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RGV TEXAS MASTER NATURALISTS

THIS CHAPTER IS AN AFFILIATE OF THE TEXAS MASTER NATURALIST PROGRAM JOINTLY SPONSORED BY TEXAS AGRILIFE EXTENSION AND THE TEXAS PARKS & WILDLIFE DEPARTMENT.

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TEXAS MASTER NATURALISTS RIO GRANDE VALLEY CHAPTER

A Letter From Your President

Hello Fellow Master Naturalists,

Welcome to our 2020 winter class Graduates!

I hope this mail finds everyone well and ready for the warm sunny days of summer ahead. There will be a bunch of them.

Many of us have been on voluntary quarantine without social contact for quite a while trying to avoid contracting..... "The virus ".

So here we all are, antsy to get back out there, and do what we enjoy. Nevertheless, things are going to change and we have to adapt to those changes just like all the creatures and things in the natural world! Going forward to our meetings, volunteer ops, classes, how we participate in everything may change on a daily basis.

Most of our partners are open again and needing volunteers. However, each of them may have different criteria depending on their location and other factors. It is up to us as individuals to check with each of them as the guidelines sometimes change daily.

TURTLE INC, SPI BIRDING CENTER, RESACA DE LA PALMA, ESTERO LLANO, SABAL PALM SANTUARY, FISHING, HIKING, BOATING, PHOTOGRAPHY. Our RAMSEY PARK VOLUNTEERS are always there every Thursday, keeping the area in great shape. Go pull some weeds! If you feel like it, get out and do something, make sure you wear your mask and practice the protocols.

Barb Peet and husband Robert have been experimenting with virtual meeting platforms. We have had a couple of virtual Board meetings and the goal is to have virtual membership meetings ASAP. The classroom at the Cameron County Complex in San Benito is presently unavailable to us, and we do not know if it will be available in the future. Therefore, in an abundance of caution New Class Director, Richard Loya and his committee are presently working on a contingency plan to offer a class in some form or another as soon as we are permitted to do so.

Our chapter has three people that approve the volunteer hours submitted by our members. All three of those folks are just sitting there on their hands right now waiting for you to send them something to approve.

Everyone please, let's all take care of each other!

Larry Johnson



Roseate Spoonbill by L. Johnson TMN

OYSTERS - NATURE'S WATER FILTERS

P. Jack Austin STMN, Border Chapter

Did you know that oysters are not only good to eat, but also help the marine environment in many ways? Wild oysters tend to latch on to the shells of other oysters, as well as to rocks, concrete structures or other hard surfaces. In many places, huge colonies of oysters form large reefs which serve as shelter areas for young fish, crabs, shrimp and other marine creatures. Oysters feed by filtering food out of the water they take in through their gills. They feed mostly on phytoplankton but also take in nutrients, suspended sediment and contaminants. The contaminants become solidified as they go through the oyster's digestive track and are ultimately expelled where they become harmless elements of the sea bottom. It has been determined that one adult oyster can filter up to fifty gallons of water per day. Therefore oysters, whether growing wild on reefs or raised commercially in suspended cages, are not only good to eat and provide a good source of jobs, they are also helpful to our marine environment.

The Eastern Oyster (*Crassostrea Virginica*) was once plentiful in the Gulf of Mexico as well as along the entire Atlantic coast. I grew up along a tributary of the Chesapeake Bay in Virginia and remember the thriving oyster industry that existed in my small riverside community. Of course this was during the latter part of the 20th century, before disease, over harvesting



Raw Oyster Photo by Tony Reisinger

and pollution devastated Chesapeake Bay oysters. As the Atlantic Coast oysters declined, the Gulf Coast became the nation's top producer of oysters. The water in most parts of the Gulf had a lower salinity level than the Atlantic coast but the fresher and warmer waters in the Gulf grew large, meaty oysters. The oyster industry in Mississippi and Louisiana thrived during the latter half of the 20th century. However, some of the same factors that hit the Atlantic coastal

oysters eventually attacked oysters in the Gulf where there was the added problem of too much fresh water at times when hurricanes and flooding greatly lowered the salinity.

Some areas along the Gulf Coast also had problems with silting resulting from erosion along the shore lines. The resulting decline of wild oysters in the Gulf led to research into oyster farming methods and today there is a thriving mariculture industry in many areas of the Gulf. This has led to both a new source of jobs as well as a positive impact on the Gulf ecosystem. The demand for oysters has not only been sustained, but according to statistics kept by NOAA Fisheries, the demand has actually increased in recent years. In 2016, the Gulf region produced the greatest harvest of oysters in the US; this harvest amounted to \$90 million in revenues.

In Texas, native oysters have declined in recent years due to many factors, among them being disease, over harvesting and silting caused by dredging channels for ships and larger pleasure craft. However, until Texas passed a law in 2019 to permit oyster farming (mariculture), it was illegal to introduce farm raised oysters into Texas waters. The delay is thought to involve concern about how the introduction of farm raised seed oysters might affect the native oyster population in the southern waters of Texas where the natives are genetically different from oysters that inhabit the northern Gulf shores. Texas is now preparing to encourage oyster farming when the regulations are approved and a source of seed oysters can be developed that will genetically be compatible with the wild oysters found in South Texas.

I contacted Tony Reisinger at Texas Sea Grant, who is a marine biologist and has previously worked on oyster research and restoration in Georgia before moving to Texas. I asked why it seems to be taking a long time for Texas to follow most other Gulf Coast states in allowing oyster farming as a supplement to the native oyster industry. Tony replied, "The biggest obstacle is the genetic diversity of the oysters that grow in Texas estuaries, especially those south of Corpus Christi." He explained that research as well as the writing and approval of regulations that will govern oyster farming is currently underway by a number of State

agencies. He speculated that it will take many months and possibly as much as two years, before oyster farming in South Texas can take hold. Another question directed to Tony was whether he was aware of any opportunities for volunteers, including Texas Master Naturalists, to offer their services to help with the research and development of oyster farming in our area. Tony mentioned that there was a laboratory involved in oyster research located on South Padre Island. This is the UTRV Coastal Studies Lab which is located within the Isla Blanca State Park. This facility is currently not open due to the Covid 19 restrictions. However, once these restrictions are lifted, opportunities might exist for volunteer work at this facility.

While I hope this article whets your desire to learn more about the oyster and how to help in oyster restoration efforts, I also should mention that Texas has regulations governing the harvest of wild oysters for personal use (not including any sale of oysters). While the regulations are available on the Texas Parks and Wildlife Department website (See “Harvesting Wild Oysters”), a short summary follows:

1. A valid Texas Saltwater Fishing License is required
2. If a boat is used to obtain the oysters by tongs or dredge, a Sport Oyster Boat license must also be obtained
3. The water from which the oysters are obtained must be approved for oystering by Texas State Health Services



Photo by Mario Marquez, Oyster Aquaculture Expert

4. The season for harvesting is from November 1 through April 30, and during the hours of Sunrise to 3:30 PM, Monday through Saturday
5. The minimum length is 3 inches from end to end (hinge to lip)
6. Maximum harvest per day is two sacks each weighing a maximum 110 pounds including oysters, shell and mud.

Supplementing the declining availability of the Texas wild oyster by oyster farming, whether done commercially

for profit or by citizen volunteers who help to reestablish wild oyster reefs, not only provides a source of food, it helps to clean up estuaries that have become polluted. The oyster is not only good to eat, but it is also a contributor to a cleaner marine environment.

P. Jack Austin

STMN, Border Chapter

ODD THINGS IN THE GARDEN MIGHT BE BENEFICIAL

Story by Anita Westervelt, Texas Master Naturalist

Tiny baubles suspended on strings might look odd hanging from leaves in your garden but check them out before you wipe them out, they may be lacewing eggs.

Green lacewings are a beneficial insect with a unique way of laying eggs. The eggs are usually found on vegetation in clusters, lines or spirals with about two dozen or more in a group. Each tiny, light green oval egg is suspended at the tip of a quarter-inch long hair-like filament so fine as to be nearly invisible. It is thought that this peculiar fashion is to protect the eggs from ants and also from other lacewing larvae which are strongly cannibalistic, according to aggie-horticulture.tamu.edu. The eggs darken as they mature and hatch after about four days.



Green Lacewing eggs by Anita Westervelt



Green Lacewing eggs by Anita Westervelt

It is larvae of the lacewing that really benefit a garden. Lacewing larvae are predators; their prey are soft-bodied insect pests such as aphids, thrips, whitefly, leafhoppers, spider mites and mealybugs - all insects that can suck the life out of plants in ornamental and vegetable gardens and field crops. Lacewing larvae devour all stages of their prey -- eggs, nymphs and adults.



Green Lacewing larvae by Joseph Connors TMN

The larvae look completely different from adult lacewings. The larvae resemble tiny brown alligators about a quarter to nearly an inch long. They have distinct legs on a flat body that tapers to a pointed tail and large, sickle-shaped jaws that can catch and devour prey.

Larvae feed for two to three weeks, spin a cocoon, and then emerge as adults 10 to 14 days later.

There are upwards of 1,300 species of green lacewings found all over the world in temperate and tropical climates. They inhabit agricultural fields, gardens, forests, tropical rainforests, chaparral and swamps.

Adult green lacewings are about three-quarters of an inch long. They have four transparent wings with obvious vein markings which make the wings look lacy. They are a delicate, soft-bodied insect. Adults often fly at night and can be drawn to lights. Most species have large golden eyes.

Adult green lacewings are not predatory; they feed on nectar, pollen and honeydew -- honeydew is a sticky, sugar-rich liquid secreted by aphids and some scale insects as they feed on plant sap. Adult green lacewings are minor pollinators. They are active at dawn and dusk laying eggs as they feed. Adult lacewings live four to six weeks.



Green Lacewing by Joseph Connors TMN

During summer, a prevalent prey of lacewing larva are mealybugs -- garden pests especially during hot, moist weather. Mealybugs attack tropical and subtropical plants, woody trees and shrubs. They can be detected by a white cotton-like substance covering branches, flower buds, fruit and leaves where the bugs are feeding. Mealybugs crawl to nearby plants.



Mealybugs by Anita Westervelt

A light infestation of mealybugs can be dislodged from plants with a steady stream of water, a task that may need periodic repeating. Insecticidal soaps and other products can be effective although they will harm beneficial insects like

lacewing larvae, as will spraying with water. A severe spread of mealybugs may require heavy pruning, bagging and disposing of infested branches.

Sources helpful in researching for this article include Agrilife.org, Bugguide.net, ScienceDirect.com, gardeninsects.com and Tamu.edu.

WHAT'S IN YOUR NEIGHBORHOOD?

Diane Roman-Goldsberry

STBCTMN



During the evening of March 5th, 2020, we had a gathering of over sixty people at the Dr. Hector P. Garcia Memorial Library in Mercedes Texas to hear John Brush, Urban Ecologist from the Center of Urban Ecology at Quinta Mazatlan in McAllen, speak about the increasing numbers of wild animals in our urban environments. This night was also the opening of an exhibition of the wildlife photographs of Gary Jensen, retired electrician and amateur naturalist.

Urban Ecology is a relatively new science, but it is also one that is becoming more and more important. In a time of increasing disconnect from Nature, which includes increasing fear and misunderstanding, events that foster understanding and healthy experiences with Nature are extremely important. Every animal and every plant have a place and a purpose which are important to our own well-being and continued life on our precious planet.



I first met John Brush during our TMN training sessions for the new class of the STBC. Amazed by the range of his knowledge and obvious love of his field, I hoped to hear more from him and this new topic. During the evening lecture of January 21, 2020, Mr. Brush led us through the complicated steps of signing up for and using iNaturalist. To encourage us all to become Citizen Scientists of the natural world was the main goal. An excellent educator, he conveyed his experiences, ideas, and the subject matter in a clear and competent way. This is why I invited him to open the wild life exhibition in Mercedes.

Gary Jensen was a naturalist by age five. In love with nature, his natural play soon graduated to an interest in capturing images of the beauty that he witnessed almost daily in the Wisconsin woods. By age fifteen, he was photographing wildlife in its natural settings. Now a retired senior living in the Llano Grande Lake Resort in

Mercedes, Mr. Jensen spends his time birding and leading nature walks at the State Park. The photographs in the exhibition: "What's In Your Neighborhood?" were all taken in and around Mercedes, in our senior park, and the neighboring state park, Estero Llano Grande State Park. The variety and quality of the photos tell a very interesting story: there are many, many wild animals co-existing with us.



The photographs of Gary Jensen are on display in the Texas Room of the Mercedes Library and throughout the rest of the public spaces in the library. The photos include many birds, insects, reptiles, amphibians, and mammals. The Northern Shovler, Rosette Spoonbill, Brown Pelican, the American Alligator, Tarantula, Rattlesnake, Nutria and best of all, the Bobcat are on display. People were surprised to learn that these wild animals are so close.



We learn how it is important to become aware of them, make a correct response to them, and protect them when necessary. Urbanization has destroyed much of their habitats and now they have moved in with us. Mr. Brush encouraged us to continue learning about urban wildlife and to help in the effort of creating urban sanctuaries that are sustainable in which people and Nature can coexist in peace which in turn enriches all life.

The combination of the Urban Wildlife Exhibition and the lecture on Urban ecology gave the attendees an inspiring experience of this increasingly important area of Naturalism. We hope to have many more of these public education opportunities.

Moth-ing

Story and photos by Anita Westervelt, RGVCTMN

Note: If you don't put the hyphen in the word moth-er, it looks like the word, mother. Also without the hyphen, auto-correct features on many electronic devices change the moth-ing to the word nothing.

I learned moth-ing via a series of e-mails with Joseph Connors, South Texas Border Chapter of the Texas Master Naturalist's Webmaster, Creatures of the Night co-presenter and avid moth-er.

I had e-mailed Joseph in early April, in enough time to collect all the various parts to set up a home moth-ing station for the April 24-27, 2020, City Nature Challenge.

"It doesn't take anything fancy. Just one blacklight and a white sheet."-- Joseph Connors

These items may also be necessary:

- An extension cord
- Clamps or other implements to secure sheet
- Tripod or stand to support light fixture
- Headlamp with white light and/or flashlight

Joseph Connors' favorite Blacklight bulb is available at Home Depot. "Put that in a clamp light for a pretty inexpensive setup,"



Joseph wrote. "There are fancier UV bulbs, specifically for moth-ing, but the cheap ones will attract plenty of moths."

Aluminum light fixture with clamp. We had a couple of work lamps with the clamps. I changed out the regular light bulbs for the blacklights.

The most important step was to select where to set up. When I asked, Joseph said that it is more successful to hang the sheet in the open. Too much cover overhead, like a large dense tree or porch roof may reduce the moths that will see the light.



Sheltered side of set up, lamp clamped to

The simplest set-up in our yard seemed to be to clamp the sheets to the ends of the arbor. I'd seen a similar set up at Oleander Acres in Mission, from photos Joseph sent me that he'd taken at a moth-ing get together he periodically participates in.



First night results

I had an old dust ruffle stashed in the back of the linen closet. The lilac print ruffle was still attached but there was a lot of plain white fabric. A mattress pad from the guest bedroom would also work on one end of the arbor. Recall that this was during the beginning of the COVID-19 pandemic and I was not going to go shopping for white sheets. And, too, my point was to do this project as simply as possible, without a big expense in order to help promote the activity to others. In the end, my only expense was the purchase of two blacklight bulbs.

I set up two days before the City Nature Challenge. I secured one clamp light to an old camera tripod and attached the other one to the leg of a small ladder.

The sheltered end of the arbor, between the plantains and the side of the barn, attracted very little moths the first night. Thinking about Joseph's "not under cover" theory, I disassembled that end after the first night and clamped that second light fixture to a leg of the tripod so that both blacklights were aimed at the sheet that was more open to the elements. It was windy during the days and I would re-secure the sheet each evening.

The open end of the set-up was not disappointing. Each morning, I snapped photos of moths and bugs, uploading them with my phone's iNaturalist app. I kept the set up through the four days of the challenge. Each night garnered more moths and bugs.

Joseph's instructions were to turn the lights on around sunset. "You should have pretty good results in about two hours," Joseph wrote. "Some of the bigger moths seem to come out around midnight."



White light hands-free headlamp

I did not stay up until midnight. I would turn the blacklights on before going to bed and then go out when I awoke in the mornings. For this adventure, it seemed that 3 a.m. was my wake-up time.

In order to photograph visitors to the sheet, white light is necessary. I happened to have a "headlamp" apparatus that worked successfully -- it allowed my hands to be free to photograph my winged subjects.

One last piece of advice from Joseph was to turn off the UV lights before day break in order to give the moths and insects a fair advantage from awakening birds.

Joseph has prepared a more in depth account about moth-ing on the South Texas Border Chapter's website at the following link:

<https://www.stbctmn.org/post/mothing>

Whether you're a night owl, or early riser, moth-ing can add a new dimension to learning more about nature in the Valley. There's even an annual moth week -- check it out:

National Moth Week this year is July 18 - 26. Visit this link for more information about this event. <http://nationalmothweek.org/2020/05/15/nmw2020/> This is a Citizen Scientist activity that would count for volunteer hours. Photos of moths and bugs from a moth-ing event uploaded to iNaturalist.org also is a countable volunteer Citizen Scientist activity.

(All photos by Anita Westervelt)

Becoming a “Real” Purple Martin Landlord

Jolaine Lanehart

When living in Arroyo City, I had as many as four Purple Martin houses and hearing their chirps and songs, clicks and chatter has been a highlight of spring and summer. However, none of the houses were easy to lower without risk to the residents or to myself. So, unfortunately, house sparrows often built nests and nest checks could not be done correctly. However, the Purple Martins always returned and there were some successful fledges every year.

When I moved to Laguna Vista a year ago, I was determined to become a better landlord to this wonderful bird. Veronica Guzman’s presentation had really boosted my desire to follow through; and she was kind enough to answer questions about different housing options and the accessories when it came time to make the big purchase.

I am now a card-carrying member of the Purple Martin Conservation Association (PMCA) and have a new setup that has six large cavities in a metal house plus two plastic gourds. It is mounted on a pole with a winch, making it safe and easy to check nests, monitor for predation and unwanted guests, assess the hatchlings and check for general health of the birds. All entrances are starling resistant. The accessibility for nest checks is quick and easy. I did order the entire kit from PMCA and, the house came constructed but I did have to put the pole and winch assembly together (about 2.5 hours). Bob Severson helped with setting the concrete base and installing the pole with the house. In hindsight, we probably needed another person.

About two weeks after, I saw the first birds checking it out. Then about 2 weeks after that, Purple Martins were clearly going to be my newest neighbors. Finally, around late April/early May, there were signs of nest building and some courting behaviors!

PMCA has a lot of resources and one really wish I had purchased earlier is the set of pictures and the prognosticator (full set is \$19.95), shown right. These tools are **extremely** useful when trying to age the hatchlings and calculate fledge dates. The life-size photographs of Purple Martins from egg “age” to 28 days are very helpful. It is extremely satisfying to be able to predict when a new clutch will hatch and then validate that finding during nest checks. Also, knowing the age is critical as once they reach 22 days, you should not handle the birds. Birds handled at or after 22 days may “jump” and since they cannot fly, they are at risk. Fledging may begin at 26 days but most fledge at 28-32 days old.



I

There is a reporting form for compiling data, which can then be entered online as part of the Project MartinWatch. Other research (citizen science) projects involving Purple Martins exist (scout studies, roost studies) so even if you do not have housing, you can still observe Purple Martins and report on those activities. Remember, this all counts as TMN volunteer hours!

Below are some pictures of the hatchlings/nestlings and some observations. This is first time I have taken on the task of trying to age the chicks, so I am likely off a bit since I did not have the pictures and prognosticator at the very beginning.



A set of 4 hatchlings (with one still in the egg). I was so nervous so it's not quite in focus. They are so tiny and all eyes. You can see why some call them "pinkies." These youngsters should fledge about June 28.



Here are the same 5 hatchlings at about 6 or 7 days old. At this stage, their bellies are prominent. Beaks are shaping up and feathers are just starting to grow.



This is another set of 3 about 12-13 days old. Like all babies, they sleep or want food. They *are* all alive (regardless of how it looks).



Here are the same 3 (yes, there *are* 3 in there, all alive), at 17-18 days. I calculated they would fledge by the next nest check on June 22nd and they did!

On June 26th, I saw this little one (from the above nest of 5, predicted to fledge on the 28th) take his first flight off the porch a millisecond after I took this photo. Mom, behind him, is feeding the siblings who haven't ventured out yet. Later I saw him on top of the house, looking for mom and food. She flew by and it was an awkward encounter, but he was fed. After this, he kept looking over the edge down to his home as mom and dad were actively feeding the siblings. Eventually he flew down, missed the perch at first, but finally had dinner and they all went inside for the evening.



I currently have a total of 5 active nests with a total of 16 hatchlings/nestlings and 6 fledglings. So far, all eggs have hatched and all young have lived. Hopefully, I will have at least one more nest as there are Purple Martins in the cavity with a partially constructed nest. This is the first year for this house (although there are Purple Martin houses in the neighborhood, there are none near my home), so I consider myself incredibly lucky to have this much success (so far).

The last 2 cavities are house sparrows that I keep discouraging at every nest check (initially destroying the nest and now just the eggs). The trap has arrived, so next nest check...(cue sinister music).

What's not to love about Purple Martins and being a landlord? House sparrows followed closely by mites (thank you Veronica for your suggestions).

Is this for everyone? No. It does take commitment and follow through, asking questions, learning (as they say, I didn't know how much I didn't know), dealing with mites (just thinking the word makes me start scratching), and **it is work**.

Is it rewarding? Absolutely, 100%, without a doubt, so very worthwhile!

The Purple Pleat Leaf *Alophia drummondii*

By Camille M. Rich, El Mesteño Ranch

What a vision of loveliness lay before me as I rounded the corner the other day in the Kawasaki Mule 4 X 4 on a routine fenceline check. There she was! Had I not glanced back a second time, I would most surely have missed her---the Purple Pleat Leaf! Could it really be? Is this her? Almost as soon as I spotted her, after searching for the last fifteen years (15) years for any sign of her continued presence on El Mesteño, I began to doubt what my very own eyes beheld. It was, indeed, the Purple Pleat Leaf. What a beauty!

With the midday South Texas sun beating down upon us both, I knelt down in the red, sandy soil to get a better look at her. Using my hat to block the bright sunlight, I attempted to snap a few pictures with my cellphone that would be worthy of showing the world how intricately, and exquisitely designed this perennial native wildflower truly is.



Family: Iridaceae



In Plants of Deep South Texas, by Alfred Richardson and Ken King, page 40, the Purple Pleat Leaf (*Alophia drummondii*), “is a plant of sandy soils. This species was named in honor of Thomas Drummond, from Scotland, who made extensive collections of plants in Central Texas in the 1830’s.”

In Wildflowers of Texas by Michael Eason, page 433, the common names for this flower are listed as, “Purple pleat-leaf, propeller flower, prairie iris.” Their habitat is listed as, “Fields, meadows, grasslands, roadsides.” Their bloom time is listed as, “Spring, summer.” Their occurrence is listed as “common.” Their location range is given as, “Found in South Texas and eastern third of state.”

In A Photographic Guide to the Vegetation of the South Texas Sand Sheet, by Dexter Peacock and Forrest S. Smith, page 62, this plant is also called a “Purple Nymph.” Additionally, the guide states, “This flower has many names, and it is one of the most striking wildflowers in the Sand Sheet. It blooms throughout the year following rain.”

Birding on Bicycle (in the Time of Covid-19)

by M. Kathy Raines

Thank goodness! We can still exercise outdoors! I thought, after perusing Cameron County's March 25 "shelter in place" order, created to limit the spread of COVID-19. All our missions into the world be purposeful—basically for food or medicine. I gathered that I was free to ride on the Brownsville Historical Battlefield Trail and its outshoots, providing I launched myself from home.

I've enjoyed many lovely, enlightening bicycle rides during and after the community quarantine, at first, veering off the road to maintain a requisite six feet distance from others, and now, wearing a mask—one I pull down beneath my nose during the many spates of solitude.

Occasionally I ride south from Alta Mesa, along resacas edged by clumps of brush. Then, at the Brownsville Events Center, I turn left, following the veins constituting Paseo de la Resaca Trails through neighborhoods and along waterways.

There, sculptures of Texas spiny softshell turtles and red-eared sliders decorate the limbs and rocks at water's edges. Still lives of multi-leveled cormorants adorn brush piles. Various herons, black-bellied whistling ducks, Muscovy ducks, some with ducklings, and black-necked stilts fish, eat, rest, travel and preen. As late as mid-April, a lingering northern shoveler and a sole white pelican paddled about, fishing the shallows.

More often, though, I take the less-traveled leg north of Alton Gloor towards wilder lands, a portion which winds through Palo Alto Battlefield, now open, but closed during the quarantine. Crossing the road, I press the "Walk" button with my elbow to avoid contamination.

The trail crosses a bridge over one resaca, then, a quarter mile off, threads along resacas on either side. At one, which waxes, then nearly vanishes, depending upon rainfall, I investigate varied creatures like the perpetual killdeer—sometimes with chicks—bobbing and bathing, black-crowned night herons, or roseate spoonbills sweeping the waters for prey.

The trail borders backyards, then fallow fields and scrub that feature, among other vegetation, clumps of deergrass, mesquites and yuccas which, especially in March, produce massive creamy blossoms. Red, orange and yellow flowers burst amid forbidding pads of prickly pear. Dazzling



Eastern Meadowlark

Mexican palo verde blossoms—buttercup yellow, bedecked with flashes of orange—and puffs of Crayola-yellow huisache perfume the breeze. In late spring, blindingly vivid blossoms of royal poinsettia (flamboyant) and golden rain tree cap the season.

Being the sole, albeit unbidden, guest in the province of non-human creatures is pure enchantment.

I hear birds before I see them as they call and belt out tunes to attract mates, establish and protect territory.

Northern mockingbirds and curved-billed and long-billed thrashers—talented songsters in the family Mimidae—

perform intricate arias. Great-tailed grackles chuck, shriek and whistle, their realms being everywhere—backyards and parking lots, beaches and fields.

The trail's musical score features piccolo-like whistles of eastern meadowlarks—lemon-yellow, black-bibbed lovelies—who assert, "See-you see-yeer" or "Drzzt!" Their feet grasp twigs of palo

verde and mesquite. They often startle but continue singing as they flutter off, dissolving into long grass. A resolute male, though, may cling to his perch, unwittingly posing for photos as he continues his tune.

This constantly shifting, mingling birdsong recalls distinct melodies and timbres—those of violins, flutes and pianos— spilling beneath doors of university practice rooms.

Couch's kingbirds, great kiskadees and scissor-tailed flycatchers perch upon wires and topmost twigs to scan fields for prey. Throughout April, a loggerhead shrike or two—AKA “the butcherbird”—cling to utility wires. This bird impales insects and crustaceans upon yucca spears and other spikey things for later consumption. Harris' hawks watch from brush piles and poles. Near sunset, especially in March, northern harriers sweep low for plentiful rodents and rabbits. I delighted one June evening to see a lovely white-tailed kite perched on a pole.

I regularly spot eastern cottontail rabbits, many of whom freeze, as if posing, at my approach—and alert little Rio Grande ground squirrels, sometimes chewing on mesquite beans.



Harris's Hawk

Turning, the trail follows the railroad track beneath Paredes Line Road, then ascends onto an overpass paralleling the road—the only section that requires uphill exertion. But what goes up must go down. With glee, I coast, legs dangling, down towards the intersection of 511, enraptured by windswept, honey-colored grasses bedecked with wildflowers, brush and scraggly trees. Like peering over the gunwale of a boat, aware that ocean depths teem with fascinating creatures, I thrill to know the grasses conceal vibrant beings invisible to me: birds, rodents, rabbits, lizards and snakes. But hawks see them.

Occasionally on the overpass, I come nearly eye-to-eye with one or a few Harris' hawks. One I photographed wore two distinct bands—a metallic one on its right leg, a green cloth one with a clearly imprinted number on its left, the latter signifying it as female. I reported this sighting, as one should, to:

<https://www.pwrc.usgs.gov/BBL/bblretrv/>. Then in June, fledglings appeared.

Here's a bit of logistics. I ride a Raleigh SR Suntour, an upright 8-speed. I strap lightweight 10 x 25 binoculars around my neck and right shoulder, which I find comfortable. I wind the strap of my Nikon Coolpix P900 case around the right handlebar, but, once I take my first photo, I wear it comfortably on my left shoulder.

When I spot a bird I want to photograph, I brake quietly. I may take a picture astride the bike, but I may quietly dismount, set the kickstand, take a few photos, then, if the bird hasn't flown, find a place to sit, stabilize the camera, and take some more.

The camera, which has an 83x zoom lens, is wonderful in many ways, not so in a few. It focuses on faraway creatures quite well, but, on typically windy spring days, it's challenging to hold it steady, which is necessary for a clear photo; I don't want to ride with a tripod in tow. But I find ways to counter this: sitting down, propping elbows on knees, for instance, or holding the camera against a post or railing.

Each day on the trail is different, and each is an adventure, as flora and fauna constantly change. During shelter-in-place orders, I found living near the bike trail a rare privilege.

During these times, we may still enjoy non-human creatures that offer us joy as well as the sensible perspective that we, with our myriad difficulties, are not the be-all and end-all of existence.

Our fellow creatures struggle daily to eat and not be eaten, to rest and procreate. Also, they find joy, I think, in their comparatively short lives.

THE FRINGED DIVING BEETLE
Cybister fimbriolatus
By Camille M. Rich, El Mesteño Ranch

This giant diving beetle is listed as a species of predaceous beetle found in North America. On a recent ranch visit, I found this deceased specimen on the ground beside one of the watering troughs. Its green and yellow hard outer wings (that I have since learned are called elytra) were easy to spot on the red, sandy soil.

A few beetle basics:

- • Most beetles are able to fly.
- • Some beetles, such as the Fringed Diving Beetle, are able to swim.
- • **Beetles wear their skeletons on the outside---exoskeletons.**
- • **Beetles' exoskeletons, like large shells, protect them and give them their unique shape.**
- • **Beetle bodies are divided into three (3) parts: head, thorax, and abdomen.**
- • **Beetle eyes are compound. These "compound" eyes allow them to see many views of something all at once.**
- • Four stages of the beetle's life cycle: egg, larva, pupa, and adult.

Kingdom: Animalia
Phylum: Arthropoda
Subphylum: Hexapoda
Class: Insecta
Subclass: Pterygota
Order: Coleoptera
Suborder: Adephaga
Superfamily: Dytiscoidea
Family: Dytiscidae
Subfamily: Cybistrinae



The Plant Life Cycle of our Native Guajillo

By Camille M. Rich, El Mesteño Ranch

Spring ushers in many gorgeous, fragrant flowers on plants native to the South Texas Sand Sheet. Once pollinated, the flowering plants, shrubs, and trees undergo a transformation right before our very eyes! Through the process of pollination, bees, butterflies, wasps, flies, and beetles, just to name a few, enable our native plants to produce marvelous fruit for wildlife! Another product of the pollination process are precious seed crops that are necessary for continuation of species.

The guajillo (*Acacia berlandieri*), which is in the legume family, is one of our native shrubs in the South Texas Sand Sheet ecoregion. The guajillo can grow upwards of ten (10) feet. Each Spring, it puts on a fantastic flower show with its tiny, white flowers sprinkled throughout its leaflet-covered gray branches. As with most plants in the South Texas Sand Sheet, the guajillo is armed with small, slightly curved thorns, which are called prickles. Its fruit is a reddish-brown legume, or seed pod, that is up to six (6) inches long. In each seed pod, there are numerous seeds that have the potential to become an adult Guajillo shrub.



As Spring marches forward, and after the seed pods have baked for just the right amount of time under the hot South Texas Sun, a prolific guajillo seed crop will be ready for harvest. Are you ready to harvest the seeds? Just kidding! You will not need to harvest these seeds, as they will harvest themselves. How is this possible? These seeds are disbursed by a ballistic (explosive) seed distribution method in which the heat from the sun dries the seed pods causing them to crack open with a violent force. The force of the explosion of the seed pod results in the seeds falling a bit farther away from the parent plant. Voila! Just add water, and the seeds on the ground are ready to grow!

During Springtime each year, I set about picking up seeds on a daily basis in order to save them for sharing with others. Each and every morning I will find brand new seeds that have been hurled out of their pods onto the ground. Should it happen to rain on the seeds before I get a chance to pick them up, I will have scores of newly sprouted guajillo seeds that are either still in their open seed pods or lying on top of the soil.

I have enjoyed a front row seat to the guajillo plant life cycle repeat, like clockwork, each Spring for the last couple of years. Consequently, I decided that there was no better time than the present to share this transformational process with others through photographs.



In my search for a simple outline of the life cycle of a plant as a starting point for this article, I encountered a plethora of sources and information. Some of these resources include life cycles that are quite detailed and elaborate. For the purposes of this article, I will simply state that the life cycle of a plant includes the following four (4) stages: Seed, sprout, seedling, and plant.

The following images of the guajillo plant life cycle were captured with my cell phone---a Galaxy Note10+. Other than placing them on a piece of cardboard covered with black felt to enhance their visual detail, the seeds, seed pods, and sprouts were not manipulated in any way. Additionally, the images were adjusted for sharpness, brightness, contrast, and saturation, using standard editing features that my cell phone came with.

Stage 1: Guajillo seed in the dried seed pod.



Stage 2: During germination, a sprout emerges from the guajillo seed.



Stage 3: This hardy guajillo sprout has matured into a seedling.



Stage 4: Young guajillo plant.



Additional information on the Guajillo:

In “Plants of Deep South Texas,” by Alfred Richardson and Ken King, page 239, we learn that “this is one of our earliest-blooming shrubs. It was named in honor of Jean Louis Berlandier, an early collector of plants from Mexico and Texas. Honey derived from guajillo is prized for its superior flavor. The leaves are toxic to livestock. They can cause what is called ‘guajillo wobbles’ and death. The plant is also recognized by the prickles, which are scattered around the stem rather than arranged in rows or pairs.”

In “A Photographic Guide to the Vegetation of the South Texas Sand Sheet,” by Dexter Peacock & Forrest S. Smith, page 191, we learn that “It can form in thickets on thin soils on higher-elevation sites of the Sand Sheet. The legumes produce dark brown seeds. Its leaves are browsed by white-tailed deer. It is a common component of tighter soils in South Texas.”

Rattle purr, knock, knock, knock

Story and photo by Anita Westervelt

In the eerie stillness between late afternoon June storms, I heard the soft guttural rattle of a rain crow -- a vocal yet illusive summer visitor these past three or four years.

I raced to the house, grabbed my camera with the long lens and swept back into the lower yard, my determined gaze intent on seeking this loyal yet secretive bird. And there it was -- near the top of a tall mesquite, barely visible amongst the feathery green of the branch's leaflets -- and then, as luck would have it, the bird fluttered to a higher branch, giving me a clearer view! VOILA!

In the southern United States, words like portent, foreshadowing, omen, or augury are often used in conjunction with tales about this rarely seen but oft heard mysterious bird whose calls on hot cloudy days often presage rain or lively thunderstorms.

In a land nearly suffering from extended drought, the rain crow's rattle-purr-knock-knock-knock is a welcome sound, stirring hope in those who believe it to be a harbinger of rain. This June, the rain crow has not let the Valley down. Outside of San Benito, our rain crow has so far brought us seven and a half inches of rain!



Rain crow or storm crow, this reputed prognostic bird is the **yellow-billed cuckoo** (*Coccyzus americanus*). In its swift flight from tree to tree, the bird's dull white underparts often blend with a cloudy sky, making the bird inconspicuous but for its cinnamon-colored primaries and large white polka dots on the underside of its black tail.

The yellow-billed cuckoo's preferred diet is caterpillars, especially hairy caterpillars, and also insects, larvae and small fruits and berries. As one who embraces bird diversity, and thrilled with each new species to inhabit our yard, I welcome this one with trepidation; my first love is butterflies. In an unfortunate blend of research and knowledge, I now suspect the fate of many of the caterpillars I've attempted to track these past few weeks. I'll happily share all the fall army worm caterpillars that are eating holes in my beet leaves and hanging around the tomato plants, but hopefully, a few of the black and orange fuzzy cats will escape and transform into the beautiful giant leopard or other gorgeous tiger moths.

Research note: Augury is the practice from ancient Roman religion of interpreting omens from the observed behavior of birds. ... 'Auspices' is from the Latin *auspicium* and *auspex*, literally "one who looks at birds." Depending upon the birds, the auspices from the gods could be favorable or unfavorable (auspicious or inauspicious). **Source** -- many links pop up when searching for the definition of the word augury, with the above description.

Collective nouns for cuckoos: asylum of cuckoos; an incredulity of cuckolds (baby cuckoos) - derived from the habit of female cuckoos laying eggs in other birds' nest and leaving the babies to be raised by the "adopting" adults.



Blooming Huisache by Chet Mink



BerlandiersAlicoche by Chet Mink