Rio Grande Valley Chapter, Texas Master Naturalists



The Chachalaca

VOLUME 15 NUMBER 4 DECEMBER 2018

In this Issue		Officers	
		President	Norma Trevino
Cool Bat Species	1	1 st Vice President	Maile Worrell
		2 nd Vice President	Barbara Peet
Planting Old Standards	8	Recording Secretary	Heidi Linnemann
Tianting Old Standards	0	Treasurer	
		Past President	M. Lee Brown
2018 TMN Annual Meeting	12	Advisors	
		Texas AgriLife	Tony Reisinger
Ramsey Nature Park	14	Texas Parks and Wildlife	Javier de Leon
		Directors	
Did You Know?	17	Membership	Jolaine Lanehart
		New Class	Joni Gillis
Volunteer Honorees	17	Communications/Outreac	h
		Volunteer Projects/AT	Alicia Cavazos
RGVCTMN 2019 Officers Elect	17	New Class Representative	Chuck Cornell
		Standing Committee Chairs	
Conservation Laws and Ethics	19	Communications	Frank Wiseman
Conservation Laws and Ethics	19	Host	
		Membership	Sally Robey
New Graduates	20	Listserv/Webmaster	Jimmy Paz
		Historian	
Sharehouse and		New Class	Chuck Cornell
I market			
		Newsletter Editor	Lou Osborne
Harry Hall Land			
mappipertomails			

NINE OF THE COOLEST BAT SPECIES IN THE UNITED STATES

Often misunderstood, bats are crucial to our planet. They provide essential pest control, pollinate our plants and disperse seeds for new plants and trees. In the last week of October, we celebrate National Bat Week to share the impacts and importance of these fascinating creatures.

Bats first appeared on Earth 50 million years ago, and today, there are more than 1,300 species worldwide and 47 in the United States. Bats remain a frontier of wonder and discovery -- from understanding their longevity to inspiring medical marvels.

It's hard to talk about bats without mentioning white nose syndrome -- the fungal disease that's decimating many bat species as it spreads from the New York area where it was first discovered in 2006. Across the continent, scientists from U.S. Fish and Wildlife Service, the U.S. Geological Survey, the Bureau of Land Management and partners are working to protect bats, research treatments to halt the spread of white-nose syndrome and raise awareness about just how incredible (and vulnerable) these creatures are.

Check out some of our favorite bat species found in the U.S. and what makes them so cool.



LESSER LONG-NOSED BAT

A small bat covered in yellow pollen is held in a gloved hand. No, the lesser long-nosed bat isn't normally yellow. This one is covered in pollen after a busy night of drinking nectar. Photo by National Park Service.

Small but mighty, the lesser long-nosed bat is the unsung hero in maintaining fragile desert ecosystems. Measuring about 3 inches long and with a brush-tipped tongue that is as long its body, this species is the perfect pollinator. Every year, it migrates from its winter home in Mexico, following the "nectar trail" of blooming cacti and agave flowers to southern Arizona and New Mexico. Along the way as it drinks the sweet nectar, the lesser long-nosed bat picks

up pollen, spreading it from flower to flower. Both the saguaro cactus and agave (which is used to make tequila) depend on the lesser long-nosed bat for pollination. When it was listed as an endangered species in 1988, there were fewer than 1,000 of these nectar-feeding bats. Today, there are an estimated 200,000 bats at 75 roosts in the Southwest and Mexico. Thanks to a three-decade-long conservation partnership, the bat was saved from extinction and delisted in 2018 -- making the lesser long-nosed bat a conservation success story.

HOARY BAT



A brown bat with a small face on a big head with large ears. Hoary bats fest on moths, beetles and other insects, and travel up to 24 miles roundtrip in a night foraging for food. This one was spotted at Isle Royale National Park in Michigan. Photo by National Park Service.

The hoary bat is one of America's most handsome bats. It has a wingspan of up to 16 inches and long, dense, white-tipped fur that gives it a frosted appearance. The hoary bat is among the most widespread of all bats, found throughout most of Canada and the United States, and south into Central and South America (there's even a subspecies of the hoary bat in Hawaii). While this species is abundant, the hoary bat is also a solitary creature that's rarely seen. They typically roost 10-15 feet up in trees and stay well-hidden in foliage during the day. The males spend the summer west of the Rockies and females to the east, and they don't emerge from their trees to feed until after dark. But in the winter, you might be lucky to spot them at dusk as they begin their migration south in groups.

PALLID BAT



A bat with a light tan body and large ears sits on a rock eating a yellow scorpion. A pallid bat enjoys a tasty snack of a scorpion. In addition to eating arthropods, pallid bats also feast on spiders, cicadas and occasionally small lizards or mice. Photo by Richard Jackson, U.S. Fish and Wildlife Service.

Known as a desert bat, the pallid bat is found in semi-arid regions across most of the American West. Its name comes from its light brown to cream-colored fur, which helps it blend into its surrounding. It's about 4-4.5 inches long and boasts a wingspan of up to 15-16 inches. Unlike most bats, it doesn't use echolocation to locate prey. Instead the pallid bat uses its long ears and simply listens. Swooping in silently from above, it eats crickets, beetles, grasshoppers -- even scorpions. These bats are hibernators, and they roost in colonies of 12-100 bats in dark, cool areas, which can include buildings, between rocks, and in caves or mines. Be careful not to scare these them, though. They emit a skunk-like odor when disturbed.

LITTLE BROWN BAT



A small, fuzzy bat hanging upside down in a cave is illuminated by the bright white flash of a camera. This little brown bat isn't hiding, it's hibernating. In order to survive months without food, bats slow down their bodily functions -- like body temperature, heart rate and breathing -- to conserve energy. Photo by Ann Froschauer, U.S. Fish and Wildlife Service.

With a range from Alaska to central Mexico, the little brown bat is one of the most common bats found in North America. This tiny species weighs just a quarter to a third of an ounce and has a body no bigger than a human thumb, but despite its small size, the little brown bat has a big impact on humans. It can eat up to 1,200 insects (including pesky mosquitoes) in an hour. This means fewer insects that carry diseases like malaria and West Nile virus, and useful pest control for farmers. Little brown bats hibernate in winter, congregating in the tens of thousands in caves and mine shafts. The little brown bat was one of the first bat species detected with white-nose syndrome, which damages wing tissue and depletes precious fatty deposits during hibernation by causing bats to wake up more frequently. Over 1 million little brown bats have died from white-nose syndrome. While there is no cure for white-nose syndrome, many scientists are working together to study the disease. There are several experimental treatments in progress that will hopefully lead to increased survival of bats from this devastating disease.

MEXICAN FREE-TAILED BAT



Dozens of dark brown bats take flight against an azure sky with the tops of green trees cropped in the background. Bats are the only flying mammal, and their wings have the same type of bones that humans have in their arms and hands. Photo by Ann Froschauer, U.S. Fish and Wildlife Service.

The Mexican free-tailed bat is a subspecies of the Brazilian free-tailed bat that lives in the southern United States. There are over 100 million Mexican free-tailed bats in the U.S., with two of the largest populations in Carlsbad Caverns National Park in New Mexico and Bracken Cave near San Antonio, Texas. Every night from spring through autumn, the bats wow visitors as they swarm out of the caves in a whirling funnel to find water and food. It's estimated that the 4,000 bats at Carlsbad Caverns eat about 3 tons of insects every night! These bats are strong, fast flyers -- reaching speeds of up to 60 miles per hour, flying as far as 50 miles from their roosts and in some cases as high as 10,000 feet in the air. While some of these bats hibernate, most migrate to Mexico for winter.

VIRGINIA BIG-EARED BAT



Lit by camera flash, a small group of fuzzy bats hang upside down hibernating in a dark cave. A cluster of hibernating healthy Virginia big-eared bats in Pendleton County, West

Virginia. Every year while they hibernate, they lose half their autumn body weight before spring. Photo by Craig Stihler, WVDNR.

One of two subspecies of the Townsend's big-eared bat, the Virginia big-eared bat is aptly named for its large ears, which are more than 1 inch long. This medium-sized bat can be found in Kentucky, North Carolina, Virginia and West Virginia, where it inhabits caves year round. In the early spring, females congregate in maternity colonies in the caves' warm areas and each give birth to a single pup. Within three weeks of their birth, offspring are able to fly, and by six weeks, they're fully weaned. Then they can start going out on their own, using their highly efficient sonar to eat insects while flying through the air. While the fungus that caused white-nose syndrome has been found in the caves where they live, this species has yet to contract the disease. It's a mystery that scientists are studying to see if certain bats are immune to white-nose syndrome. Even slight disturbances can cause Virginia big-eared bats to leave caves, abandon young and force bats to use valuable energy reserves needed to survive hibernation. Do your part to protect them by not entering caves during winter, and check out more ways to be friends to bats.

CALIFORNIA LEAF-NOSED BAT



A dark brown bat opens up its full wingspan as it flies in a cramped stone cave. California leaf-nosed bats have short, broad wings that aren't suited for long-distance flying. This one is leaving a cave at Lake Mead National Recreation Area. Photo by National Park Service.

Found in Southern California, Southern Nevada and parts of Arizona, the California leafnosed bat gets its name from the leaf-like projection on the tip of its snout -- it's an adaptation on bats that sends out echolocation sounds through their noses. In addition to its nose, this bat is easy to recognize because of its large ears and grayish to dark brown fur. While other bats hibernate or migrate, the California leaf-nosed is active all year. It roosts in warmer caves and mines during the day and spends the night hunting. Its hearing is so acute that it can detect noises as faint as the footstep of a cricket! This bat species lives 20+ years in the wild, making it one of the longest-living mammals.

MARIANA FRUIT BAT



The head of a small bat with beady brown eyes fills the foreground and the rest of its lithe body hangs upside down in the background. Mariana fruit bats have rounded ears and large eyes that give their faces a canine appearance -- hence the name flying fox. Photo by Anne Brooke, U.S. Fish and Wildlife Service.

The Mariana fruit bat -- also called the flying fox -- is one of the largest bats found in the United States. It measures in at 7.7-9.4 inches in length, can weigh up to 1.3 pounds and has a wingspan of up to 42 inches wide. This bat has dark fur, and its shoulders and neck are gold to pale brown in color. The Mariana fruit bat is found only in Guam, American Samoa and the Northern Mariana Islands, and it's an important pollinator that's essential for keeping forests and watersheds healthy. Its diet consists of mostly fruit (along with the occasional flower and leaves), and while it eats, it fertilizes fruits and nuts. The flying fox spends much of its day sleeping, and it can be seen hanging upside down on trees in the forest. Why do they sleep in this position? Hanging upside down has benefits for bats -- special tendons in their feet allow them to be relaxed and conserve energy, and this position allows for easy takeoff.

INDIANA BAT



A tightly huddled cluster of dark brown bats squeeze their eyes shut as they hang upside down throughout hibernation. Who knew hibernating was so tiring? One bat yawns in a

cluster of Indiana bats in Wyandotte Cave, Indiana. Photo by R. Andrew King, U.S. Fish and Wildlife Service.

First found in Southern Indiana's Wyandotte Cave in the early 1900s, the Indiana bat is quite small, weighing only a quarter of an ounce (about the weight of three pennies). Even though it's small, this species can eat up to half its body weight in insects each night, providing vital pest control. The Indiana bat's scientific name is Myotis sodalis, and it's an accurate description of this social species. Myotis means "mouse ear" and refers to the relatively small, mouse-like ears of the bats, and sodalis is the Latin word for "companion." In the winter, Indiana bats hibernate in large numbers in caves (and occasionally abandoned mines) with the biggest colony supporting 20,000-50,000 bats! While found throughout the Eastern United States, more than half of their population hibernates in the caves in Southern Indiana.

Do your part to help bats by building a bat house. These tiny structures are a win for both bats and humans. They can hold up to 100 bats, providing them with much need roosts while the bats keep the pests at bay around your house.

This article is presented courtesy of the U.S. Fish and Wildlife Service

OLD STANDARDS CERTAINLY WORTH PLANTING --AND CONDIDER THE RUTACEAE FAMILY, TOO!

Anita Westervelt

It's tree planting time in the Valley. It's cooler, the sun not so strong, making November through February the best time to plant trees. Consider planting one of the Valley's old standards that will benefit your yard and attract birds and butterflies -- for your enjoyment as well as for the health of a native habitat.

These first five trees are stand-alone as they will eventually take up considerable space.

Texas Ebony, *Chloroleucon ebano*, can grow to 50 feet tall. Host plant to sulfur, blue and skipper butterflies. It provides cover for wildlife and nesting sites for birds. Branches have paired spines.

Anacua, *Ehretia anacua*, moderate growth rate and can reach 15 to 40 feet in height. Dense canopy gives shelter and nesting for birds. Fragrant blooms in spring and after rain provide nectar for butterflies and bees and fruit for birds and critters.

Honey mesquite, *Prosopis glandulosa*, grows to 20 to 30 feet, relatively fast-growing. Its crooked, sprawling growth pattern adds an artistic element to the landscape. It flowers spring through summer. Young branches can have long, sharp thorns; older branches lose their thorns.

Brasil, *Condalia hookeri*, often reaching to about 15 feet. Has small, light green, spatulate leaves and dense canopy. Branches end in a sharp spike. Protection for roosting and nesting birds; blooms summer and fall; fruit is popular with wildlife.

Guayacán, *Guaiacum angustifolium*, will define its own unique shape. Very slow growing. Will eventually reach to 20 feet. Lavender orchid-like flowers bloom in spring and after rain. Excellent cover for wildlife; host to lyside sulphur and gray hairstreak butterflies.

Not so prevalent in the Valley and worthy of interest are some unique native trees in the Rutaceae family. Citrus is a member of this family, as are the herbs rue and bergamot. Most species in the family are trees or shrubs, "frequently aromatic with glands on the leaves," according to <u>www.worldwidefruits.com</u>.

These trees are showcased in specialty gardens around Ebony Loop in Harlingen's Hugh Ramsey Nature Park. Information also is found on pages 375-377 in the Dr. Alfred Richardson/Ken King book, "Plants of Deep South Texas."

Barreta, Helietta parvifolia



Colima, Zanthoxylum fagara

Esenbeckia, (Limoncillo - little lemon), Runyon's Esenbeckia, *Esenbeckia berlandieri* [E. runyonii]



Texas Torchwood, Amyris texana



Sierra Madre Torchwood, Amyris marensis



All but barreta are on the general bimonthly guided nature walk, although it is close enough for a side trip, time allowing.

Both torchwoods, colima and baretta are host plants for giant swallowtail butterflies. Orange, lemon, lime and grapefruit citrus trees also are hosts to species of swallowtails and sickle-winged skippers. Esenbeckia, I suspect, is also a swallowtail host plant, but my research has yet to reveal that particular fact. My recommendation is to hedge your bets and plant one of each.

The foliage on these trees is aromatic, citrusy-smelling. The leaves are sturdy, shiny and waxylooking. White bloom clusters pop out in spring followed by small berries that provide food for birds and critters. Colima blooms in spring and after rainfall at other times during the year. The torchwoods bloom spring through fall; Esenbeckia, spring and fall; and barreta blooms spring and summer.

Barreta and colima are listed as shrubs. Don't let that category fool you, it merely means there is possibly more than one trunk. Barreta may be considered a shrub, but it certainly needs a lot of room. Although it may only reach to about 13 feet in height, it sports a pretty hefty girth.

Colima can grow nearly 30 feet tall with a somewhat narrow and gangly spread, depending on how crowded it is with neighboring trees and vegetation. It is not a very fast-growing shrub.

Of these five Rutaceae family trees and shrubs, colima is the only one armed -- aggressively armed -- the PDST describes it as having curved, sharp prickles.

Both torchwoods are small trees. Texas torchwood is the smaller of the two, growing to possibly six feet, Sierra Madre to 10 feet. Torchwoods have slender, upright growth. The Thursday Moring Ebony Loop Volunteer Team has recently planted a grouping of three Texas Torchwoods at one side of the entrance to the specialty garden on the Loop, Hachinal Corner.

Esenbeckia, like barreta, needs plenty of space. It can grow to twenty feet tall. It branches out in a large "V" which allows it to support lower-growing understory. The leaves of esenbeckia are larger than the other four trees in this discussion. They call to mind the ornamental schefflera tree (also known as umbrella tree) to participants uninitiated in the world of native plants who have attended our Ebony Loop bimonthly guided plant tours.

Harlingen native nurseryman Mike Heep has the described Rutaceae family trees for sale. Monday through Friday, 8 a.m. - 4 p.m. Call before visiting, to ensure he's not out on a delivery or presenting a lecture. 956-457-6834.

Before you visit, perhaps you'd like to check out how Mike Heep helped reestablish, and continues to propagate, Texas' rarest tree, Runyon's Esenbeckia.

http://www.tamuk.edu/artsci/biology/herbarium/teaching%20garden/Limoncillo.html

http://texasforestservice.tamu.edu/websites/FamousTreesOfTexas/TreeLayout.aspx?pageid=268 86

When planting any tree, free the roots so they can spread in all directions, especially if they have become pot-bound and have circled around themselves. Dig a hole twice the size of the pot. Flood the hole with water and let drain before planting the tree.

After the hole has drained, plant the new tree at the height the soil level was when it was in the pot. Fill in around the sides with loose, friable soil or purchased compost or a topsoil mix. Water

in well and water two to three times a week for about the first three weeks to make sure the plant becomes established.

2018 TMN ANNUAL MEETING AT GEORAGETOWN

Alicia Cavazos

The TMN Annual Meeting that was held in Georgetown on October 25-28 in Georgetown Texas was a success. We decided to go early to visit with family. I traveled with Carolyn Cardile on Wednesday, October 24 from San Benito. It was a great trip to catch up on our friendship. I dropped her off at her sister's at Bastrop Texas and I went on to Georgetown to visit with my brother and his family. There was concern that some TMN field trips would be cancelled due to weather as a hurricane was passing through Central Texas.

I had signed up for the Canyon of the Eagles Vanishing Texas River Cruise & Upper Highland Lakes Nature Center but I got notification that the trip had been cancelled due to bad weather. I had downloaded the App of the Texas Master Naturalist Annual Meeting and this was a great way to find out what was going on with the notifications.

On Friday, I checked in to Hotel and boarded a van to The Vireo Preserve-Balcones Canyonlands Preserve. The trip was led by Jim O'Donnell, Biologist and Vireo Preserve Lead Restorationist. He demonstrated what is being done in this 212 acre tract of land which is north of the Wild Basin Wilderness Preserve which is the area that preserves the Black Capped Vireo and Golden Cheek Warbler



This area had previously been stripped by ranching and the restoration efforts are being successful as there have been active nesting sites for both bird species. These birds need the bark of the ash juniper tree to build nests. Part of the conservation efforts is to control the parasitic behavior of the Bronzed Cowbird. He demonstrated the first cage created for this effort.



He demonstrated the first cage created for this effort



The area is on the north part of town where views of the city are fabulous

After several hours hiking, we were then taken back to the hotel in time for the wonderful dinner served.

Saturday morning I boarded a bus with about 40 other people. We were lead by a father-daughter team. Dr. Chris Mathewson and Dr. Heather Mathewson led our group on a Geology and Ecology tour of Central Texas. We started with the Blackland Prairie and to a dam near Granger Texas. Dr. Chris explained the geology of the region and the rock formations. After a stop at the dam, Dr. Heather Mathewson who is an ornithologist, pointed some of the birds located in the area. We then went on to Round Rock and Marble Falls where the rock formations and faults were explained by Dr. Chris. We went by the quarry where the granite for the state capitol was obtained. These rocks are more than 2 billion years old. We had lunch at the Longhorn Caverns State Park Picnic area and had a little time to explore some of this area. We then went on to Llano, TX to observe the Colorado River which last week had experienced major flooding. We were then taken back to the Hotel.

Saturday evening's Keynote was Ben Masters who showed several films he had produced on wildlife. Awards were presented, but I was disappointed that our advisor, Javier DeLeon did not win. Linda Butcher received her Presidential Award Pin during the ceremony.

Sunday morning after breakfast, I packed up and returned home. It was a Great Conference in which I had an opportunity to see old friends and make new ones.

HARLINGEN'S HUGH RAMAEY NATURE PARK STILL REAPING BENEFITS FROM FALL RAINS

Anita Westervelt

Since the great September rains, the park seems to be a dichotomy of spring and winter all at the same time.

The recent cold snaps and then subsequent warm weather have urged three **pink mint**, *Stachys drummondii*, to bloom. Generally the harbinger of spring, the flowers were peeking through strands of a native grass at the entrance to Tom Wilson Garden.



Hachinal Corner specialty garden offered a sensational treat -- **Brush Holly**, *Xylosma flexuosa* - like most of us who work weekly around Ebony Loop have never seen it: loaded with berries along its branches. From another view, huge thorns make themselves known! The fruit are a

good source of bird food -- quite fitting as the Hachinal Corner garden was designed as a bird sanctuary.



The lantanas along the path -- West Indian, *Lantana camara*; Texas, *Lantana urticoides*; and Velvet, *Lantana velutina*, are still bringing in butterflies for the third month running -- notably, common maestra, white peacock, sickle-winged skipper, Gulf fritillary, queen, the big yellows -- orange-barred sulphur and more! The air is as colorful as the shrubs!

If **pink mint** is a reminder of spring, **coral bean's**, *Erythrina herbacea*) bright red seeds are showing brilliant, in contrast to the dark pods, in a definite winter display.



A most spectacular ending to the December First-Friday walk was an up-close look at the rarest tree in Texas, **Runyon's Esenbeckia**, **Limoncillo**, *Esenbeckia berlandieri* [E. runyonii]. It was laden with big, nearly 1 ¹/₂-inch diameter, segmented, green seed pods, camouflaged by the tree's large leaves.



First Friday and Third Saturday guided native plant tours are available through May 2019. The tour highlights specialty gardens around Ebony Loop. The trail is a level, quarter mile long, caliche path. No reservations necessary; meet the guides in the parking lot. The two-hour tours begin at 9 a.m.

For Texas Master Naturalists, two hours of advanced training are allowed and for Master Gardeners, two-hours of continuing education.

The native plant tour guides are Anita Westervelt and Barbara Peet. We subscribe to what we consider the bible of native plants in the Rio Grande Valley. It is the Richardson, A., King, K., 2011. *Plants of Deep South Texas: A Field Guide to the Woody and Flowering Species*. Texas A&M University press, College Station.

We often cite the authors' comments and Barbara will show pictures of flowers of significant plants not in bloom during a tour when people are curious. We are often asked how to purchase the book.

The book generally sells for \$30 and is available at many local nature preserves like Laguna Atascosa, Weslaco's Valley Nature Center and online at Amazon.com.

DID YOU KNOW?



Mosquitoes on a flower.

Not all mosquitoes feed on blood. Only the females feed on blood, and only when they are producing eggs. Male mosquitoes feed exclusively on plant nectar, sometimes serving as vectors for pollen transmission.

TMN VOLUNTEER SERVICE HOUR HONOREES from OCTOBER to DECEMBER 2018

<u> 100 Hours</u>

Carmen Grammer

Maria Reyna-Gomez

Vivian Acott

Ethel Cantu

250 Hours

Michele Gardner

Mark Salvatore Angelica Tamayo M. Kathy Raines Linda Norman Elizabeth Cavazos <u>500 Hours</u> Cristela Wise Carol Gluntz Gloria Nelson

RGVCTMN OFFICERS FOR 2019



(Lf to Rt) President-Norma Trevino, 2nd Vice President-Barbara Peet, Secretary-Heidi Linnemann, 1st Vice President- Tamie Bulow, Treasurer-Maria Reyna-Gomez

CONSERVATION LAWS AND ETHICS

Virginia Vineyard



"The chapter gets a call that a child found a mockingbird and brought it to school. The chick is being sent home with different children each week to care for it. The chick is healthy, but the caller is upset because the mockingbird is the state bird." Applicable laws: MBTA, Chapter 64, Rehab Laws So what do you think should be done?

Here's another scenario.

"A father takes young daughter deer hunting for the first time, in a one buck county. But the daughter pulls the trigger and kills a doe. What do we do then? Applicable laws: Deer bag limits, Waste of Game. Again, what's your decision?

And here's a final one.

"You're asked to do a story for the chapter newsletter on a local predator contest that focuses on bobcats. The organizers are giving away cash prizes for the most bobcats and the biggest bobcat killed. The organizers take the carcasses with them after the weigh in." Is this legal? Is this ethical? Applicable laws: Furbearer codes, Trapping codes, Statutes related to selling furs, Waste of game (and how it doesn't apply).

These are three of several actual scenarios that were discussed in the two hour session: "Conservation Laws and Ethics 2.0: A Fascinating and Interactive Exploration Without Legal Mumbo Jumbo" at the2018 Texas Master Naturalists Program. The presenters were Richard Heilbrun and Mike Mitchell, both with Texas Parks and Wildlife Department.

Discussions were lively with lots of back and forth about how best to handle these issues, and what responsibilities we have as Texas Master Naturalists. Mitchell, who has been a game warden for many years, said that using common sense and understanding each situation, help make applying laws and ethics to human activity a very interesting job. One thing that was made very clear was that although we cannot get involved politically as representatives of the Texas Master Naturalist program, we have a right, and, indeed, a responsibility, to be informed and active citizens. And will there be people who know that you are a Texas Master Naturalist? Yes, and that's a good thing.

Finally, that third scenario is a real thing that most of us in the session were not aware of. These predator contests have some big business sponsors, and are growing in popularity. So be aware. If you ever have a chance to attend a session like this, I highly recommend it.

NEW GRADUATES

Congratulations and a big pat on the back to our newest class of TMN Graduates.

Dana Allamon Judy Blades Katherine Joyce Brookbank Miranda Jae Butler-Valverde Dulce Cortez Hernandez George Cox Rebecca Melinda Guerra Lawrence Robert Johnson Tina Ruiz Kathryn Genevieve Shupe Janis Ann Silveri Anthony Ryan Turner Luis Alberto Uribe Chester Mink