The Midden

Raptors by Linda Zeller

Galveston Bay Area Chapter - Texas Master Naturalists February 2025

Table of Contents

Next Chapter Meeting

February 6

Time to Restore Texas : Informing Climate-Smart Plantings for Pollinators

By

David Gwin

At Extension Office* and via Zoom

President's Corner by Mary Dobberstine

Happy New Year! There's something special about opening a new calendar with that front cover still springing back closed as if it's not ready for the new year to begin just yet. All those blank pages just sitting and waiting for the possibilities. As a Galveston Bay Area Texas Master Naturalist, our opportunities are varied and plentiful. Have you thought about what this year could bring for you? How about trying something new?

2025 starts off with a bang with the Beach Heroes Student Art Exhibit followed by the Dolphin Challenge, a national high school science quiz bowl that is back after a brief hiatus. Personally, I am excited to dive into the new year leading a New Year's Day hike at Armand Bayou Nature Center, hosting our chapter's annual board planning workshop, supporting the Dolphin Challenge and the Spring training class, and of course, taking part in firefly and bird surveys. New year, new lists – here we go! Heart pumping just thinking about it all!

A dear friend, who is no longer with us, wrote – "Ain't no time like the present, ain't no present like time." It's a beautiful reminder of how precious it is to be outdoors, connecting with nature and with our fellow chapter members and the broader community. I don't take a single moment of it for granted. I'm eager to hear what the year has in store for you, too.

Be sure to mark your calendar for our February 6 chapter meeting. We'll have a speaker who will introduce a citizen science program you could participate in from your own backyard. The project will help scientists study how plant species are responding to climate change, especially with more unpredictable weather patterns. It's a great opportunity for anyone looking for flexible ways to contribute, whether you're juggling work or other commitments.

Photo by Patty Trimingham

Stay connected with us! We've a full year ahead, packed with amazing advanced training opportunities, community outreach, presentations, garden and prairie restorations, and plenty of chances to come together for food, fun and friendship.

Let's make 2025 one for the books!!

Women in Nature: Mary Anning by Meade LeBlanc

Mary Anning almost didn't survive to become internationally known for her discovery of fossils found in the Jurassic marine fossil beds in the cliffs along the English Channel. At 15 months of age, she survived a lightning strike to the tree under which she was sheltering; the family friend holding her, and two other women were killed! The tot survived and was rushed home and revived in a bath of hot water. Family members later declared that Mary, once a sickly child, became lively, intelligent and curious because of the incident.

Image courtesy of Wikimedia Commons

She was born in 1799, one of only two surviving children of the ten born to her father Richard and mother Mary (also known as Molly.) Her brother Joseph was three years older. The other siblings died before reaching the age of five, which was not uncommon at that time. Her father, a cabinetmaker and carpenter, supplemented the family's income by mining the nearby coastal cliff-side fossil beds and selling his finds to tourists. The family lived so near to the sea that the same storms that swept along the cliffs to reveal the fossils sometimes flooded the Anning home. On one occasion they were forced to crawl out of an upstairs bedroom window to avoid drowning.

From an early age, Mary collected fossils with her father and brother, which they sold at a table outside their home. Many of the locals did the same, selling what were called "curios" to visitors, with names like "snakestones" (ammonites), "devil's fingers" (belemnites), and "verteberries" (vertebrae). Fossil collections were very popular as a pastime, especially among the wealthy English gentry. Most people still believed in a literal interpretation of Genesis, that the Earth was only a few thousand years old, and that species did not evolve or become extinct. Paleontology was not yet a science, and the connection between fossils and biology was not understood.

The cliffs are part of a geological formation known as the Blue Lias, one of the richest fossil locations in Britain. It consists of alternating layers of limestone and shale, laid down as sediment on a shallow seabed early in the Jurassic period, about 210–195 million years ago. However, the cliffs could be dangerously unstable, especially in winter when rain weakened them, causing landslides. It was during those times that collectors visited because the landslides often exposed new fossils.

Richard Anning died of injuries suffered from a fall from a cliff in 1810, when Mary was just 11. He left no savings. The family continued to collect and sell fossils. Molly set up a table of curiosities near the coach stop at a local inn.

The next year the brother and sister made their first well-known find. Joseph dug up a 4-foot ichthyosaur skull, and a few months later Mary found the rest of the skeleton. The find changed hands a few times before finally landing on display at the British Museum in London as a "Crocodile in a Fossil State"

By the 1820s, Mary was running the family business; her brother had been apprenticed to an upholsterer. She mainly sold ammonite and belemnite shells and other invertebrate fossils common in the area. Vertebrate fossils, such as ichthyosaur skeletons, were much rarer, and collecting them was dangerous winter work. One day she nearly died in a landslide that killed her terrier that had been standing nearby.

In 1823, an article in *The Bristol Mirror* said of her: "This persevering female has for years gone daily in search of fossil remains of importance at every tide, for many miles under the hanging cliffs at Lyme, whose fallen masses are her immediate object, as they alone contain these valuable relics of a former world, which must be snatched at the moment of their fall, at the continual risk of being crushed by the half suspended fragments they leave behind, or be left to be destroyed by the returning tide: – to her exertions we owe nearly all the fine specimens of Ichthyosauri of the great collections …"

Mary's reputation grew as she continued to make important finds. In 1823 she discovered the first complete Plesiosaurus found in Britain. Then, in 1828, she found the first pterosaur found outside Germany - called a flying dragon; it was displayed at the British Museum. She followed that discovery in 1829 by finding a specimen of Squalaraja, an extinct shark-skate.

In 1826, at age 27, Mary had saved enough money to purchase a house with a glass store-front window for her shop, Anning's Fossil Depot, visited by many geologists and fossil collectors from Europe and America. She sold fossils to places as far as the New York Lyceum of Natural History. King Frederick Augustus II of Saxony visited her shop in 1844 and purchased an ichthyosaur skeleton for his private natural history collection. In addition, Mary led fossil-collecting excursions for geologists. Experts sought her out for her thoughts about anatomy and classification.

She often knew more about fossils and geology than the wealthy fossilists to whom she sold specimens. But as a woman, Mary was an outsider to the scientific community. At that time in Britain, women were not allowed to vote, attend university or hold public office. The newly formed Geological Society of London did not allow women to become members, or even to attend meetings. Male geologists published the scientific papers and descriptions, usually neglecting to mention her name. For example, Mary discovered yet another nearly complete plesiosaur skeleton in 1830. It was named *Plesiosaurus macrocephalus* by William Buckland and described in an 1840 paper by Richard Owen, who mentioned the wealthy gentleman who had purchased the fossil and made it available for examination, but not the woman who had discovered and prepared it.

In 1846, she received official recognition. Diagnosed with breast cancer, the Geological Society raised funds to help with her expenses and the newly created Dorset County Museum made Mary an honorary member. After she died, the Geological Society contributed to a stained-glass window in her memory, which was unveiled in 1850. It depicts the six corporal acts of mercy—feeding the hungry, giving drink to the thirsty, clothing the naked, sheltering the homeless, visiting prisoners and the sick, and the inscription reads: "This window is sacred to the memory of Mary Anning of this parish, who died 9 March AD 1847 and is erected by the vicar and some members of the Geological Society of London in commemoration of her usefulness in furthering the science of geology, as also of her benevolence of heart and integrity of life."

In 2010, 163 years after her death, the Royal Society included Mary in a list of the ten British women who have most influenced the history of science. She was recognized for her discoveries that became key pieces of evidence for extinction. The ichthyosaurs, plesiosaurs, and pterosaur she found, along with the first dinosaur fossils which were discovered by others during the same period, showed that there had been an "age of reptiles" which were the dominant form of animal life on earth before the age of mammals.

2025 Board of Directors

Elected	
President	Mary Dobberstine
Vice President	Jenny Dudley
Treasurer	Meade LeBlanc
Secretary	Lisa Hardcastle
Past President	Gene Fisseler

Training Class Representatives	
Spring 2024 Class	Denise Correll
	Terri Bell

More information can be found at http://txmn.org/gbmn/board-of-directors/ .

Appointed positions are tentative until the January 25 Board Meeting.

Appointed	
Advanced Training (AT) Director	Robin Novak
Class Director	Julie Massey
Communications Director	Mary Dobberstine
Justice, Equity, Diversity, and Inclusion Director	Mohammed Nasrullah
Membership Director	Tracy Walpole
State Chapter Rep.	Mary Dobberstine
Volunteer Service (VS) Projects Director	Sharon Tirpak
Sponsor	Brandi Keller

Silent swimmers glide,
Paths untraced through mystery.
Homeward, sea turtles.

By Jane Downs

Writings about Texas Geology by Diane Humes

In 1845, Carl Ferdinand von Roemer, a university-trained geologist, traveled to the Republic of Texas to survey its mineral resources, at the request of Prince Carl of Solms-Braunfels, who was recruiting German colonists to settle in what we call the Hill Country - around New Braunfels and Fredericksburg - and wanted Roemer to learn as much as possible about its prospects.

He spent a year and a half traversing the hills with his mule, which he called the “Scientific Mule”, to carry his gear and instruments. It was said of Roemer - age 27 when he arrived in Texas - that he was a "young man who neglected his toilet, ate voraciously, loved his cognac, had no teeth, always had a cigar in his mouth, and was forever poking about in the mud of Texas rivers.” J. Frank Dobie said that Roemer “saw more and told more about {Texas}…than anyone between Cabeza de Vaca and Frederick Law Olmsted.”

Roemer produced the first geologic map of Texas, with clear delineation of topography and rock types - five geological strata, including granite, chalk, Paleozoic rocks, coal seams, tertiary rocks plus alluvial deposits - "the best account available of the Texas frontier at that time.” He is considered the Father of Texas Geology and was friends in New Braunfels with Ferdinand Lindheimer, the Father of Texas Botany. What a time it must have been!

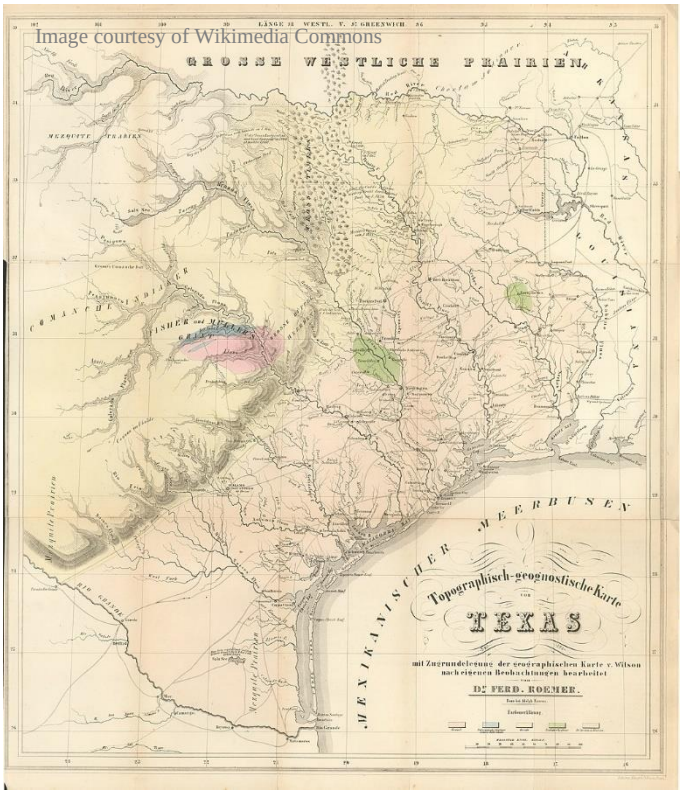
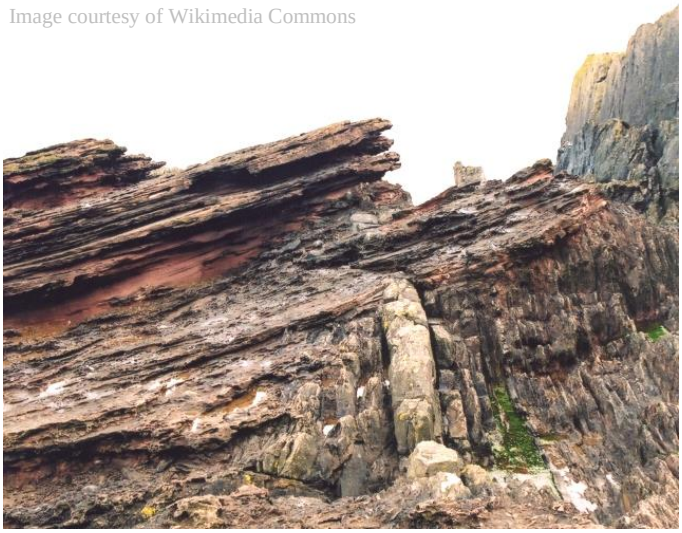


Image courtesy of Wikimedia Commons

Geology is a relatively new science, as of this writing barely over 200 years old, since James Hutton published his observations in *Theory of the Earth* in 1788. Hutton described the continuous cycle of rock erosion into the sea, compaction into bedrock and upthrust by volcanoes, during long periods of time. He is famous for his insight into the cliffs at Siccar Point (Scotland) where vertical layers of gray shale are overlain by horizontal layers of red sandstone, which could only be explained by stupendous forces of uplift and erosion over vast time.

Image courtesy of Wikimedia Commons



The boundary between these rocks is now called the Hutton Unconformity.

Hutton was followed in 1830 by Charles Lyell with his publication of *Principles of Geology,* furthering the thoughts about time and geological processes. A young Charles Darwin took a copy of Lyell’s book with him on his five-year journey on the *Beagle*; he intuited the incredible age of the Earth but could not prove it. Certainly, Carl Roemer was also familiar with these works in 1845 on his travels through Texas, just before it became the 28th state.

The prevailing theory was “uniformitarianism”, the belief that the rocks and mountains were ageless and the processes building them remained constant through time. But, almost 200 years later, what has changed with geology and Texas?

Since Hutton's great insight, probably eight or more generations of geologists have mapped rocks - across the globe - and learned about isotopes and radioactive dating, greatly expanding the known age of the Earth to 4.54 billion years. Mountains have had LOTS of time to grow and erode, but it has not always been a slow process. In 1963 the volcanic island of Surtsey

spectacularly rose out of the sea, witnessed by scientists and television crews. The news of its growth, colonization by plants and animals went global; Surtsey is now eroding and will most likely sink back into the Atlantic within the lifetime of many of us!

Also, geologists have discovered that our Earth's continents have changed positions a lot, roaming the planet, crashing into each other and being pulled apart, leaving folded and mashed up rocks as evidence. Contrary to past beliefs, planetary (and other) forces can also act suddenly and catastrophically on our planet, forcing all life to adapt and change or die. Earth is thought to have had five mass extinction events marked by sudden disappearances of species from the fossil record.

The first extinction, between the Ordovician and Silurian periods 445 - 444 million years ago, is thought to have been caused by global warming, volcanism and anoxia. After this event 27% of all families, 57% of all genera and 85% of all species vanished from the fossil record.

The second event, 372-359 million years ago, wiped out fish and most ammonoids during the Late Devonian - 19% of all families, 50% of all genera, and 70% of all species.

The "Great Dying" occurred 252 million years ago between the Permian and Triassic periods, resulting in loss of 53% of marine families, 84% marine genera, and 81% of marine species, including trilobites AND 71% of terrestrial vertebrates and insects.

Living creatures endured a fourth event 201.3 million years ago that killed off 23% of families, 48% of genera and 70-75% of all species between the Triassic and Jurassic periods.

The fifth mass extinction, 66 million years ago, had a cosmic cause marked world-wide by deposits of the element iridium - uncommon on Earth, but more abundant in rocks from outer space - and is correlated with the meteor impact crater found off the Yucatan Peninsula near the village of Chicxulub. Formerly labeled the K-T Boundary, for Cretaceous-Tertiary, it is now called the Cretaceous -Paleogene (K-Pg) extinction. Following this impact, 17% of all families, 50% of all genera, and 75% of all species disappear from the fossil record, including all ammonites, plesiosaurs and mosasaurs. Only the avian dinosaurs survived.

The closer you are on Earth to Chicxulub, the thicker the iridium layer is, if you can find the proper stratigraphy. As it happens, in Texas, you can along the Brazos River in Falls County. For bragging rights, this is the best location in the U.S, to see evidence of the dinosaur-killing event. Let me know if you would like to take a field trip!

I recently had the opportunity to tag along on a Hill Country geology field trip - out of flat coastal sand and mud (the debris of mountains) and into the hills. Driving in our air-conditioned cars - no "Scientific Mules" for us - I thought the road cuts so thoughtfully placed by the highway department surely made our explorations easier than Roemer's. However, as I learned, we could ONLY visit the roadcuts, because nearly everything else is private property now. Also, a lot of the topography has changed since Roemer's time with reservoirs, cities, mines - signs of civilization everywhere and, unlike mules, cars do need roads.

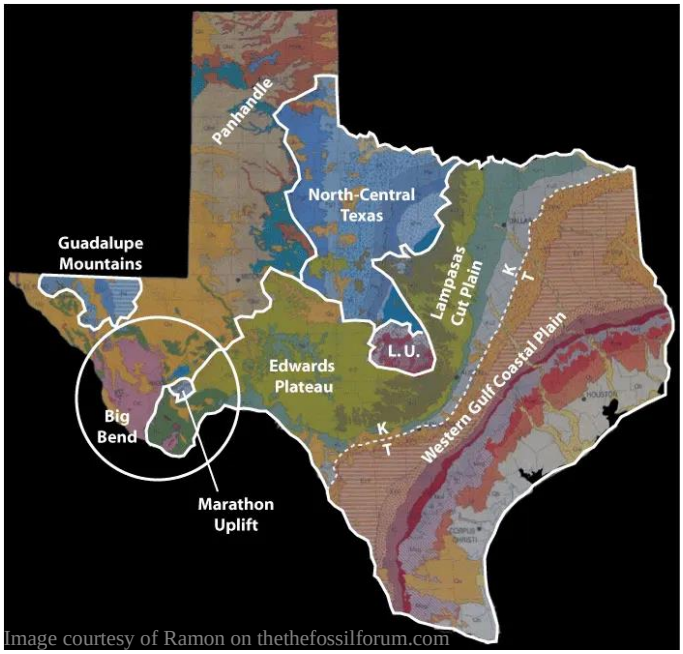


Image courtesy of Ramon on thethefossilforum.com

The world looks different where you can see rocks and hills, instead of living on the flat beds of their debris. Plants change; our state grass, side oats grama, (*Bouteloua curtipendula*) grew everywhere west of Austin - just one indication that we had changed our location. And it is a great puzzle to look at the rocks across time and space - especially time - to figure out what the layering, folding, stacking, thrusting, tilting and twisting mean.

Excepting Surtsey's sudden rise from the Atlantic Ocean, no geologists have been around to observe any of these events. All that we think we know is the result of careful and thoughtful study of the Earth. While considering the rocks, remember Aldo Leopold's admonishment to, "Think like a mountain." He knew that we humans are part of nature - not separate or above it, although we do not always believe it. Not as powerful or fast-acting as large meteors, humans are capable of monumental changes to our planet. We even move mountains! We should be sure the results are worth the price - to us and all creation.

Invasive spotlight: Common or House Sparrow by Madeleine K. Barnes

I enjoy watching the small birds that visit my backyard, observing their behaviors and interactions. There is often an invader in the group that may be blending in with the native sparrows in your yard, too. The spotlight this time is on one of the more prolific invasive bird species, the Common or House Sparrow. Let's look at the specifics:

Species*: Passer domesticus*
Common name: Common Sparrow, or House Sparrow
Class: Aves
Order: Passeriformes
Family: Passeridae

If you are looking around at a flock of sparrows, look for a plumper, broader-chested bird with a shorter tail, a larger rounded head and a stouter beak in comparison. House Sparrows are insectivorous (insect-eating) and granivorous (grain-eating) songbirds. They have adapted conical beaks and a specialized bone in their tongues that helps them eat seeds efficiently. The males may have gray heads, black breast and white cheeks along with a rufous neck. In urban areas, males tend to be drabber looking. Females are brown or gray in coloring.

Photo by Martin Molina

House Sparrows can breed at any time of year, commonly during March to August. The female lays 1-8 eggs in a clutch and incubates them for 10-14 days. The young remain for another 10-14 days in the nest after hatching. Hatchlings emerge from the egg naked and blind, so are totally dependent on their parents. The average lifespan can range from 2-5 years, but some have lived 13 or more years in the wild. Common Sparrows are not closely related to native species and got their name because they tend to nest in buildings, homes, and man-made structures, close to people and our activities.

Common Sparrows have a significant negative environmental impact on native species. They aggressively out-compete native birds for nesting sites, often evicting adults and destroying their eggs or killing nestlings. They dominate food resources, which limits food availability for native species, and have caused population declines in bluebirds, chickadees, tree swallows, cave swallows, and some woodpeckers. By dominating nesting sites and food sources, House Sparrows can significantly disrupt the balance of native bird communities. In urban environments, they can become a nuisance creating large roosts and excessive droppings. In agricultural areas, they can damage crops by consuming seeds.

Native to Eurasia, northern Africa, and most of Europe, Common Sparrows have been in the U.S. since 1851, when they were introduced in Brooklyn as a control method to decrease Linden looper moth populations. They became widely abundant and have spread from coast to coast and are currently found in 48 states.

In Texas, there are 28-33 native sparrow species and two invasive sparrow species, the Eurasian Tree Sparrow, (*Passer montanus)*, and the Common Sparrow. There are no management plans for these species currently.

I hope this has given you a brief look at another one of the invasive species impacting our natural resources. It certainly has made me more aware of how dominant and numerous they are in the environment. Learn and share the knowledge.

A Good Year for Wild Texas Cats by Nicole Cloutier-Lemasters

It's not often there is good news to report regarding Texas wildlife, but thankfully, 2024 brought positive developments for two of the state's iconic species - mountain lions and ocelots.

As Texas Master Naturalists may recall from Monica Morrison's presentation in 2023, mountain lions in Texas have been and remain classified as a nongame species, which affords them no legal protection. They could be hunted and trapped without monitoring. Canned hunts (a captive mountain lion is released for the sole purpose of being hunted) were legal and there was no requirement to report harvesting. After many years of trying to change some of these policies by mountain lion proponents, the

Texas Parks and Wildlife Commission approved two new regulations to help better monitor and regulate the impacts on these cats.


Photo by Justin Shoemaker/USFWS

As of September 1, 2024, there is a ban on canned hunting of mountain lions and a requirement mandating 36-hour trap checks. Quickly following, TPWD added voluntary harvest (mortality) reporting via its hunting and fishing mobile app. (You can see the TPWD press release for more details on the app here: https://tpwd.texas.gov/newsmedia/releases/?req=20241125a)

The Commissioners also agreed to begin a research program to better understand mountain lion populations throughout the state. Those interested in learning more can watch the TPWD Commissioners meeting where this issue was discussed at this link (https://www.youtube.com/watch?v=UcVPa2LvUT4) (*The presentation starts at the 43-minute mark with Richard Heilbrun presenting Work Session – Item 6 "*Banning Canned Hunts and Establishing Trapping Standards for Mountain Lions.")*

Texas' endangered ocelots were also the beneficiaries of good news. With an estimated state population of fewer than 100 cats, much is being done to bolster their numbers.

Texas A&M-Kingsville (TAMUK) has started work on the new state-of-the-art Ocelot Conservation Facility, following last year's award of a $12 million grant to TAMUK for ocelot research, protection and recovery. Key to that effort is a captive breeding program that will require important collaboration with private landowners who will allow the bred ocelots to be released on their lands as part of a unique safe harbor agreement. Much work lies ahead, but if the target population of 200 cats can be successfully maintained for at least 10 years, the ocelots would be considered recovered in Texas - no longer endangered. You can follow along with these exciting developments at Recover Texas Ocelots.


Photo courtesy of USFWS

Texas Native Cats (TxNC) remains active with numerous outreach events and presentations throughout the state and virtually. With a growing list of requests, TxNC welcomes those interested in volunteering. For information, please contact TxNC founder and director, Monica Morrison at Monica@TexasNativeCats.org.

TxNC hosted a virtual presentation on January 12, titled, *Cats on the Brink: Ocelot Conservation in South Texas* featuring guest speaker Amanda Veals Dutt, PhD.

Ocelots are an endangered species in the United States with the only known breeding populations occurring in southern Texas. Decades of research and conservation efforts have been undertaken to save this charismatic cat. Dr. Amanda Veals Dutt discussed some of the past research and what the future for ocelots looks like in Texas.

Amanda graduated in 2014 with a BS in Ecology and Evolutionary Biology from University of Arizona and assisted on several carnivore research projects and worked in Namibia on caracals (African lynx), where her passion for carnivore conservation and management began. Amanda completed her PhD in Wildlife Sciences from Texas A&M University-Kingsville with the Caesar Kleberg Wildlife Research Institute in 2021. Her dissertation focused on the endangered ocelot and reducing road mortalities.

For more information about Texas' wild cats, research and resources, please visit TexasNativeCats.org.

Seed

Falling, floating, bounce,
Land on dirt, rock, or water.
Promise of rebirth.

By Madeleine K. Barnes

A Different Sort of Plague by Dorothy Hogg

Great-tailed Grackles or Mexican Grackles (*Quiscalus mexicanus*) are featured in native myths passed down through generations in the tropical lowlands of Venezuela and Columbia, Central America and southern coastal Mexico. Their known range extended as far north as the current Mexican state of Veracruz in the 1400's. An amazing document, unearthed and intricately researched by Paul D. Haemig, contains a remarkable report about this bird written in 1577 by Spanish scholars in Mexico, reporting that the Aztec ruler, Ahuitzotl, enamored of the brilliant black and blue-purple iridescent feathers of the male birds, imported these grackles from the Veracruz coastal lowland to the Aztec capital of Tenochtitlan (now Mexico City) between 1486 and 1502. He bred pairs in captivity for several years and released flocks into the city with a royal decree that they were to be revered by the populace and not harmed in any way.

Aztec records confirm that the birds thrived in the city for nearly 20 years. References to them cease in 1521; instead, the chronicles record the catastrophic arrival of Hernando Cortez and decimation of the native human population. What happened to the imported birds is unknown.

However, a slow and steady acceleration in a northward expansion of the grackle range and population began following the Spanish invasion and settlement. These social, aggressive and intelligent birds are particularly, and possibly uniquely, adaptable to human changes to the natural environment. They followed the northward expansion and environmental changes wrought by agriculture, irrigation and urbanization. They went forth and multiplied in the human bounty they found.

Photo by Charles J. Sharp via Wikimedia Commons

By 1865, Great-tailed Grackles had arrived in Corpus Christi, Texas. Breeding pairs were reported in San Antonio in 1890, and in Austin by 1909. As farming, ranching and urbanization spread, so did the grackles, moving west into New Mexico, Arizona and California. During the 1960's, they moved east into Louisiana. Walter Wehtje reported in the *Journal of Biogeography* (2003*)* that between 1880 and 2000, the range of Great-tailed Grackles expanded from about 64 thousand square kilometers to more than 3.5 million square kilometers - an increase of 5,530%. He found they were residents in 17 states, and migrants in 3. By 2023, they were reported as residents or migrants in 23 states and 2 provinces of Canada.

Great-tailed Grackles are medium-sized, intelligent, extremely adaptable, aggressive and hard-core omnivores. They socialize in large flocks numbering many thousands of individuals. The large flocks divide into smaller flocks to forage during the day, but regather at night to roost on wires, even though many more trees or empty wires may be nearby. They become raucous, extremely loud and quarrelsome as they settle in for the night. They tend to roost in the same areas and leave large quantities of feces behind every morning. The common name for a flock of grackles is a "plague." In Austin, some people call it an "annoyance".

Their natural foraging habitat preference is open areas, not especially large, with nearby trees or other elevated perches and a clear line of sight of just a few hundred feet to best spot predator danger from above and below. In a pristine natural habitat, they forage in grasslands where scattered trees are present, in salt- and fresh-water marshes, and at the cleared edges of wooded areas, but not in dense forest.

With human encroachment on these pristine areas, farm and ranch land becomes ideal foraging, roosting and nesting habitat. Although not the only birds to take advantage of plowed and planted fields, Great-tailed Grackles take full advantage of all potential foodstuffs available on farmland and any adjacent wetland or pond. These include seeds, grains, fruit, berries, insects, worms, spiders, rodents, reptiles, tadpoles, small fish, small birds, birds' eggs and fledglings, and roadkill. They also enjoy feedlots, where they eat wasted grain, abundant insects, and even parasites residing on the livestock.

Great-tailed Grackles have adapted well to urban areas; with their near total indifference to human presence, they occupy a niche unoccupied by any birds other than pigeons in city parks or seagulls on beaches.

They have discovered a cornucopia of edibles in city parks, home landscapes and garbage dumps, and the parking lots surrounding supermarkets, big box stores and fast-food restaurants. Occasional landscape trees,

light poles, wires or even the tops of cars provide the necessary high perches. Stands of trees in parks and neighborhoods provide breeding and nesting territory. Predators are rare in urban landscapes and skittering out of the way of cars appears to be second nature to the grackles. Bird feeders, dumpsters, garbage cans, insects, vermin, lizards – the urban menu is essentially endless.

Here's a timeline, showing events and statistics in the USA, which may help explain grackle expansion.

1917 – 1st successful (John Deere) gasoline powered farm tractor
2023 – 878.6 million acres of farmland

1950's – 1st cattle feedlots
2024 – 26,586 cattle feedlots

1916 – 1st grocery store (Piggly Wiggly)
2023 – 62,383 grocery stores/Supermarkets

1962 – 1st Walmart
2024 – 4,606 Walmart stores

1953 – 1st fast-food (McDonald's) franchise
2023 – 207,827 fast food restaurants (50,000 chains)

Correlation is not causation, but the common denominator does seem to be human-induced environmental change. Makes sense?

Sylvan Beach Hawk Watch by Diane Humes

Please join chapter members on February 19, 2025, at 6:00pm for our annual training/refresher about all things raptor. Lynn and John Wright will conduct the training via Zoom.

Raptors are birds of prey, fiercer than your average songbird, with strong claws and beaks. Many of them undertake long-distance migrations twice each year, chasing summer, to breed in the northern hemisphere summer and return to the southern hemisphere before the northern winter begins. The journey is arduous, and we humans are trying to understand how they do it by watching, counting and tracking their movements and the weather as best we can.

You cannot understand the thrill of seeing thousands of birds filling the sky, flying north, unless you see it. If you never look up, you won't even know they are there - right over your head!

Members of our chapter volunteer to count raptors at Sylvan Beach Hawk Watch in LaPorte, TX every day from March 1 - April 30. We note hourly temperature, wind speed and direction, cloud cover and height and direction of flight, if birds are present. And, of course, we count and try to identify all that we see.

This year, 2025, marks the 30th season of hawk watch, started in 1996 by our chapter's founder, Dick Benoit. Probably he knew he couldn't do it all by himself and we are better for learning how to help.

Many hawk watch sites report data, including ours, to the hawkcount.org repository, sponsored by HMANA (Hawk Migration Association of North America), which has recently celebrated its 50th anniversary and changed its name to the Hawk Migration Association.

Lynn Wright has been entering Dick's oldest data; the earliest dates on hawk counts are from 2003. On April 10, 2003, Bill Saulmon and Dick recorded seeing 2659 Broad-winged Hawks and 19 Mississippi Kites flying at Sylvan Beach. I know that was a thrill, because not all days are like that. Attend the training and try the hawk watch - it can be very exciting!

Greater Roadrunner 2025 Pin by Diane Humes

Our 2025 re-certification pin represents the Greater Roadrunner, (*Geococcyx californianus)*, a year-round Texas resident, recorded in all counties, but most common in the Chihuahuan Desert regions of the west and South Texas brush lands and extending into Mexico along with the Lesser Roadrunner, (*Geococcyx velox*).

Roadrunners share many characteristics with members of the worldwide order of cuckoos, Cuculiformes, with 139 species in 36 genera. Most cuckoo species are strong fliers, live in forests and are often brood parasites; however, roadrunners are ground-dwelling birds, weak fliers, strong runners that nest and roost in small trees or shrubs and adults build nests and care for their young. They share many distinctive characteristics with all cuckoos, but they are most closely related to the New World ground cuckoos and anis.

Characteristics of all Cuculiformes:

- Long, stout, downward-curving bills
- Long, slender tail with white spots on tips of tail feathers
- Zygodactyl foot - two toes point forward, two points back
- Naked, two-lobed oil gland at tip of tail bone
- Bare patch of skin, usually colored, behind eye
- Drab plumage, often streaked
- Eyelashes
- Look-alike sexes
- Hatchlings naked or with sparse, hairlike strands on body

Greater Roadrunners are the largest cuckoos of the Americas - slender birds, about two feet long, with a similar wingspan, standing about one foot tall on long legs. Their body feathers are mostly brown with black streaks, with white bellies and a crest of brown feathers on the head. There is a bare patch of skin behind each eye with orange and blue skin - often hard to see - and males have white instead of blue near the eyes. Males and females have identical plumage, but females may be slightly smaller and lighter. Their beaks are stout, long and grayish with a hooked tip. Their zygodactyl feet are brown with pale gold spots.

Roadrunners can fly but spend most of their time on the ground. They can run 20 mph or more over long distances, keeping head and tail parallel to the ground and using the tail as a rudder. They prefer to run on roads, packed trails and dry riverbeds instead of through dense vegetation. They are diurnal, non-migratory and do not stray terribly far from their territory.

No songbirds, roadrunner vocalizations are variations of “cooing” or “chattering” and “squealing” or “groaning”, often heard during incubation and rearing of chicks. Their long breeding season can last from March until September, with mated pairs rearing as many as three clutches of up to 10 eggs. This is a huge effort: both parents construct the nest - a compact platform 3-10 feet above the ground and feed each other and the chicks, while also protecting the nest from intruders. Males sit on the nest at night and females during daylight. They may begin a second nest before the first chicks are fully fledged, doubling the work!


Photo by Dominic Sherony via Wikimedia Commons

Greater Roadrunners are omnivorous and opportunistic, eating insects, spiders (including black widows, scorpions and tarantulas!) centipedes, mice, small birds, lizards and snakes - even venomous western diamondbacks and coral snakes. They use their speed to outrun and catch their prey and are not above eating carrion and some plants.

Fossil evidence shows that Greater Roadrunners formerly lived in cooler forested habitats. Now adapted to a warmer, drier climate, they require open woods; they never occur in continuous tall grass, closed woodlands, desert scrub monocultures, or large wetland complexes. However, since human settlement in the last century and a half, they have dramatically expanded their range; as settlers move west, roadrunners moved east and north into the cleared open ground.

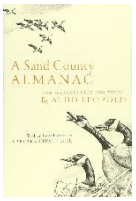
Interestingly, the roadrunner range expansion parallels that of the Nine-Banded Armadillo (*Dasypus novemcinctus*) (State Small Mammal of Texas and 2014

re-cert pin) and its expansion north and east. Both species have similar dietary and physiological requirements and seem to be taking advantage of human-induced changes on the land of Texas.

The 2025 re-cert pin will be a worthy and interesting addition to your collection; earn it as quickly as you can and wear it with pride. Remember, greater roadrunners kill and eat Western Diamondback Rattlesnakes (*Crotalus atrox*) (2024 re-cert pin) for breakfast!

Heritage Book Study by T J Fox

Happy New Year from your Heritage Book Study Group.



In February we begin a two-month discussion of Aldo Leopold's *A Sand County Almanac*. This is my second time reading this classic. My first reading was in 2000, the year I became a Texas Master Naturalist. My thoughts were "nice book." I shelved the book and went on to more interesting activities. Now reading it for a second time more than twenty years later, I cannot believe how much my involvement with the Master Naturalist program has changed my view of the world. This time. I find the book not only well written and entertaining but so thought provoking.

Leopold's ability to closely observe nature and then understand and describe what he has seen leaves me wanting to read more. To say that he has a "way with words" is a major understatement. His description of the commitment migrating geese make to the return of spring in Wisconsin is so vivid you can easily visualize the event. Leopold describes their commitment thusly "A migrating goose who stakes two hundred miles of black night on the hope of finding a hole in the lake ice come morning, has no easy chance for retreat. His arrival carries the conviction of a prophet who has burned his bridges." WOW!!

Please read this book and if you would like to join our discussion group send me an email to mailto:tj.fox39@gmail.com. You'll be sent a link to our Zoom meeting on February 3 at 1pm. We meet on the first Monday of every month. I will also send you a copy of our 2025 reading list.

If you join us after reading the book three things will follow. First, you will have been thoroughly entertained. Second, you will be part of a lively discussion of its contents and thirdly, you will earn A/T hours.

We look forward to seeing you.

***The Midden* Deadline**
for the next issue

March 3

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: https://txmn.org/gbmn/ 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 the extension office at 281-534-3413.

Midden Team

Diane Humes, Editor	Madeleine K. Barnes
Verva Densmore	Sheron Evans
Rebekah Gano	Meade LeBlanc
Carolyn Miles	Chuck Snyder

World Wetlands Day

2 February 2025

Protecting wetlands for our common future

February and March Activities

ADVANCED TRAINING OPPORTUNITIES

Chapter Meeting – February 6; Time to Restore Texas : Informing Climate-Smart Plantings for Pollinators
Presenter: David Gwin
6pm Social, 6:30pm Meeting, 7pm Speaker
At Extension Office* and via Zoom; 1 hour AT

Whooping Cranes: Past, Present, and Future
Tuesday, February 11 at 6pm via Zoom
Presenter: Ray Kirkwood

Diurnal Raptors
Wednesday, February 19 at 6pm via Zoom
Presenter: Lynn and John Wright

Bluebirds
Thursday, March 6 at 6pm via Zoom
Presenter: Ralph Faxel

Vultures
Monday, March 31 at 2pm via Zoom
Presenter: Mary Swartz

Ongoing

Heritage Book Study Group
First Monday of every month via Zoom
2 hours AT ;Contact: T J Fox
See Pg. 11 for meeting dates and books.

STEWARDSHIP OPPORTUNITIES

For a complete list of stewardship activities, see our chapter website, https://txmn.org/gbmn/what-we-do/.

EDUCATION - OUTREACH OPPORTUNITIES

For a complete list of education - outreach activities see our chapter website, https://txmn.org/gbmn/what-we-do/.

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.

CHAPTER INFORMATION AND RESOURCES

Calendar - https://txmn.org/gbmn/events/month/ Includes meetings, AT and volunteer activities

Board - https://txmn.org/gbmn/board-of-directors/ Contact information for the Board of Directors. **Board Meetings** – usually first Tuesday of each month (via Zoom), verify on the calendar

Committees - https://txmn.org/gbmn/board-of-directors/ Contact information for the Committee Chairs

Volunteer Service - https://txmn.org/gbmn/volunteer-service/ Volunteer Opportunities

Advanced Training - https://txmn.org/gbmn/advanced-training/

Midden Archives - https://txmn.org/gbmn/ Go to The Midden on the top menu.

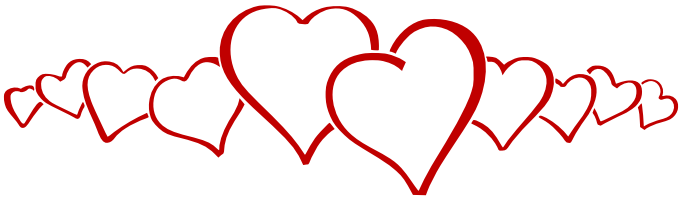
Facebook - https://www.facebook.com/gbactmn

TEXAS A&M AGRILIFE EXTENSION

Sea Grant Texas
Science At Work For Texans
http://TexasSeaGrant.org

Master Naturalist℠

Our 120th Midden Issue!



*Extension Office = Texas A&M AgriLife Extension Service – Galveston County Office (Carbide Park)