sebifera*, threatened to dominate the 900 acres of coastal tallgrass prairie. In the constant battle against this invader and others, control methods have included herbicide, cutting, burning, and bad language for many years by many people. The official management plan includes mowing and/or burning in a pattern to ascertain which methods will best result in improved prairie health and control invasive species.

Burning a dry grassland, especially one surrounded by homes (mine), petrochemical plants, and Johnson Space Center, requires organization, communication, and perfect conditions. The burn team welcomes new members every year; training is always the first Saturday in December for those wishing to join the team and anyone wishing to refresh his memory of burn procedures. No one is allowed on a burn without completing training.

Prairie grasses have greater living biomass below ground than above; for example, Little bluestem and Big bluestem prairies produce hay between 0.75 - 1.5 and 1.5 - 2 tons per acre, respectively, but 3 and 4 tons biomass per acre in the top 4 inches of soil alone! Prairie grass roots grow deep into the soil, and meristematic tissues are found at or below the soil surface, so are safe from the intense heat of prairie fires. Therefore, grasses grow leaves back quickly after a fire, whereas, trees and shrubs are killed.


Photo by Chatt Smith

Bluestem prairies that are undisturbed by grazing, mowing, or fire accumulate immense amounts of mulch. This can result in almost pure stands of the dominant grasses - eventually resulting in weakened plants - and loss of the diversity from less dominant species. So, for the health of the prairie, on February 10, 2015, after a two year hiatus, the Armand Bayou Nature Center burn team completed a successful burn season.

Please observe the results from the prairie platform!

Wetland Wanderings: Restoration at Sheldon Lake by Marissa Sipocz

The Sheldon Lake State Park wetland restoration has been a long-term project with multiple phases and many partners. While the phases and partners have changed over the years, the constant has been the Wetland Restoration Team's dedication to seeing the project completed.

The Team began official restoration work at Sheldon in the fall of 2003 when we hosted our first volunteer group of Boy Scouts. The Scouts collected plants from our partner nursery (at the time) in Baytown and transported the material to the project site. We had a delayed rainy season that year, which meant that instead of making simple dibble holes in the muddy bottom of a wetland pond, as we had expected, we needed shovels and pickaxes to puncture through rock-hard crusty bottom. With the holes finally dug, we placed the precious wetland plants and watered each of them with a gallon of water.

The scouts and the Team worked hard on that first workday to get everything in place and planted. At the end of the day, with everything planted and watered, we could only look at the plants in their holes and hope for the best (and rain).

Eventually, the following February, rain arrived in sufficient quantities for those Phase 1 plants. Today, 11 years later, we are neither concerned about the hydrology for the Phase 1 ponds nor the vegetative cover, as both have reached a stable established point. Rather, we are happily considering planting strategies for our current Phase 4 ponds and working on the management of the Phases 2 and 3 wetland edges and adjacent prairie.

The drought of 2011 created the biggest challenge to the restoration effort, shutting down work both on the wetland ponds and the adjacent prairie. Without a consistent water source, we simply could not put plants in the ground, especially not bare-root sprigs. Thus, we waited; by late spring 2012, the rains slowly returned to the park and the wetland gradually began to fill up. The toll from the drought was harsh - the exotic species invading the adjacent prairie seemed to flourish during the drought - but the ponds themselves recovered their losses and re-established the wetland plant community.

Our current Phase 4 work brings us to the last parcel of land on the south side of the park to be restored, and a new challenge of restoring the overgrown meander ridge to open prairie wetlands with an adjacent forested canopy. While our progress has been slow, we are moving forward; changes are dramatic. The mulching of the exotic tallow trees on the ridge exposed the wetland ponds, made them easy to access and, therefore, easy to plant. Our next step, this spring and summer, will be the excavation and planting of the last few ponds, just west of the meander ridge.

With the completion of Phase 4 this year, we will have restored a total of 165 acres of wetlands at Sheldon Lake State Park. It has been a long time coming, but the wait has been worth it. Thank you to the Team for their commitment to the effort since day one.

Beach Patrol: Nesting Sea Turtles Arriving Soon by Steve Alexander

Note: The 2015 sea turtle nesting season began April 1st. In honor of the season's start, here are some reminiscences from the 2012 nesting season.

During a patrol, Jim discovered a nesting sea turtle on East Beach as she headed for the top of a seaweed-riddled pile of sand. On another morning, Ana spotted a nester near Jamaica Beach while walking with girlfriends.

Jim's turtle, named Mij (Jim spelled backwards), dug a hole in the sand-seaweed mix and therein laid 115 eggs, and after swiping sand over eggs and rocking back and forth to pack them, turned without hesitation and headed back toward the water.

But before she could reach the water, several pairs of hands grabbed her and gently placed her into a padded container for transport to the NOAA facility at Ft. Crockett. There she was satellite tagged and released some hours later.

While Mij was visiting Ft. Crockett, her eggs were excavated and carefully packed in sand for transport to an incubation facility on Padre Island's National Seashore. There her eggs will be safely hatched and the resulting hatchlings released into the Gulf of Mexico, all in an effort to restore populations of the Kemp's ridley, a highly endangered species.

As for Ana, she was celebrating her birthday with family and girlfriends when on a Saturday morning the girls set out for a walk on the beach. It was there she and her friends spotted a nesting sea turtle that was subsequently named Ana in her honor.

Ana, the nesting sea turtle, laid eggs in a low mound of sand not far from the water. Unfortunately, the spot she chose was in the midst of a fire ant mound.

Those excavating the nest quickly became aware of this oversight. To a chorus of bites, they carefully removed her 95 eggs from the nest, wiped them clean of ants and placed them in a container of ant-free sand for transport to the Padre Island incubation facility.

Like Mij, Ana's return to the water was delayed, being grabbed and transported to Ft. Crockett for satellite tagging before release. Mij and Ana's nests were two of the 209 Kemp's ridley nests found along the Texas coast in 2012.

Note: Although 2012 set a new record, trouble may be on the horizon. The number of nests has declined since then: 153 in 2013 and 119 in 2014. Placing blame on any one factor would be speculative, but some have pointed to a plausible culprit: the large volumes of oil and dispersants released into the Gulf of Mexico during the 2010 Deepwater Horizon oil spill.

Diurnal Raptors AT by Diane Humes

"Spring has sprung the grass is ris", I wonder where the birdies is."

Spring means hawk migration to Dick Benoit and on March 2, 2015, sixty-five master naturalists sat at the feet of the master hawk watcher to prepare for the spring "river of raptors" when the birds fly and ride the thermals from southern winter homes to northern breeding grounds. Having watched and counted raptors on their spring/fall journeys for 40 years in Michigan and Texas, Dick gladly shared his "bird's eye view" with us and highlighted the **Top 10 Raptors** for the Galveston Bay Area.

Diurnal raptors (birds of prey active during the day) are the **quiet** members of the bird family. They use their powerful talons and beaks to catch and eat prey. They wear sophisticated colors of **brown, white, and black, with maybe some red**. Raptors include three main groups: the buteos, broad-winged soaring birds, accipiters, long-tailed, short-winged forest dodgers, and falcons, sharp-winged speed demons, as well as

vultures, kites, eagles, Osprey, Northern Harrier, and Crested Caracara.

Our most common buteo is the **Red-shouldered Hawk**, seen in woodlots and **perching on wires**. The Broad-winged Hawk, the smallest buteo, migrates in huge numbers, looks as though "**dipped in ink**". **Swainson's Hawk** is a western bird, with a long tail and longer wings and may be blown to our area by a strong weather front. The **Red-tailed Hawk sits on posts** in open areas. He is large, with a **patagium**, the dark mark on the leading edge of the wing seen from underneath, usually has a "belly band" and a red tail.

Accipiters speed through forest trees to catch their meals; they are most likely to be seen picking off LGB's at your bird feeder! The Sharp-shinned Hawk is the smallest, with a squared tail and the **Cooper's Hawk** is larger with a white terminal band to his tail. A third accipiter, resident of northern forests, is the Northern Goshawk, a much larger bird with powerful talons and beak and a very bad temper. Approach his nest, with proper armor and a helmet!

Falcons include the very **common American Kestrel**, the medium-sized Merlin, streaked "**from the nose to the toes**", and the large and powerful Peregrine Falcon. The use of the chemical DDT gravely threatened the Peregrine Falcon; in the U.S. in 1972, no birds nested east of the Mississippi River. Hawk watch monitoring by scientists and citizens was begun to track bird population numbers. Today the eastern U.S. has 1600 nesting pairs of Peregrine Falcons – a result of the efforts of many dedicated conservationists.

Vultures, common in our area, are large, dark, carrion-eaters. The **Black Vulture** can be told in flight by its shorter wings and a quicker flap to the wing beats. The **Turkey Vulture** has a longer tail and slower wing beat and carries his **wings at a dihedral** angle. He has the best sense of smell in the bird world.

Kites are graceful fliers, elegant black and white birds. They snag and eat smaller prey while on the wing. The Swallow-tailed Kite is considered the **second most beautiful bird in the world**. It picks snakes and lizards from tops of trees as it passes. The **White-tailed Kite** nests here, but was once nearly extinct in Texas from being shot for target practice. The Mississippi Kite, with its **shiny white head,** migrates in large numbers (200,000 +), munching cicadas as its staple food.

Eagles are **really big** birds. We might see a Bald Eagle during migration; adults older than 5 years have the white head and tail, while immatures are less distinct. The **Crested Caracara**, is distinctive in flight with white head, white tail, and white wing patches on an otherwise dark bird. It eats carrion like a vulture.

The **Osprey** is a fisherman, often seen **flying carrying a fish in its talons, head always first.** It can be mistaken for an eagle, but is smaller, with white head and underbody, chocolate brown back and dark stripe through the eye. Ospreys, found on every continent except Antarctica, are common here around water, although do not nest.

The Northern Harrier lives in bird open fields, even nests on the ground. It flies low over fields and marshes to locate prey by sound as it "**quarters" the field**. It has an owl-like facial disc, white rump patch, and carries its wings in a dihedral.

Success in counting hawks as they stream overhead by ones and twos or by the thousands, flying as high as 2 1/2 miles, requires teamwork and practice. **No hawk is 100% identifiable**, but the prepared mind and eye can do pretty well. Start with the Top 10 Raptors (**see highlighted birds**) in our area. Grab binoculars and a guidebook, a water bottle, sunscreen, and a comfortable chair, and come to Sylvan Beach or Little Cedar Bayou Park in LaPorte any day until the end of April to help spot, count, and ID. the birds Lynn and John Wright are coordinating the Hawk Watch activities and entering the data collected. If you want to participate as a Hawk Watcher, contact Lynn at lynn-wright@comcast.net or 832-741-4516.

Bee My Valentine AT by Verva Densmore

Twenty Master Naturalists gathered at the Extension Office at Carbide Park on Valentine's Day to learn about native pollinator bees and how we can help with the rapid decline of our native bee population. Rick Becker and Mel Measeles focused on three native bees that are "solitary" bees ": the leafcutter bee, the sunflower bee, and the Mason bee. These bees do not excavate their own nests, but rely on hollow twigs or the abandoned nests of wood boring beetles or carpenter bees - even snail shells for their nests. Females like to nest in narrow cavities that normally occur naturally, but the class would learn how to build a welcoming structure for these important insects.

If you are wondering why we would care that bees are in decline, or why we would build houses to encourage a healthy bee population, here are a couple of things you might want to know: 70% of the world's main food crops

are reliant upon pollination for development and the honeybee (*Apis mellifera*) is the main pollinator (~80%). The honeybee population has been spiraling into a decline, presenting a potential global crisis.

Fortunately, other solitary bees (Megachilidae) like Mason bees, sunflower bees and Leafcutter bees also pollinate; they are among the world's most efficient pollinators. Their energetic swimming-like motion in the reproductive structures of flowers moves the pollen. They are, however, extremely inefficient at gathering pollen; compared to all other bee families, megachilids require on average nearly 10 times as many trips to flowers to gather sufficient resources to provision a single brood cell, which moves lots of pollen.

Mel, Rick, and Root Choyce worked with the class as we built the bee houses. It was clear that everyone was enjoying the jobs of sanding, gluing, and stapling the pre-cut pieces of wood on the porch in 70-degree sunny weather. The houses went together quickly because of all of the behind the scenes work of the class team. Thank you Mel, Rick, and Root.

Mason bees don't do well in our area, so we learned to care for leafcutter and sunflower bees. Class members received cocoons and were told to store them in the refrigerator at temperatures between 40-42 degrees F until outdoor temperatures are consistently above 55-

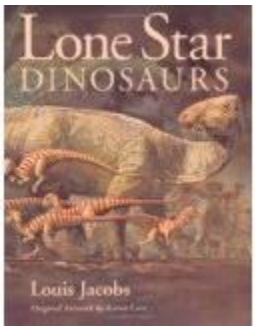

Photo by Chuck Snyder

degrees F. Once all danger of frost has passed, it is time to place the bees in the bee house for releasing. Incubation period is 18-28 days. Immediately following emergence, the bees will find a nest and mate. If the habitat is right, roughly 80% will nest from where they emerge. They usually pollinate until the first frost hits.

Many thanks to Mel Measeles for suggesting and organizing this wonderful AT, and to Rick Becker and Root Choyce for their assistance. Thanks, too, to our photographer Chuck Snyder and to everyone who brought food and coffee.

Heritage Book Study: Review of *Lone Star Dinosaurs* by Madeleine K. Barnes

During February, the book study group traveled back in time to the Jurassic, Triassic, and Cretaceous periods in what is now Texas by reading *Lone Star Dinosaurs* by Louis Jacobs.



Louis Jacobs is a noted Texas paleontologist and author and it is through his description that we journey to uncover (literally) the early history of Texas' first creatures.

This book reads like a mystery where you have some clues: the bones and/or footprints of creatures that lived up to 200 million years ago, and the detectives: the geologists, paleontologists, and other dinosaur hunters as they unlock what happened in the past.

The fossilized clues have been found in three dinosaur-bearing areas within the state - the Panhandle, Central Texas, and Big Bend. Each of these locations offers different insights into the three different periods and what the area looked like and how these different dinosaurs lived until the time of the big extinction some 66 million years ago.

In conducting this investigation, the dinosaurs are identified as having been in two fundamental groups - either lizard-hipped or bird-hipped, which helps to explain how they moved, what they ate, and how they lived. Given the fossils and footprints, these detectives developed more understanding of the behavior of these creatures and the book chronicles the tales of the various discoveries as they occurred.

Join us at the April 6th meeting to discuss the first 169 pages of *Cadillac Desert The American West and Its Disappearing Water* by Marc Reisner

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Passenger Pigeon Philosophy by Diane Humes

Spring is here; the sun is shining and birds are singing and it is time for cleaning. Is it really a nesting instinct to make order out of our piles of stuff? How do you decide what to keep and what to toss?

How much more difficult to decide which part of the Earth's biota to keep or toss. Said Aldo Leopold, *"The last word in ignorance is the man who says of an animal or plant, "What good is it?" If the land mechanism as a whole is good, then every part is good, whether we understand it or not. If the biota, in the course of aeons, has built something we like but do not understand, then who but a fool would discard seemingly useless parts? To keep every cog and wheel is the first precaution of intelligent tinkering."*

Last year marked a naturalist milestone: the one hundred year anniversary of the death of the last captive passenger pigeon, a truly American bird. Passenger pigeons, *Ectopistes migratorius*, were an important cog in the North American forest ecosystem and were, perhaps, the most abundant birds ever to have lived - three or six, maybe ten billion of them - until they were gone. Likely the last of her species, Martha died at the Cincinnati Zoo on September 1, 1914. You can visit her bronze statue at the zoo, but no person alive today has ever seen a live passenger pigeon.

We cannot know what we are missing- how differently the ecosystem functions without them. Aldo Leopold said, *"The pigeon was no mere bird, he was a biological storm. He was the lightning that played between two biotic poles of intolerable intensity: the fat of the land and his own zest for living. Yearly the feathered tempest roared up, down, and across the continent, sucking up the laden fruits of forest and prairie, burning them in a travelling blast of life. Like any other chain-reaction, the pigeon could survive no diminution of his own furious intensity. Once the pigeoners had subtracted from his numbers, and once the settlers had chopped gaps in the continuity of his fuel, his flame guttered out with hardly a sputter or even a wisp of smoke."*

Passenger pigeons somewhat resembled Mourning doves, but were much larger, with longer tails and wings, sexual dimorphism, and lacking a facial stripe. Their fossil remains have been found in 25 states and provinces, dating back 100,000 years, over an even wider range than the historical record shows. According to recent DNA analysis, they may have been the eastern counterparts of the band-tailed pigeons of the west, their closest relatives.

These pigeons were nomadic, rather than strictly migratory. Muscular, strong, quick fliers - large amount of dark meat! - pigeons flew in huge flocks at 60 mph, searching for suitable roosting and nesting places. An Eastern North American species (see map), pigeons nested in the northern portions of their range; flocks moved south for the winter. As eastern forests were cut down, birds gradually shifted westward. The large flocks required huge amounts of food; birds could travel 100 miles per day from the roost to forage.

Also known as "wild pigeons", what we know of them and their fate has been gleaned from writings of witnesses and examination of the 1548 remaining specimens. John James Audubon, in 1813 observed a flock in Kentucky: *"The air was literally filled with Pigeons; the light of noon-day was obscured as by an eclipse; the dung fell in spots, not unlike melting flakes of snow; and the continued buzz of wings had a tendency to lull my senses to repose... Before sunset I reached Louisville, distance from Hardensburgh fifty-five miles. The Pigeons were still passing in undiminished numbers, and continued to do so for three days in succession."*

Gideon Lincecum described the 1832 southernmost nesting in Mississippi: "*Through the . . . 30 square miles of that densely timbered bottom, from as high as one's head on horseback on the saplings, to the topmost limbs on the tallest trees, not a vacant spot where a nest could be crowded in, was to be found anywhere. Egg laying commenced synchronously and only one egg per nest was found on a later visit. On the large horizontal prongs of the big trees, were long rows of nests, closely jammed side by side, and in all the forks, on projecting knots and many more unlikely places nests were found. . . Lincecum described the enormous activity and noise of feeding the young on later visits. Then, the adults suddenly abandoned the fledglings in the nests for two days when all of the young left simultaneously. Two days later great numbers of the young pigeons were on adjacent prairies of the Chickasaw and Choctaw Nations*

feeding on the fields of wild strawberries. The Indians were killing them with sticks for food."

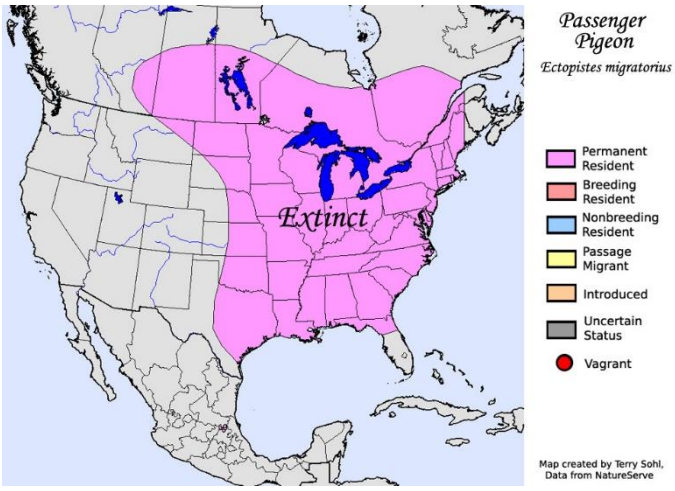
Pigeons were forest dwellers, favoring beech, oak, and chestnut trees for food. These trees are "masting" species, producing huge crops of nuts synchronously with neighboring trees, but at irregular intervals. These species may need to grow for 40 years before producing mast; therefore, passenger pigeons needed "old growth" forests covering large areas. A million pigeons could quickly clear a forest of mast and leave wreckage behind. However, a former pigeon roost often became the most fertile farmland!

Not ones to go hungry, pigeons also ate blueberries and cranberries, cherries, grapes, mulberries and pokeberries, dogwood fruits, earthworms, caterpillars, snails, and became fond of freshly-broadcast buckwheat seed and other grains. It is said that the seed drill was invented in 1860 to foil pigeons; farmers at last could plant their crops and avoid ruination. Pigeons stored food in their crops, and could expel the crop's contents, should they find a more preferred food. Imagine the farmer's ire upon finding his seed regurgitated two fields or counties over!

Pigeons were fond of salt and nets were often sited along brackish springs or salty soil, complete with "stool pigeons" - blinded pigeons tied to stools - to lure pigeons into traps. Pigeons were shot, clubbed, knocked out of nests, smoked, and poisoned, or captured live for sport shooting contests. Sportsmen now shoot at clay pigeons, due to the outcry against such "sporting" practices. With better communications and technology - telegraph, railroad, refrigerated cars, rifles - pigeon hunting became big business, especially after 1870.

Professional "pigeoners" criss-crossed the country, following pigeon flocks to hunt and trap them for meat and live birds for sport shooting competitions. Freight schedules, bills of lading, invoices for ammunition and hogsheads, and restaurant menus, tell the story of millions of pigeons shipped to markets as cheap food - the young "squabs", rich in fat, were considered the most tasty - in addition to local hunting. Hunting at one of the largest and last pigeon nestings in Petoskey, Michigan in 1878, pigeoners slaughtered perhaps one billion birds in 50 days. Most of the birds were sent to restaurants in New York and Boston. Pigeon feathers went into pillows and mattresses - feathers from 4000 birds to fill a mattress; pigeons were fed to the hogs or left on the ground to rot.

Pigeons were the most common bird in North America and appeared so abundant that nobody believed they could ever be diminished, yet by 1880 they were rarely seen. It was assumed they flew somewhere else - South America, Antarctica, the far North, or the Moon. Place names remain to mark their presence on our land: Pigeon Creek, Pigeon Lake, Pigeon Cove, Pigeon Hollow, Pigeon Hill, Pigeon River, Pigeon Forge on the Little Pigeon River, and more.



Pigeons were known in Texas: four Texas counties have a Pigeon Roost Creek (Bandera, Cass, Leon, and San Augustine); Houston Co. has a Pigeon Roost Branch; Sabine Co. has a Pigeon Creek; Bastrop Co. has a valley: Pigeon Roosthollow - something for a master naturalist to ponder when traveling. There is a mineral named "pigeonite", for its type locality at Pigeon Point, Minnesota, where pigeons were common nesters each spring until 1870. And, the Cooper's hawk's alias is "pigeon hawk".

Probably passenger pigeons numbers began a slow decline with the beginning of European settlement. Many factors contributed: loss of forest and loss of old growth forest meant shrinking food, nesting and roosting sites; sustained hunting disrupted nesting for three decades, killing reproduction, as well as individuals.

The loss of the passenger pigeon happened within the same time frame as the slaughter of bison, pronghorn, Prairie dog, Prairie chicken, Carolina parakeet, Heath hen, and Great auk. The passenger pigeon was exterminated in the name of progress, but at what cost? Said Aldo Leopold, "*Our grandfathers, who saw the glory of the fluttering hosts, were less well-housed, well-fed, well-clothed than we are. The strivings by which they bettered our lot are also those which deprived us of pigeons. Perhaps we now grieve because we are not sure, in our hearts, that we have gained by the exchange."*

The early 20th century also saw inauguration of the Audubon Society, the American Bison Society, the National Park Service, and Migratory Bird Act to protect wildlife. Biologist Edward O. Wilson estimates that by the end of this century half of all species on earth will be extinct - "the first animals to go are the big, the slow, the tasty, and those with valuable parts, such as tusks and

skins" - a spring cleaning on steroids. Can we learn from the saga of the passenger pigeon - billions to zero in less than a century?

Resources:
www.passengerpigeon.org Project Passenger Pigeon

www.foldtheflock.org Passenger Pigeon Origami

A Feathered River Across the Sky. The Passenger Pigeon's Flight to Extinction. Joel Greenberg. 2013

A Message from Martha. The extinction of the Passenger Pigeon and its relevance today. Mark Avery. 2014

Fun from Wild Camp by Carolyn Miles; Photos by Helle Brown

Come join us next year!

Wild Camp
Galveston Island State Park

January 29-31, 2016
(Tentative date)

Master Naturalists Food Beach Fun
Bay Birds Prairie Tents Kayaks
Fellowship More Food RV's
Campfire Night Sky Cold Dominos
Knot Tying Hiking Outstanding!

A Barred Owl by Richard Wilbur

The warping night air having brought the boom
Of an owl's voice into her darkened room,
We tell the wakened child that all she heard
Was an off question from a forest bird,
Asking of us, if rightly listened to,
"Who cooks for you?" and then "Who cooks for you?'

Words, which can make our terrors bravely clear,
Can also thus domesticate a fear,
And send a small child back to sleep at night
Not listening for the sound of stealthy flight
Or dreaming of some small thing in a claw
Borne up to some dark branch and eaten raw.

Fun from the Class of 2015 Photos by Nathan Veatch

Thank you Half Price Books!

The Galveston Bay Area Chapter of the Texas Master Naturalists and The New Class Coordination Team want to give a big shout out and THANK YOU to Half Price Books on NASA Parkway for donating recycled re-useable bags for every member of our new class. These bags, along with the plates and cutlery each student receives from the Chapter, help emphasize our mission to be a green organization.

Guppies from Julie

Thank You from Dolphin Challenge!

Twelve teams from across Texas and Arkansas rolled into Galveston for Dolphin Challenge in late February! These high school students had been preparing for the ocean sciences quiz bowl for months and the time had arrived!

Dolphin Challenge is the regional competition for National Ocean Sciences Bowl (NOSB). The competition is intended to increase knowledge of the oceans on the part of high school students, their teachers and parents, and to raise the visibility and public understanding of the national investment in ocean-related research. It is managed by the Consortium for Ocean Leadership, a nonprofit organization representing 94 of the leading public and private ocean research and education institutions, aquaria and industry with the mission to advance research, education and sound ocean policy.

On the day of the competition, Master Naturalists and Texas A&M Galveston (TAMUG) students were ready to volunteer. The high school competitors were ready - many wearing team t-shirts and my favorite – geeky glasses held together with tape in the middle!
The students with buzzers in hand were nervous as were the volunteers. After a practice round, everyone settled in for a long, brain teaser of a day! Finally, Dolphin Challenge was off and running!

Texas Master Naturalist and TAMUG Sea Aggies served as officials during the competition. They were moderators, science judges, rules judges, score keepers, time keepers and runners. Four of the Sea Aggie volunteers for the day were former NOSB participants in high school – now studying ocean sciences at Texas A&M at Galveston.

The Galveston Bay Area Chapter sponsored snacks and goodies for the students. Thank you!

In the final rounds, Sanger High School defeated the team from The Village School, a private school located in Houston! The Rains High School team received the Ralph Rayburn Sportsmanship Award, which is given to the team judged by competition officials to best embody the spirit of earnest competition while demonstrating exemplary decorum and character.

Thank you, Texas Master Naturalists, for making Dolphin Challenge a great success and so memorable for the students! Dolphin Challenge could not have happened without you!

Sea Grant Texas
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Master Naturalist ™

The Midden

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Texas AgriLife Extension Service
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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
May 4th

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

TEXAS A&M AGRILIFE EXTENSION

April and May Activities

ADVANCED TRAINING OPPORTUNITIES

Chapter Meeting - April 2
Our Neighborhood Bats
Presenter: Diana Foss, Urban Wildlife Biologist, TPWD
6:30 Social, 7:00 Presentation, 8:00 business meeting
AgriLife Extension Office 1 Hour AT

Beginning of a three part AT series: Taxonomy, Botany and Plant Id/Taxonomy

Introduction to Taxonomy - April 25
9 am - 12 noon - 3 hours AT - Limit 50 students
Location: Extension Office
Presenter - Nathan Veatch
Register with Emmeline Dodd txdodd@aol.com

Botany - May 14
1:30 - 4 pm - 2.5 hours AT - Limit 50
Location: Extension Office
Presenter - Emmeline Dodd
Register with Emmeline Dodd txdodd@aol.com

League City WaterSmart Park - May 25
9-11 am - 2 hours AT - Limit 20
Location: WaterSmart Park, League City
Presenter - Charriss York, Texas Agrilife/Sea Grant
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: *Cadillac Desert* by Marc Weisner

STEWARDSHIP OPPORTUNITIES

Ongoing Activities:
Tuesdays -

- Sheldon Lake 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

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 - March 31, May 5
2-4 at the Extension Office

Committee Meetings
Communication - May 4
9-Noon at Extension office
Advanced Training - April 20, May 18
10-Noon at Extension office
Education/Outreach - Meets as needed. None currently scheduled.
Stewardship - Meets quarterly. Next meeting to be determined