Rio Grande Valley Chapter, Texas Master Naturalists

The Chachalaca

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IN THIS ISSUE

The Rio Grande Valley Chapter Texas Master Naturalist is organized exclusively for charitable, scientific, and educational purposes, more specifically to develop a group of knowledgeable volunteers to provide education, outreach, and service dedicated to the study of conservation of natural resources and natural areas within the Rio Grande Valley of Texas.

A Look into the Harlingen Christmas Bird Count

by Norma Friedrich, Rio Grande Valley Chapter TMN 2021 Class member

Since the Christmas Bird Count (CBC) has been identified as an accepted TMN volunteer opportunity I decided to share highlights of our January 2, 2021 CBC. This was the 121st CBC for the nation and the 23rd year for Harlingen.

This past CBC saw several active RGVCTMN members participate either as a feeder watcher in their yard or in an Area of the Harlingen Circle designated by the compiler. You know who you are and should enter those hours you spent into the VMS.

Wading birds in Area 2A (Photo by Mary Beth Stowe)

Mark Conway began the Harlingen count in 1998 and in 2010 Norma Friedrich joined him as co-compiler. Norma organizes and documents the participants, the teams, and feeder watchers.
Mark compiles the birds after the tally sheets are returned. He makes sure that the rare birds are identified and that proper documents are submitted. The rare bird documents are collected and sent to the State of Texas compiler. Once Mark has completed his spreadsheet of number of species seen and numbers of each species, the spreadsheet is sent to Norma who enters all the data on the birds into the system on the official Audubon Christmas Bird Count website. Also entered is information on the weather, the effort (miles and hours of walking, driving etc.), the start and end time, and the participants are registered with their email.

Anna's Hummingbird in Area 5A (Photo by Peggy Rudman)

There were 86 participants in this year's count. Sixty-two were members of 24 area teams. Twenty-four feeder watchers counted birds in 15 individual yards within the fifteen mile diameter Harlingen circle.

The total miles traveled by the 24 teams within the circle were 804.2 and hours spent on counting totaled 164.0.

Area 5A Team: (L-R) Donna, Peggy, and Gloria

There were 60,705 birds reported from the list of 164 species. Red-winged Blackbirds topped the list at 27,553 individuals.

Bragging rights for the Area Team with the highest species count was Area 4A, Stephanie Bilodeau and Justin Le Claire with 104 species. Next up was Area 3C led by Michael Marsden and Michael Miller with 97 species. Third high species count went to Area 5C, Clay Taylor, Greg and Mary Beth Albrechtsen with 94. Donna McCown's Area 5A receives an honorable mention at 90.

Red-shouldered Hawk in Area 5A (Photo by Donna McCown)

High species count for the feeder watchers was Anita Westervelt with 38 followed by Keith Foeste with 34. Honorable mention goes to Robin Gelston with 20 species.

Yellow-rumped Warbler
(Photo by Anita Westervelt)

Northern Mockingbird (Photo by Anita Westervelt)

The highlight species were Anna's Hummingbird, Sage Thrasher, Black-headed Grosbeak and a Cape May Warbler.

Cape May Warbler (Photo by Donna McCown)

To learn more visit https://www.audubon.org/conservation/science/christmas-bird-count

The Ubiquitous Great-tailed Grackle

Article and photos by Anita Westervelt, Rio Grande Valley Chapter

There are reportedly 10 million Great-tailed Grackles, ranging from northwestern Venezuela and Colombia, through Mexico and the U.S. and into southern Canada. In winter, many of the northern ones come south, swelling the Valley's flocks to gargantuan proportions to upwards of half a million birds. They frequent sugarcane and corn fields and land freshly plowed.

A species that is thoroughly urbanized, they have embraced our culinary delights such as tacos, French-fries, biscuits, and other offerings abandoned on parking lot pavements.

A medium-sized bird, the males appear overall glossy black until the sun glints their iridescent hues of brilliant copper, amethyst, green, and purple. The females are about half the size of the males, and are buff-cinnamon and brown in color with a faint iridescent purple patch at each shoulder. Both males and females have yellow eyes.

Great-tailed Grackles are omnivorous and opportunistic, noted for their diverse foraging habits: in addition to fast food scraps, they eat crustaceans, insects, spiders, bees, slugs, moths, worms, and small reptiles and mammals to fruit, berries, and grains. They hunt tadpoles and catch fish by wading or by flying close to the water's surface.

Top Five Sea Beans

Article and photos by Linda Butcher, Rio Grande Valley Chapter

There has been little research done on sea beans. I suppose one reason is that most people don't even know these floating seeds exist. Some of the research being done on sea beans includes flotation, plant dispersal, effects of ocean current, when to collect, growing, and polishing. The reason I call them the top five is because they are relatively easy to find on our local beaches and they are my favorites.

The SEA HEART is the largest of the tropical sea beans. It is common on our beaches. It is mahogany in color with a hard outer coating. Some of the seeds are distinctively heart shaped. It's native to the American tropics. The yard long pods contain five to fifteen seeds and hang from thick woody vines that often engulf the trees that support them. As most sea beans it has an airspace inside that provides buoyancy enabling it to make long sea voyages. They will take a high polish and are often used in jewelry.

Can you identify the beans pictured above based on the descriptions give in the article?

The HAMBURGER BEAN is also one of our common sea beans. It is called hamburger bean as it resembles a miniature hamburger. They occur in two varieties, brown and red. They vary somewhat in size, mostly dime to quarter size. Their range is South and Central America as well as the West Indies. One species is found in West Africa. They grow on semi-woody vines that can engulf trees and shrubs. The seed pods are covered in stinging hairs which protect them from being eaten by insects, birds, and other animals. Maximum flotation time is five years.

The SEA PURSE can be confused with the hamburger bean. They can be told apart by their hilums. The hilum is the seam that goes around the middle of some sea beans. It is much thinner on the sea purse and usually marked by a thin tan margin. There is a great variation in color. They range in color from brown, rust, and caramel. Some have dark mottling. The plant is a woody vine that grows well back from the beach along rivers and streams in Central America. The sea purse in much less common than the hamburger. Maximum float is fourteen years, but most will sink before then.

MARY'S BEAN is a true favorite among collectors. It is a member of the morning glory family. It's a high climbing vine of Central America, Mexico, and the Caribbean basin. The seeds are usually a lustrous black to dark brown and have an indented cross on the dorsal side. More common on Texas beaches than Florida, but not considered common anywhere. Maximum flotation time is ten years under test conditions.

NICKERNUTS Come in three colors: gray, brown, and yellow. **Gray** nickernuts are not rare, but are not as common as the brown nickernuts on the Texas coast. The gray ones are common in Florida as the plants have naturalized there. The seeds are borne from spiny pods. Nickernuts are in the bean family and are not actually nuts. There are about 100 species worldwide in tropical and subtropical regions. Two plants have been found growing at Laguna Atascosa National Wildlife Refuge. There was one growing at Isla Blanca Park along side the board walk just north of the pavilion, but was removed by park employees because the prickly stems kept encroaching on the boardwalk. The entire plant has thorns similar to blackberry bushes.

We have never been able to determine which of the nickernut plants we have since they never produced seeds to our knowledge. We think the plants clusters of yellow blooms either need several plants to accomplish pollination or it's possible that the insect species that pollinates them does not occur in our area.

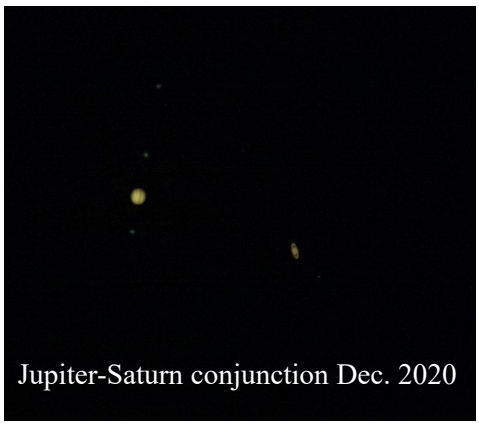
The **brown** nickernut is somewhat larger than the gray. They vary from rusty brown to chocolate. The rarest of the nickernuts found on the coast of the United States is the **yellow** nickernut. They are very similar in size and shape as the gray. Out of 76 that were tested for flotation only one floated. This is probably why they rarely reach our shores.

The best time to look for sea beans is at low tide. Search in the front part of the dunes at the highest tide line. They are usually more plentiful after a storm that washes in large amounts of sargassum..

Visit www.seabean.com to learn more about sea beans.

Sea beans make attractive jewelry.

Rio Grande Valley Night Skies


Jupiter-Saturn conjunction Dec. 2020

Article by Linda Butcher, Rio Grande Valley Chapter
Photos by Jim Bonser, Amateur Astronomers of Central Iowa

I hope everyone was able to view the Christmas Star. It was truly a once in a lifetime event. I have compiled a list of events for the next three months that may be of interest.

MARCH 6 The planet Mercury reaches greatest western elongation of 27.3 degrees from the Sun. This is the best time to view Mercury since it will be at its highest point above the horizon in the morning sky. Look low in the eastern sky just before sun rise.

MARCH 20 Vernal equinox. The sun will shine directly on the equator and there will be nearly equal amounts of day and night throughout the world. This is also the first day of Spring in the Northern hemisphere.


Full moon April 1, 2014

MARCH 20 Also on this date Venus reaches greatest eastern elongation of 46.6 degrees from the Sun. This is the best time to view Venus since it will be at its highest point in the morning sky. Look in the eastern sky just before sunrise.

MARCH 28 Full moon. This full moon was known by early Native American tribes as the Worm Moon. This was the time of the year the ground would begin to soften and earth worms would reappear.

APRIL 22-23 Lyrids Meteor Shower. It is produced by dust particles left behind comet c/1861 G1 that was discovered in 1861. It peaks on the night of the 22nd and early morning of the 23rd. Best viewed after midnight. Meteors will radiate from the constellation Lyra, but can appear anywhere in the sky.

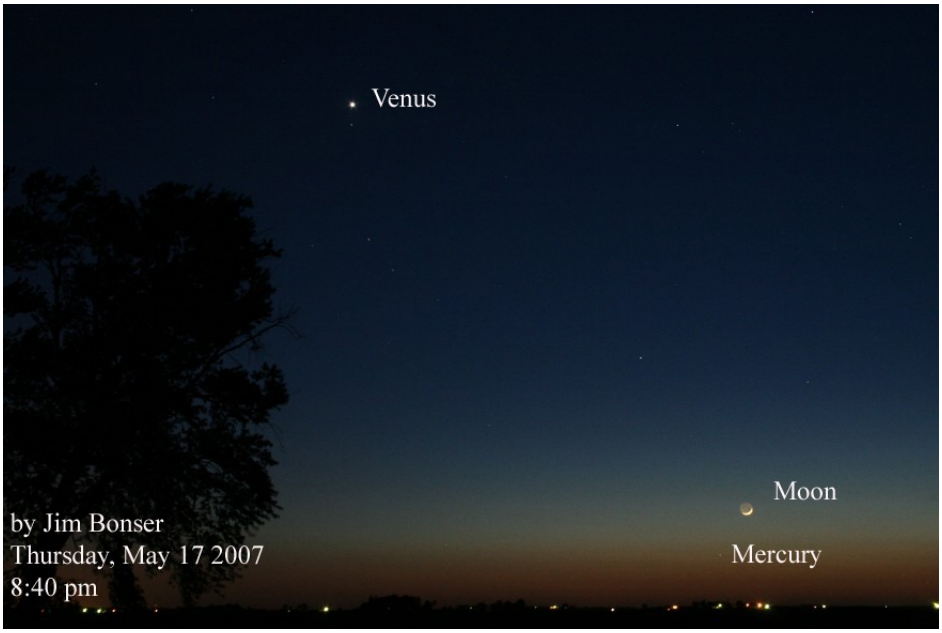

Super Moon on November 14, 2016

APRIL 27 Full Moon-Super Moon This full moon was known by early Native American tribes as the Pink Moon because of the Moss Pink or Wild Ground Phlox. This moon has also been known as the Sprouting Moon, Grass Moon, Growing Moon, and the Egg Moon. Many coastal tribes referred to it as the Fish Moon because this was the time that shad swam upstream to spawn. This is the first of three Super Moons for 2021.

MAY 6-7 Eta Aquarids Meteor Shower. It is produced by dust particles left behind by the comet Halley. It peaks on the night of May 6 and morning of May 7. Meteors will radiate from the constellation Aquarius, but can appear anywhere in the sky.

MAY 17- Mercury is at its greatest eastern elongation. This is the best time to view Mercury since it will be at its highest point above the horizon in the evening sky. Look for the planet low in the western sky just after sunset.

MAY 26- Full Moon-Super Moon This full moon was know by Native American tribes as the Flower Moon because this was the time of year when spring flowers appeared in abundance. It has also been know as the Corn Planting Moon and the Milk Moon. It is the second Super Moon of 2021.



City Nature Challenge
--Are you up for the challenge?

By Elizabeth Perdomo, South Texas Border Chapter

We are busy preparing for the upcoming April 30 – May 3 City Nature Challenge (CNC). This is a volunteer opportunity open to all Texas Master Naturalists and anyone living in or visiting the Rio Grande Valley. What a great opportunity to participate in important Citizen Science observations, to get outside, to enjoy some safe outdoor time with your family, children, grandchildren, co-workers, or neighbors.

If you haven't yet downloaded the iNaturalist app to your phone and/or computer, please do so! It's free and there are some tutorials for use on the app. We've had recent and past trainings done by John Brush and others.

Our Lower Rio Grande Valley (LRGV) City Nature Challenge page is now up…

"Join the Rio Grande Valley World Birding Centers, Texas Master Naturalists, Texas Parks and Wildlife, The Nature Conservancy, Audubon Society, and many others in a fun challenge to see which city can document the most species during April 30 – May 3, 2021. It is easy to participate by joining the event or making observations on your own using the iNaturalist app. With the app, you just take a photo of the plant or animal and the community will help identify which species it is. Any observation in the metropolitan area of the LRGV will count during the four day challenge. You can participate by exploring the life in your backyard, in your local park, or on a field trip with your local naturalist group. You can also help with IDs for other people's observations to increase our species count, come to a bioblitz, or even hold your own event!"

Area CNC Coordinators are:
LRGV – John Brush jbrush@mcallen.net
South Texas Border Chapter – Elizabeth Perdomo mateliza@aol.com
Rio Grande Valley Chapter – Tira Wilmoth sswilmoth@gmail.com

Even though you don't have to "join" the event to have your observations count in the CNC, it is very helpful. Joining allows you to keep up with what things are observed, by whom, and where on the LRGV map. The map is located on the LRGV CNC page. To join, click on "Log in or Sign up" on the top right hand side of the page. Check it out here:

https://www.inaturalist.org/projects/city-nature-challenge-2021-lower-rio-grande-valley

And, just for fun, also "join" the City Nature Challenge page which will document participation and species found in the entire state of Texas and show how the LRGV stacks up against Austin or Houston. In all cases, there are THREE categories documenting: Species, Observers, and Participant numbers.

https://www.inaturalist.org/projects/texas-city-nature-challenge-2021-cities

If you would like some practice before the official Challenge begins, go out in your yard, in your neighborhood, walk down the alley, or come by and begin documenting species at our own South Texas Border Chapter-TMN Pollinator Garden. Please Join this project, too!

https://www.inaturalist.org/projects/stbc-tmn-pollinator-garden-at-st-george-s

Although participants can take and upload species observations in ANY part of the LRGV, day or night, South Texas Border Chapter would like to focus on covering areas in Hidalgo and Starr Counties. However, if you are out in another area, say South Padre Island, during those days, you should observe away! But, we want to get some places covered that might be otherwise missed. We are coordinating our efforts with the Rio Grande Valley Chapter-TMN, so if you plan to be somewhere in Cameron or Willacy Counties during the challenge, do let me know and I will pass that on to their chapter CNC Coordinator. Although we could have a multitude of people in any area on the same day, it is likely folks would pick up on, see, or make observations on a variety of different things.

I will be asking some of you in the STBC to cover particular areas. Others may WANT to cover particular parks, sections, road right of ways, or parks. If you would like to commit to any particular places, PLEASE LET ME KNOW! Also, if you know of a park, place, site to include on our list, please let me know.

REMEMBER: OBSERVATIONS can be made of anything living or once living, even scat, feathers, or tracks. Don't forget to look under rocks and roll over dead logs. Lots of life is found there. It's not just trees, shrubs, flowers, and birds. Remember all of the other critters, large and small! Moths, butterflies, cocoons, buggies of all sorts. Moss and lichen and fungi, snails, and other shells.

After the CNC observation days are complete, we will need assistance in verifying and identifying observations. But, that is another topic altogether. We are hoping to have some sort of discussion/training on that aspect as well. I will let you know if/when/how that occurs.

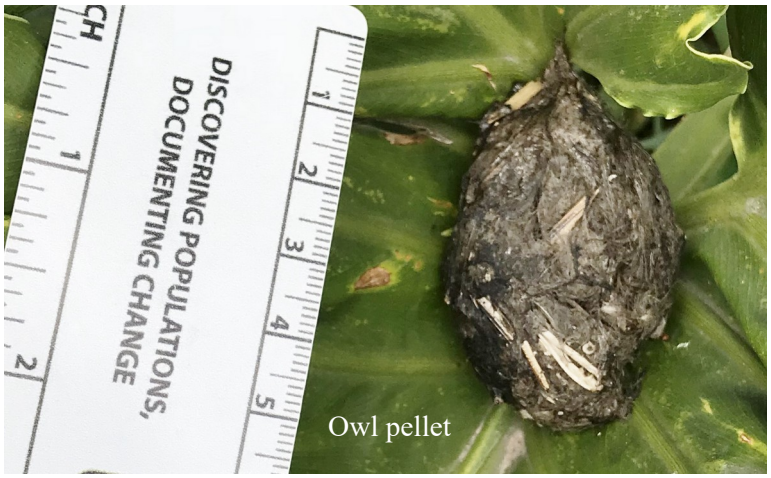
Let me know if you have any questions, suggestions, or ideas. Not only do we need YOUR participation, we need for you to encourage others to join in! Help out any way you can. Get your neighborhood, your clubs/organizations, scout troops, family, and friends involved. We always NEED more participation in this fun, educational citizen science event.

Peculiar Oddities Accepted During City Nature Challenge 2021

Article and photos by Anita Westervelt, Rio Grande Valley Chapter

You may have been following recent information about what photos to upload for the upcoming annual City Nature Challenge. Master Naturalists, Valley residents and Winter Texans alike are being encouraged to join the challenge and upload nature photographs to the www.iNaturalist.org website database to help document the diversity of the Valley's habitat.

An interesting and acceptable category is one that is considered **signs-of-life**. These are the odd items -- the mysterious-looking and not so easily recognized objects one might come across while scouring the land for all things native. These are signs that indicate something has passed through an area and left something behind, such as feathers, tufts of fur, roadkill (or something the cat has brought in), bones, skeletons, partial skeletons, snake skins, an empty or full chrysalis or cocoon, scat, tracks of birds and other critters, and things like castings, owl pellets, and turkey vulture regurgitation.



Owl pellet

During the first City Nature Challenge the Lower Rio Grande Valley entered, I discovered and uploaded an oddity that I'd found on the grass under a stand of Washingtonia palms. It was an owl pellet. Owl pellets are indigestible materials from the birds' prey, including feathers, teeth, fur, and some bones along with the owl's digestive fluids. They are not scat, as they have not passed through the owl's digestive system, but are regurgitated, or hacked up. Most adult owls will produce two pellets a day; they can be found underneath their favorite roosts.

Owl pellets can be a fascinating find, but experts put a healthy caution on them: before attempting to break them apart to see what all is in them, wear gloves, wrap each pellet in aluminum foil and place them in an oven set at 325 degrees Fahrenheit for 40 minutes to kill bacteria such as *E. coli* and other harmful things that might be present.

Such pellets are common to all birds of prey that swallow their food whole, including hawks and eagles. In falconry, it is called a casting. Other species that produce pellets include grebes, herons, cormorants, gulls, terns, kingfishers, crows, jays, swallows, and most shorebirds.

Some avian, such as Turkey Vultures have the ability to regurgitate undigested food as a defense when startled or harassed. Herons, gulls, terns and kestrels also rely on this type of defense.

Images of feathers can also be uploaded. I've had a Great Horned Owl, an Osprey and a Pauraque identified from a photo of feathers I've found in the yard. Last year, a photo of scat proved to be from a bobcat and this year, an intriguing substance on our driveway was identified as nine-banded armadillo scat.


Armadillo scat


Spinybacked orbweaver egg sac

Recently I uploaded a photo of an interesting green blob I found on the wood of my arbor. I chose the class name, Arachnids, as the species name since I suspected my find was of an egg sac for a spider. That category would capture the attention of expert spider identifiers. My observation was soon identified as a spinybacked orbweaver.

It's helpful for the identifiers if a perspective is included in photographs of peculiar subjects so they can judge the size of an object to be identified. A six-inch ruler is a handy prop to place next to a specimen to show perspective.

Local identifiers offer advice for taking photographs for uploading onto iNaturalist.

Recommended photography pointers

- Keep a white card with you about 8 ½ by 11 inches. Place card behind plant species if plant is among a tight growth of vegetation. This will single out item to be identified. Or use a light colored hat as background.

- If guinea grass or other invasive vegetation obscures object you want to photograph, pull, push or trim invasive species before taking photograph.

- Ensure photos are sharp and crisply focused. Keep phone camera lens at least 6 inches from subject. Hold camera or phone completely still so camera shake doesn't blur the end result. Take several photos and edit them later.

- Try to capture both bloom and leaf in photo. If there are mature fruits or seedpods on plant or beneath it, or thorns on trunks, capture those also; uploading multiple shots is allowed.

- If multiple photos are taken to ensure proper identification, upload all photos to one observation entry.
    - Taking one photo of an entire shrub or tree shows growth form but not enough detail to make an ID.
    - Take additional photos to show details of foliage, blooms, stem, and other features that will help identify a species from a photo.

- A white or light colored 6-inch ruler in the photo helps show scale. Or drop a coin near the subject, or your hand or foot. The object needs to be something that can give a relatively true perspective.

Coyote scat

- Learn the editing features on your phone. On some phones, it's easy to crop out irrelevant things, keeping only the object you wish to submit.
    - You also can change the lighting using the phone's editing features, which often helps to better visualize things.

- A wide-brimmed hat is handy to shade cellphone or camera screen to help show if shot is in focus.

- If there is too much light on white or yellow blooms, they will be obscured. Someone can hold an umbrella overhead or position their body to put the object in shade. It's best to have the sun at your back, rather than taking a photo facing into the sun.

Turkey Vulture

Poem by M. Kathy Raines,
Rio Grande Valley Chapter

Watercolor by Sandra Mink,
Rio Grande Valley Chapter

Turkey Vulture watercolor by Sandra Mink

Wings wheel, sans flutter,
Ice dancer gliding on one leg,
Bicycler coasting downhill.

Grackles and crows flap-flap-flap,
Regal hawks do not so sail,
You who await morning thermals,
You who digest first, lest heft impede ascent.

Mauve face nestled in glossy black,
Thrifty of movement,
Eyes bearing down,
Noting struggle, submission.
No fading rat, rabbit or hog eludes purview.

Huge black raisins, you rest on posts, but watch,
Biding time before descent—
That festival of dead or dying morsels: deer, mouse, dog,
Leftovers from sated car or truck.

We who shop, who fish and shoot,
Have scorned you—unmanly bird,
Nature's garbage collector—
But worship your kin—eagle, hawk and kite
Who savage with beak and claw.
Athletic teams spurn your image;
Your likeness adorns no jersey.

But you, like we, feed on carrion.
Doing what one must,
To nourish, to live.
Plus, you scrub the world clean.

(Previously published in *Interstice,* 2016; revised June 14, 2020; Published in *Odes and Elegies: Eco-Poetry from the Texas Gulf Coast*, 2020.)

The Pelican Squadron

Article and photos by Pat Avery,
Rio Grande Valley Chapter TMN 2021 Class member

Concerned about the plight of the pelicans during the cold and windy weather, the 2021 RGVC TMN class formed a committee to design educational materials for our local and visiting citizens.

We are currently studying how we can have the most "bang for the buck." We have thus far decided to focus on materials for adults and for children. These will include brochures and other printed materials that hopefully will be available throughout the Valley. In order to create interest, we hope to have area high school students submit artwork for our pelican mascot.

We are conducting a "Name the Pelican" event within our class. We want our mascot's name to be beloved for both our English and Spanish-speaking citizens.

Brown pelican preening

As of now, we plan to create materials that will focus on bridges and highways in Cameron County, particularly State Highway 48 between Port Isabel and Brownsville and the Queen Isabella Causeway. These are the major sites of pelican deaths during cold weather.

The committee, chaired by Kate de Gennaro, includes Diana Lehmann, Pat Avery, and Diane Hall. Together with our chapter president, Robert Gaitan, we plan to have materials completed and distributed before next winter's cold season.

Brown Pelican on South Padre Island

Public education is important at any age. We especially believe that raising awareness in our youth will have a positive impact. Kids love pelicans and any parent knows that when a child learns something, they are more than willing to share it with their parents – again and again.

Invasion of the Lionfish

by Linda Butcher, Rio Grande Valley Chapter

Pterois is a genus of venomous fish, commonly known as lionfish. It is native to the South Pacific and Indo-Pacific Ocean. The lionfish has been found from the New England coast to the Caribbean, into the Gulf of Mexico and as far south as Brazil. They can survive in brackish water and estuarine environments up to four miles inland. Once thought to be a warm shallow water reef fish, they have been found to depths of one thousand feet in the cold water off the coast of New York.

Lionfish (*Pterois volitans*) – Photo by Jens Petersen (WikiCommons)

The typical lionfish has a total of 18 venomous spines. The dorsal fin has 13 long spines. Each pelvic fin has a short spine and the leading edge of the anal fin has three short spines. Lionfish have no natural predators and are susceptible to very few parasites compared to other fish.

Lionfish are able to reproduce in the first year of life. Most fish native to the Western Atlantic take three to five years to reproduce. Lionfish breed throughout the year. Potentially the fastest breeders in the Western Atlantic, they can lay 30,000 eggs every four days. Eggs can travel with the currents which makes it possible to spread to large areas of reefs. Their eggs do not go into the food chain because the eggs have a toxic coating to protect them.

The eggs hatch into larvae in 24-36 hours. They have a large head with long serrated spines. The larva are good swimmers and eat small ciliates (protozoans) and zooplankton only four days after hatching. The larvae become adult lionfish in approximately three months. Lionfish are thought to live approximately ten years in the wild; they have lived as long as 35 years in captivity. As voracious feeders, they will eat anything that fits in their large mouth.

Lionfish were first discovered in our side of the world in the early to mid 1980's. It is not clear if the introduction was accidental or intentional, but most likely came from the aquarium trade. Lionfish are not bad they just do not belong in the Atlantic Ocean. At this time, there hasn't been a practical way to contain their numbers.

According to Texas Parks and Wildlife Department (TPWD), “In Texas waters, lionfish have not yet become as prevalent as they have in other areas of the Gulf and Atlantic. Our best means of defense is to educate the public and encourage harvest of lionfish to remove them from our waters before they become an issue. We need to be pro-active in dealing with this potentially harmful invader. The more eyes we have on the water, the better.”

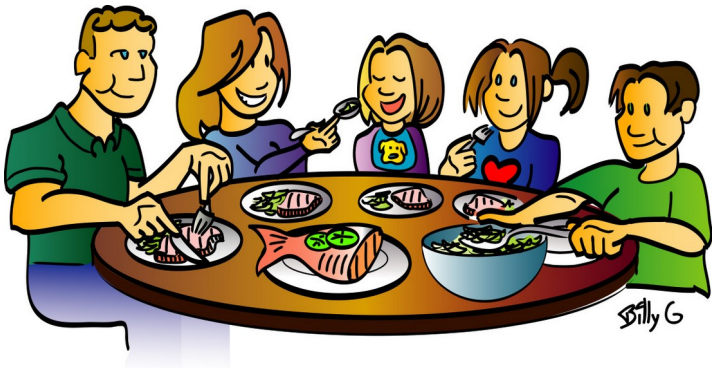
If you see a lionfish you should report its location to TPWD at 361-972-6253 (Leslie Hartman)**.**

Along to the Texas coast, divers report seeing lionfish on oil rigs, ship wrecks, and even coral reef in the Flower Garden Banks National Marine Sanctuary. Lionfish are thought to be nocturnal, mainly hunting in the morning and evening and hiding in crevices during the day.

Lionfish – Photo by Albert Kok (Dutch Wikipedia)

Lionfish are delicious to eat. They have flaky white flesh that is mild and buttery, similar in taste to grouper or hogfish. The meat contains a high concentration of Omega 3 fatty acids and high in lean protein. Once the venomous spines are removed, they can be prepared like any other fish. Entire cookbooks have even been written which are devoted to lionfish preparations.

The environmental community is urging restaurants to start serving lionfish. SO….SAVE OUR OCEANS….EAT MORE LIONFISH !!!!!



They’re Not Gone, Just Brumating

Story and photos by Anita Westervelt,
Rio Grande Valley Chapter

Texas spiny lizard

Lizards are ectotherms, which means their body temperature is the same as the environment around them. Lizards need to be warm; for most lizards, temperatures below 50 degrees Fahrenheit are too cold for them. In addition, during winter, there are a lot less bugs, insects, and spiders available -- a lizard’s primary food supply.

Instead of being active when it’s cold, lizards will seek somewhere to be warm, such as a hollowed out log, pile of leaves, sticks and other debris, or burrow into the ground. They then will enter a state of lessened activity called brumation.

The word comes from Latin*, bruma*, meaning winter solstice, or midwinter plus the suffix, ation, from hibernation. The word was proposed by American zoologist Wilbur W. Mayhew, in 1965, to indicate winter dormancy in ectothermic vertebrates that demonstrate physiological changes independent of body temperature. By definition, brumation is a state of sluggishness and inactivity exhibited by reptiles, such as lizards and snakes, during extended periods of low temperature. They require less food to stay alive during this time.

Finding lizards, geckos, anoles, skinks, and whiptails in the garden is a sign of a healthy habitat. Once temperatures rise above 50 degrees Fahrenheit and the days turn sunny, these reptiles will again become active, helping to control the insect population in gardens, fields, and nature parks.

To make a garden lizard friendly, eliminate the use of pesticides which can poison lizards and their food source. Provide places for them to hide, keep warm in winter, and cool in summer by tossing a small log beneath shrubs and leaving leaf litter in secluded parts of the garden.

For the most part, these reptiles are harmless to humans; however, some of them are not opposed to biting the hand that tries to capture them. It’s always best to leave them alone and keep them in the garden where they can do the most good.

Here are a few of the local beneficial critters you can expect to see.

Texas spiny lizard is a tree-dweller favoring mesquite trees where its colors and scale patterns are camouflaged against the bark of the tree. An adult can be from seven to 11 inches in length. They have long toes with sharp claws suited for climbing trees, utility poles and walls. Active during the day, they feed on insects and other arthropods, like centipedes, millipedes, mites, ticks, mosquitoes, June bugs, grasshoppers, scorpions, and stink bugs.

Texas horned lizard is often confused with the Texas spiny lizard, although it is smaller, only reaching to six inches in length; it has a distinctively triangular shaped head with horns. Its coloring resembles the ground in its geographic region; they are rare in the Lower Rio Grande Valley, but not extinct. They do not climb trees; they run and forage for food on the ground and feed almost exclusively on harvester ants.

House geckos are introduced species; they prefer urban habitat with warm, humid climates. Mostly nocturnal, they can easily be seen climbing walls around houses with porch lights that have attracted insects. They are harmless to have in and around the home; they feed on cockroaches, termites, moths, flies, and spiders.

- **Common house gecko** generally is three to six inches in length and ranges from pale pink to light gray and may have darker patches of color.
- **Mediterranean house gecko** can grow to four to five inches in length, is gray or tan with pink or purple undertones, dark mottling, and striped tail.

Mediterranean house gecko

Green anole

Green anole is exceptionally entertaining. They can grow to seven inches in length, are active during the day and adept at climbing trees, shrubs, fences, and walls. They are frequently seen basking in the sun, lurking on small tree branches, or stalking insects. They can leap after prey or away from danger. They feed on crickets, cockroaches, moths, beetles, flies, and butterflies.

Four-lined Skink

Skink has a dark-colored body of shiny, minute scales, with a colored stripe or stripes that run the length of the body. They have short legs and virtually no neck. Most skinks are active during the day. They prefer living on the ground. Skinks eat snails, slugs, cockroaches, grasshoppers, caterpillars, crickets, termites, and newborn mice.

Whiptail, such as the common spotted whiptail, prefers dry grassland and sandy soils with sparse vegetation. They are seven to nine inches long, tan or brown and have seven or eight white, yellow or green stripes lengthwise from neck to tail. Active in the daytime, they are constantly on the move, feeding on small beetles, ants, grasshoppers, and other arthropods.

Helpful resources in writing this article were biodiversity.utexas.edu, merriam-webster.com, reptilesmagazine.com, lizardsandfriends.org. britannica.com, thoughtco.com, sciencedirect.com, reptilefollower.com and petinsurance.com.

Tragedy and Hope

--A volunteer perspective of stunned sea turtles

by Carol Rausch, Rio Grande Valley Chapter and Sea Turtle, Inc Volunteer

On February 14, 2021 the water in the Laguna Madre dipped below 55 degrees. At that point, the sea turtles that were foraging in the bay began to develop hypothermia. At some point, the turtles became stunned and either tried to beach themselves or were borne by the currents to various beaches along the bay. The terrible tragedy begins.

Stunned sea turtles awaiting care (photo by Robert Gaitan)

I was called in on Sunday, February 14 to answer the turtle stranding hotline. To complicate the catastrophe, the island and others in Texas had no water and no electricity. The stranding phone was the only phone that had power. The phone never stopped, and calls came in from everywhere. Since we only had the one working phone, I'm sure I missed some calls, but it was overwhelming.

I began receiving phone calls of help from folks that had seen turtles floating or had picked them up. Many volunteers had been sent out to various locations to look for and pick up turtles that they found. Soon the Sea Turtle, Inc facility was covered with stunned turtles on every available space in the Education building and in the pools, which were prepared for them. There was no more space and the calls and turtles kept coming in.

The Sea Turtle, Inc leadership made arrangements to use the South Padre Island Convention Center to house the excess turtles. Tarps were arranged on the floor and soon turtles covered the entire floor and the two wings of the building. Cars were lined up outside the center carrying more stunned turtles.

Volunteers poured in from as far away as Laredo and donations came from everywhere. One lady from Colorado was so desperate to help that she contacted Blackbeard's and told us to order what food we needed for the staff and volunteers and she would pay for it.

It was amazing to see the efforts of so many people who wanted to help during the crisis. Everyone wanted to volunteer but we couldn't put everyone to work so they sent us supplies, eye lubricant for the turtles; they sent us kiddie pools, tarps, paper towels, gloves, and generators. Hope awakens…

Everyone wanted to help even though the bathrooms had no water, and we had no light or heat in the building. The wind was blowing outside and the temperatures were so very cold. We had to turn volunteers away, so they gave us food and money. The love and caring for God's creatures were heartwarming. HOPE.

As I sat in the Convention Center answering calls, I would look out at the thousands of turtles on the floor next to me. They looked like gray stones, dirty, smelly, and cold. They didn't move or make any noise. They just laid there, quiet, and we didn't know if they would live or die.

And then, hope, after about two or three days, there was a head that would peak up, very slowly and then lay down again. A flipper would move, very slowly, and then lay down again. And then, they would poop. I was told that was a really good sign that a turtle might make it.

We had volunteers that would work many hours cleaning up the poop. A dirty job for sure, but that turtle might make it. HOPE…

By Friday, we had over 5000 stunned turtles. Some were waking up and some never moved. The vets from Gladys Porter Zoo, from NOAA, and Texas Parks and Wildlife assessed and treated each turtle.

On Saturday, the turtles that survived, over 2200, were quietly released many miles offshore where the waters were warmer, and the deceased were buried in a secret and secure location.

This weather event caused the largest stunned and stranded sea turtle event in the history of the United States. A tragedy, but there is hope. Remarkably, 2400 turtles survived and the hearts of thousands of people all over the United States were opened. Hope for the future. . .

The staff and volunteers at Sea Turtle, Inc. did an incredible job under extremely difficult and challenging circumstances. They deserve our admiration, respect, and assistance whenever possible. I am grateful to have participated in a small way to provide hope for our future.

Green sea turtle – photo by P. Lindgren (Wikimedia Commons)

Birds have Adaptations to Survive Brutal Weather

Article and photos by Anita Westervelt,
Rio Grande Valley Chapter


Anhinga hunkered down with head tucked under wing

The annual Great Backyard Bird Count (GBBC) came during the coldest days of the year when temperatures dropped below freezing and areas of the Valley experienced power outages. Despite the hardship, residents stocked their bird feeders, bundled themselves in layers of clothing and blankets and sat at their windows counting birds.

The GBBC is an inter-organizational effort of the Cornell Lab of Ornithology, National Audubon Society, and Birds Canada. It is a four day event each February that began in 1998. Birds Canada joined the project in 2009; the event became global in 2013.

Many birds migrate to the Valley's warmer winter climates, but what happens to the birds when our balmy, subtropical weather turns brutal with freezing drizzle, sustained high winds, and artic-feeling temperatures? Those worried about our avian friends will be glad to know that both resident and visiting birds have ways to survive unseasonable bouts of severe weather.


Mourning Dove braces against the cold

Here are a few of the ways birds survive the cold:

- Perching birds fluff their feathers to trap heat and slow metabolism.
- They shiver, creating additional heat from circulation and muscle movement.
- Birds of a species find a wind break and huddle together to share warmth.
- At night, birds gather together in thick shrubs, or squeeze together on tree branches that block the wind.
- Birds of all sizes alternately stand on one leg and tuck the other leg under their belly to keep it warm.
- Small birds, shore birds, water birds, and ducks hunker down, covering their legs and feet with their warm bodies.
- They tuck their head under their scapular feathers and conserve heat by breathing air warmed by their body.

- Birds have oil producing glands that allow them to preen a coating of waterproof oil onto their feathers to avoid their downy under coats getting wet.
- Some birds enter a state of torpor, a short-term condition where a bird's body temperature, heart, respiration, and metabolism are lower; they require less food during this temporary state.

Interestingly, ducks, gulls, and wading birds have a built-in heat-exchange where the arteries with hot blood running to the feet pass right next to the cold blood running in the veins back to the body. The hot blood in the arteries passes heat to the cold blood in the veins before the blood reaches the feet. Heat is returned to the body and the process results in cold blood in the feet; cold feet lose very little heat to a cold ground.


Black-bellied Whistling Ducks at the resaca

During the recent below-freezing weather, about 500 black-bellied whistling ducks -- a warm-climate duck -- chose to spend the days not on the banks of a resaca where vegetation would seemingly protect them and structures would act as wind breaks, but rather in pods bobbing upon the choppy water where they were unprotected from the force of the wind. In order to understand a behavior that didn't make sense to my human logic, I asked Quinta Mazatlán's Urban Ecologist John Brush if he had an explanation:

"In cold-climate species, counter-current blood flow is the textbook example of one adaptation birds have to maintain homeostasis in severe cold," Brush said.

Although we could venture that black-bellied whistling ducks also have that counter-current adaptation, he could not say for sure without proof from studies addressing that directly.

Brush offered two other theories that could be at play:

"Ducks have very good water proofing and a dense layer of downy feathers," Brush said. "Water off a duck's back is an idiom for a reason, and it seems safe to say these birds have well-insulated coats."

"Water is a good temperature regulator," Brush continued. "It could be that the water actually was a bit warmer than the surrounding air and potentially could have been beneficial for their thermoregulation."

As the temperature rose and the wind subsided, the 500 black-bellied whistling ducks -- a nocturnal species that feeds at night and sleeps during the day -- were once again spending their rest time in the grass along the edge of the resaca instead of in the water.

Chachalaca – Mixed media by Virginia Garza Shuey,

Rio Grande Valley Chapter TMN 2021 Class member

Texas' Rarest Tree

– Runyon's Esenbeckia (*Esenbeckia runyonii)*

by Frank Wiseman, RGV Chapter

Runyon's Esenbeckia – photo by Anita Westervelt

I became aware of Runyon's Esenbeckia *(Esenbeckia runyonii)* when our Texas Master Naturalist group of volunteers at Harlingen's Hugh Ramsey Park decided to name our first specialty garden in honor of this famous local botanist. Gene Lester of the Native Plant Project donated two Runyon Esenbeckias to our chapter for transplant in our selected garden spot on Ebony Loop. The two trees had been growing successfully at his home in Palm Valley-Harlingen's Country Club.

In January of 2005, with guidance from Gene and Mike Heep, our local native nurseryman, a spot was selected for one of these trees in our Runyon Garden. The other tree was to be placed in the Boy Scout's newly formed Sensory Garden on the opposite side of Ebony Loop. Many Valley-ites are not aware of this special tree nor probably aware of Runyon's work with our native plants.

Tony Reisinger called me one day recently and asked if I had read *Journey's Reward*, a book just published by Doug Perkins, grandson of Robert Runyon. Tony was very excited about the book and offered me his copy to read. He couldn't believe our chapter had been mentioned in it. I got the book from Amazon on my Kindle to read. I enjoyed it and decided to share parts of Chapter 21 about the history of Runyon and his Tree. I urge you to read his book as it covers more than just Robert Runyon's venture into becoming a self-taught botanist, his photography, his business in a Curio Store in Matamoros, Mexico, and his life as a politician in Brownsville where he was mayor for several years. It covers early Valley history, early aviation, and the Mexican Revolution, where Runyon used his photographic skills to become a war reporter/photographer.

Fruit and leaves -photo by Anita Westervelt

My story begins in Chapter 21….

Runyon was not a person to tout his own petard as far as his botanical work was concerned, but he was active in his campaign to bring attention to Texans and the world of his shared discovery of the rare Texas tree called *limoncillo.*

On April 5, 1929, one of Runyon's colleagues, Harvey Stiles…an agricultural expert in citrus varieties…discovered a group of trees with mature fruit, growing on the banks of the Resaca de los Cuates just east of a road that led from Los Fresnos to Olmito.

Mr. Stiles was known for his expertise in citrus cultivation; so, when he saw these trees, he was naturally interested in comparing them to other citrus trees, like orange, lemon, and grapefruit. Probably what drew his eye to this tree were the leaves, similar to the other citrus trees already growing in the Valley. He told Runyon of his discovery, and on July 4, 1929, Runyon dug up a three-foot

seedling that he transplanted to his own home garden in Brownsville. (The tree still thrives there after more than 90 years.) Herbarium samples were sent to The University of Texas. Runyon, with his now acquired knowledge of taxonomy, continued his study of the tree.

Since this was back in 1929, Runyon was not to know that he had precious few years to continue his study of the original trees before a land clearing for agricultural production was to occur in 1933 destroying this group of trees.

Runyon's observations of these trees in situ let him make notes about the trees: height...up to thirty feet, shape…close rounded top, and spreading branches with evergreen leaves. He noted that the trees did put on new leaves each year.

Through further study, he found out that Mexico also had a similar tree in several Mexican states. There, too, it was called *limoncillo.* This tree is known as the *Esenbeckia berlandieri.*

For the rest of his life, unless he was traveling, Runyon observed this tree every day. Despite his care, Runyon's Esenbeckia grew to only about 13 feet between 1929 to 1940. Finally, Runyon noted that his tree bloomed for the first time on May 5, 1940. He described the flowers as "small, white, paniculate and showy." His tree bloomed again in November of the same year and a third time in June 1943.

Runyon discovered that the pod-like fruit took about four months to mature and provide seeds. These seeds he found difficult to harvest and germinate. At maturity, he noted that the pods ejected its seeds some distance from the tree. With these difficulties he believed they had limited viability for propagation.

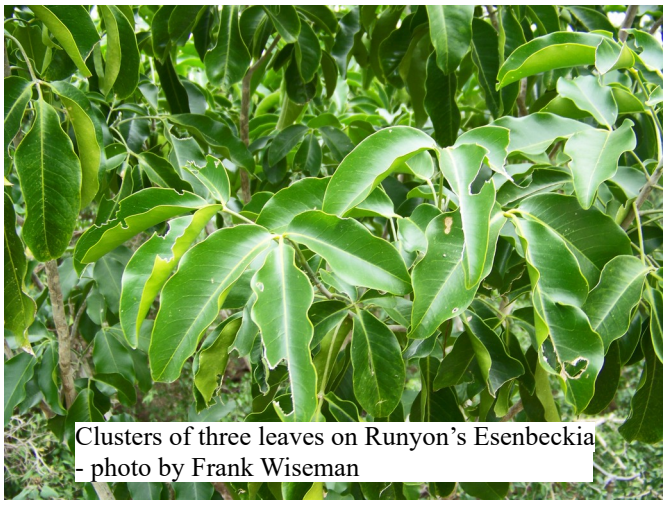
Runyon enlisted the help of colleagues to search for the tree wherever they went in wild places in the Valley. On March 20, 1940, Runyon accompanied W.K. (Kenneth) Clore to Barreda Station, now known as Russeltown at the intersection of Expressway 83 and highway 100. Clore identified a group of trees in a thicket near Resaca del Rancho Viejo. Runyon confirmed these trees as Esenbeckias, and on December 9, he observed another find eight miles east of Brownsville.

After finding these trees, Runyon realized that the trees preference for growing location was in thickets of ebony trees. Some other preferred thickets of the area were nearby elm (olmos), ash (fresnos), and hackberry (palo blanco).

Runyon shared his findings with botanist Morton at the Smithsonian. Runyon noted that three smooth and shiny leaves sprouted from each branch, a characteristic he believed made this *Esenbeckia* unique from a similar tree in Mexico.

"*Another specie(s) grows south of here, Esenbeckia berlandieri, and has a cluster of five leaves, instead of three leaves, like my tree," he wrote.*

"By 1930, Morton determined that the three leaves per stem set Runyon's Tree apart from E. berlandieri and another closely related tree, Esenbeckia



Clusters of three leaves on Runyon's Esenbeckia - photo by Frank Wiseman

pentaphylla. Today, some botanists believe E. berlandieri and E. runyonii are the same species and use the runyonii name as a synonym. Other botanists consider Runyon's Esenbeckia a distinct species."

Landowners in Mexico refer to these trees as different varieties. They call the Berlandier's tree the *jopoy,* a name that comes from the Yucateco dialect. (A Mayan language)

Eco-conscious individuals like the tree as a host for some insect pollinators and host for the giant swallowtail butterfly.

Runyon believed that the Valley's rich, alluvial clay soil near a resaca was ideal for germinating Esenbeckia seeds. Unfortunately, beginning in 1904, land clearing began on a wide scale with the coming of the railroad and northern invaders searching for cheap land to farm. These facts led Runyon to theorize that in the last century a much larger population of Runyon's Esenbeckia grew in Texas.

Some believe that the species' northernmost range is in Cameron County."*The U.S. Government also contended that range limit in 1994 after experts at the Native Plant Project, a nonprofit group devoted to preserving and propagating native lower Rio Grande Valley plant, life, identified Runyon's Esenbeckia as Texas' rarest tree. Under the then-secretary Joe Ideker, the organization asked the federal government to list Runyon's Esenbeckia; as an endangered species. Such a listing would promote management and conservation of any Runyon's Esenbeckia found on private land. The U.S. Fish & Wildlife Service rejected the petition in June 1999. One reason was that Mexico's inventory of Runyon's Esenbeckia indicated large populations in the states of Tamaulipas, Nuevo Leon, San Luis Potosi, Queretaro, and Hidalgo."*

In the 1950s, Robert A. Vines (a Houston botanist) made repeated visits to Runyon's Brownsville home to view his gardens. He included *Esenbeckia runyonii* in his 1960 comprehensive study, *Trees, Shrubs and Woody Vines of the Southwest.*

"*Other discoveries of the tree were made by his grandson Don Perkins of San Antonio in September of 1984, growing in the wild in soil near Rancho Viejo. Mike Heep, native plant grower from Harlingen, discovered a third Runyon's Esenbeckia the next day. The U.S. Fish & Wildlife Service later purchased the property, and in 2018, fifteen Esenbeckia runyonii grow in the Ranchito tract of the Lower Rio Grande Valley National Wildlife Refuge in Cameron County."*

We now know that Runyon's view for the preservation of the species in the Lower Rio Grande Valley falls on the current-day residents.

Mike Heep, our local native plant grower, is among those residents who contribute to a permanent solution every day. Since 1985, he has germinated seeds collected from the Resaca del Rancho Viejo group of trees. "*I was able to sprout about 350 (seedlings), of which most are here at our nursery," Heep said. "The Gladys Porter Zoo has purchased some from us, and they have two nice specimens."*

As of this date, our volunteers have added three more Esenbeckia in Ramsey Park. One specimen was recently stolen form our Citrus Garden, created in 2018-2020. The other two seedlings are in a location away from easy view.

Of particular interest to Texas Master Naturalist is the mention in this book the following:

Chapter 26. "*In addition, thirty miles north of Brownsville, a good sampling of native flora is at The Robert Runyon Garden, located along one of the trails with Harlingen's Hugh Ramsey Nature Park. At this unique and free garden, volunteers with the Rio Grande Chapter of Texas Master Naturalist honor Runyon by nurturing many of his plant discoveries, including Runyon's Esenbeckia and Runyon's Violet Wild Petunia*."

Those of us who have volunteered our efforts in this endeavor of establishing a native garden spot in honor of Robert Runyon feel humbled to be mentioned in this book. It is my desire that after reading this, you will venture out to Ramsey Park to view 'Our Esenbeckia.' **Journey's Reward by Doug Perkins** is available on Amazon, hard paper back, and Kindle version.

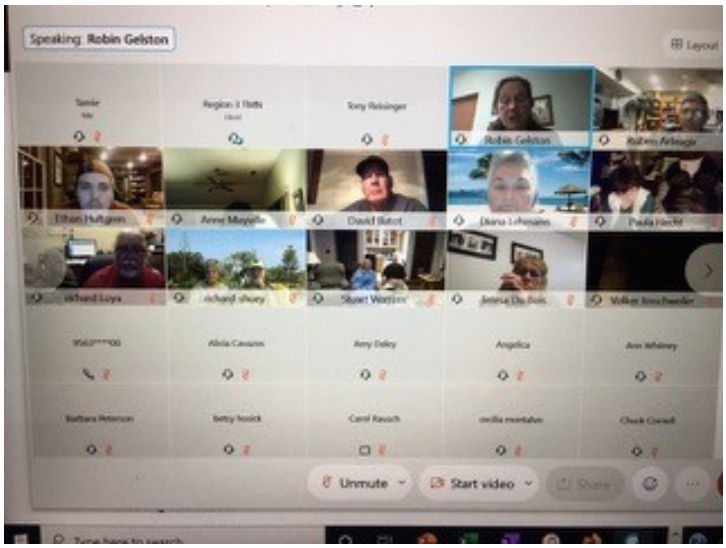
Our Esenbeckia planted January 22, 2005 at Hugh Ramsey Nature Park in Harlingen. (L-R) Donna & Walter Berry, Dianna Schaffer, Dick Roesler, Diann Ballesteros, Drew Bennie, Frank Wiseman, Tim Colglazier, Sharon Roesler – photo by Frank Wiseman

Finding the New Normal

by Roberto Gaitan, Rio Grande Valley Chapter

Once 2021 began, there seemed to be a sense that we were headed back to normal. I think we were all desperately looking for things to be the way they used to be. Three months into the new year and I think we are all still looking.

Somewhere out there, there is a new normal. I think we just need to find it.



Our meetings are virtual, but we have more people attending than before. We hear from members that cannot travel at night anymore, that do not want to drive far, and they are there at the meetings. It was great when we could meet our presenters in person, and though we cannot, we have been able to reach speakers we could not before since they are presenting virtually. Though our efforts to invite the public to our meetings has had minimal impact, we are now able to invite the public online. We can share our meetings beyond the Rio Grande Valley.

We kicked off a new TMN class of students and we were the only region where chapters are jointly conducting virtual training. We even have a student from Schertz, Texas, because our class could better fit her schedule. Though her San Antonio region is as unique as ours, can you imagine the impact of having fellow TMNs throughout Texas knowledgeable of the Rio Grande Valley? How many of us would enjoy learning from TMN chapters across the state? Though our mission has been to explore our regional ecosystem, we may be redefining what the TMN program can do once we have eliminated our physical walls.

There is still a void created by our inability to meet physically, but that gap has lessened. We have had several beach cleanups with small groups. We helped clear sediment at the SPI Birding Nature Center. Small groups meet to go birding, to help band birds, to tend gardens at Ramsey, to help the SPI Birding Center replace plants lost to the cold snap. Our members volunteer across the valley including the unprecedented rescue of cold-stunned turtles. We attended the Texas Plastic Pollution Symposium in person and virtually. We had our first outreach table in a long time at the Costa Cleanup event.

I am no longer waiting for 2021 to bring about a sense of normalcy, instead I am looking at what the new year has brought to define the new normal. The virtual environment will not go away. A hybrid will continue for much of what we do. A new normal has been released from the bottle and we shouldn't try to put it back.

MILESTONES & AWARDS
DECEMBER 2020, JANUARY 2021,
AND FEBRUARY 2021

Congratulations!

David Zipp	TMN certification
Pamela Bradley	100 hours milestone
Britney Marchan	100 hours milestone
Rosemarie Norman	100 hours milestone
Ruben Arteaga	250 hours milestone
Diane Hall	250 hours milestone
Paul Sorenson	500 hours milestone
Roberto Gaitan	1000 hours milestone

Well done!

Keep up the great work!

Don't Forget!

Did you remember to **pay your 2021 TMN annual dues**? You only have a few weeks left to accomplish this simple task. You can pay your $15 on-line or by mail to benefit your Rio Grande Valley TMN Chapter and its many valuable environmental activities.

On-line:
Visit our RGV Chapter website https://rgvctmn.org/ and click on the banner "Pay Membership Dues." You can also find the information by clicking on "Members Page" near the top of the page. From there select "Pay dues" from the list provided. Payment is made through PayPal.

By mail:
Make your check payable to "RGVCTMN" in the amount of $15; no cash please. Mail your check to:
Rio Grande Valley Chapter Texas Master Naturalist
c/o Maria Reyna-Gomez, Treasurer
3079 S. Buckingham Ct
Brownsville, TX 78526

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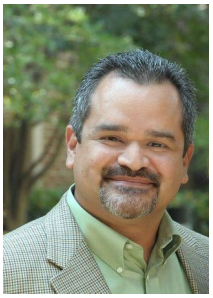
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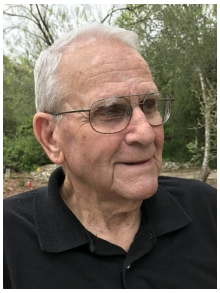
Frank Wiseman

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Advisors

Texas AgriLife	Tony Reisinger
Texas Parks & Wildlife	Javier de Leon

Can you help? We can always use additional help on our committees!

Please contact us at riograndevalleychapter.tmn@gmail.com

RGV Master Naturalists This chapter is an affiliate of the Texas Master Naturalist Program jointly sponsored by Texas AgriLife and the Texas Parks & Wildlife Department.