

# Eye on Nature

SPRING 2005

A publication of the Wildlife Diversity Branch

Getting Texans Involved

## Diversity within diversity

By Steve Bender

Texas Parks and Wildlife Department (TPWD) has been tasked with drafting a comprehensive wildlife conservation strategy for the entire state of Texas by Oct. 1, 2005. This sounds like a large undertaking and frankly it is. This is necessary to meet requirements set by the Federal Department of the Interior to continue to receive funds from the State and Tribal Wildlife Grants program. These funds have been granted to all 50 states and six territories as well as the tribal nations of the United States. This source of funds is historic in reach and serves the primary function of keeping "common species common," maintaining diversity and slowing the seemingly steady stream of newly listed threatened and endangered species.

TPWD with help from Texas State University, hosted a Wildlife Diversity Conference in Aug. 2004 to bring together some of the top professional biologists and decision makers from across the state. Federal agency staff, non-governmental organizations (NGOs) staff, university professors as well as a host of TPWD staff spoke on the state of the ecoregions and habitats as well as species specific issues such as exotic species encroachment and Kemp's Ridley sea turtle restoration. There were 14 universities, 15 NGOs and 10 agencies represented. All have a vested interest in the outcome of such a conference and strategy. Everyone at the conference was invited to be a part of species-based working groups that have helped to develop the overall content of the strategy. These working groups have created the structure and backbone of this strategy and have allowed the document to be developed under heavy time constraints. There are more than 160 individuals working on this document through these groups. Each has contributed greatly to the strategy and each has reason to be proud of his or her contribution and the priorities that will be established within its pages.

The plan is based on the species and habitats that are in need of assistance from the very



people who are helping to draft the strategy. These people know that without the help of agencies and organizations like theirs many of these species are in danger of slipping closer to the protection of the Endangered Species Act (ESA). While the ESA helps protect species it is always better to help these animals before they start the listing process. Imperilment will cause people to act but often it is too late. A proactive strategy helps create an ecological barrier between a species being common and that same species becoming rare and threatened. TPWD hopes that this strategy and the monies that will continue to flow as a result of its development will help slow the process of degradation of species and habitats and begin the reversal process.

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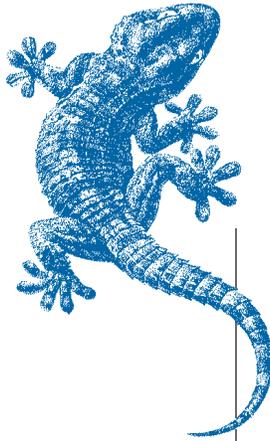
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# Monitoring programs for indicator species in aquatic habitats

By Marsha Reimer



## Eye On Nature Spring, 2005

Texas Parks and Wildlife Department  
*To manage and conserve the natural and cultural resources of Texas and to provide hunting, fishing and outdoor recreation opportunities for the use and enjoyment of present and future generations.*

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When most frogs and toads begin looking for a warm place to spend the winter, the Strecker's chorus frogs' staccato call can often be heard emanating from a Central and Eastern Texas wetland announcing the beginning of their breeding season. These frogs commonly occur in open woodlands, fields and pastures. What about frogs found in metropolitan areas in Texas? Interestingly enough, there is a little frog whose territory seems to be quickly spreading to major cities in Texas. The cricket-like chirps and trills of the Rio Grande chirping frog, abundant in the Lower Rio Grande Valley, can often now be heard in urban gardens throughout Texas. Then there is the tiny cricket frog that has one of the most recognizable calls of any frog or toad found within this great state. All you have to do is click two rocks together any time of day on a warm spring or summer day and these tiny amphibians will answer with a loud similar response. Cricket frog populations are declining in our northern states but it still can be found throughout all but the most western portions of Texas. These are only a few of at least 41 fascinating species of frogs and toads that live in Texas. So far, in Texas, only the Houston toad is federally listed as endangered.

Amphibians breathe at least partly through their skin and this makes them highly susceptible to any pollutant that invades their environment. An abundance and diversity of frogs and toads in a wetland is a very good sign that it is a healthy habitat. To learn more about the health of wetlands within their community, volunteers can attend a Texas Amphibian Watch workshop where they will learn how to identify and monitor frog and toad populations.

Many of our rivers and streams hold amazing creatures that are often overlooked. They are freshwater mussels and there are at least 52 Unionid species in Texas. Native Americans



used them for tools and as a food source. Before the discovery of plastic, their opalescent nacres were used to make buttons. These animals have unusual common names like the Texas heelsplitter, threehorn wartyback and smooth pimpleback. They also have a truly unique life cycle that is directly tied to fish. Currently around 38% of freshwater mussels in Texas are seriously imperiled. So far, in Texas, only the Ouachita rock-pocketbook is federally listed as endangered.

Freshwater mussels or bivalves are filter feeders and they are very sensitive to pollutants in their aquatic habitat, especially sediments. An abundance and diversity of native freshwater mussels can be a good indicator of the health of a stream. Volunteers can attend a Texas Mussel Watch workshop where they will learn how to identify and monitor populations of these remarkable animals.

Texas Amphibian Watch and Texas Mussel Watch are both Texas Nature Tracker wildlife monitoring projects sponsored by the Texas Parks and Wildlife Department. Both projects involve monitoring animals that can be indicator species of a healthy aquatic environment.

To learn more about these workshops and other Texas Nature Tracker projects please go to our web site at:

[www.tpwd.state.tx.us/nature/education/tracker/](http://www.tpwd.state.tx.us/nature/education/tracker/)

Marsha is coordinator of the Nature Trackers program at TPWD working out of Austin.

[Diversity within diversity Continued]

If you are interested in reviewing the strategy once it has been developed, please feel free to contact Steven Bender at TPWD or monitor the Texas Parks and Wildlife Department Web site to discover when the final draft will be available. It is our intent to have a draft completed by March 2005. In order to increase the chances that this document is the best TPWD can provide we will bring it to the public for comment. This is yet another way to increase the diversity of reviewers and contributors. We look forward to working with you on finalizing this historic document.

Steve Bender is a Wildlife Planner with Texas Parks and Wildlife Department working out of our Austin headquarters.



## I've got hummingbirds! — But what hummingbirds do I have?

By Mark Klym

**T**he quiet of the cool spring day is shattered suddenly by a violent rush of wings. The once still yard resounds with chatter as the defender dives at the brazen intruder. Wings blur, tails turn, and the victorious defender perches at the convenient feeder and settles in for a drink.

How many times each day is this scene replayed for Texans as hummingbirds — those violent, aggressive, territorial denizens we love so dearly — settle into our gardens for the nesting season. But a hummingbird in Bowie County probably is not the same as that hummingbird you just saw out there in Culberson County. Texas enjoys a wealth of hummingbird diversity, and we thought it might be interesting to explore that wealth by region and by season and see what we are doing to try to maintain that diversity (and maybe even enhance it!)

The Ruby-throated Hummingbird, once thought to be the hummingbird of the eastern United States, is beginning

to feel a little competition in some places. In Texas, this bird is primarily seen in the eastern part of the state — areas where tall trees are found are usually areas associated with the Ruby-throated Hummingbird. It has also been found in the state as far west as El Paso and is seen each year in the panhandle. While this bird is making its presence known in the west, several species including Rufous Hummingbirds, Allen's Hummingbirds, Broad-tailed Hummingbirds, Buff-bellied Hummingbirds, Broad-billed Hummingbirds and others are being seen in the areas of East Texas once thought to be exclusively Ruby-throated domain. Most of the diversity in this region will occur during the fall and winter months. Houston, during the 2004–2005 season hosted at least five species of hummingbird.

North Texas residents are not left out of the party. The panhandle has long shared Ruby-throated and Black-chinned Hummingbirds but they can also enjoy the Rufous Hummingbird, the Broad-tailed Hummingbird, the Calliope Hummingbird, the Anna's Hummingbird and several of our western mountain birds. Again, most of the diversity occurs late in the summer into early fall, with only a few hummingbirds ever recorded during the winter months.

Long recognized as a hotspot for hummingbird diversity, West Texas continues to be a magnet for the hummingbird enthusiast. Sixteen of the eighteen species documented for Texas have been seen in this mountainous, highly diverse habitat. Only the Buff-



Buff-bellied Hummingbird

bellied Hummingbird and the Green-breasted Mango have yet to be documented from this region. While late summer is probably the peak of diversity in this region — last year the Davis Mountains recorded 10 species on a single weekend — some of the real treasures are seen during the late winter and spring months.

The Rio Grande Valley, with its myriad of tropical treats, does not disappoint the hummingbird enthusiast. Buff-bellied and Ruby-throated Hummingbirds are to be expected, but Rufous Hummingbirds, Calliope Hummingbirds and the occasional Green Violet-ear, Green-breasted Mango and Broad-billed Hummingbird among other western hummingbirds always make the valley an exciting experience. Birding in the Rio Grande Valley is great at any time

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Rufous Hummingbird

# A bumper year for butterfly records!



PHOTOS COURTESY OF MIKE QUINN

By Mike Quinn

**T**wo thousand and four was a fantastic year for butterfly records! Well over 500 new county records were reported by butterfly enthusiasts from across Texas! Ten butterfly and moth records were new to the United States! The majority of the new U.S. records were found in Hidalgo County in the Lower Rio Grande Valley.

The 500 plus new county records in one year were without precedence. There haven't been 10 new U.S. records since 1973 when 14 new butterflies were reported in the RGV! This phenomenally large number of new butterfly records immediately begs the question, "Why?"

One answer that quickly comes to mind is that there are now many times more people looking at butterflies than in the past and that more eyes looking means more rarities found. Whatever environmental conditions contributed to the butterfly outbreak, 500 new records wouldn't have been reported if there wasn't also an outbreak of butterfly enthusiasts to see them.

Not only were there more people watching butterflies, but the optics and field guides required to make identifications have much improved. Close-focusing binoculars and guides depicting live butterflies are now the norm.

Cameras are much improved as well. The modern digital camera or "digi-cam," coupled with the internet surely played a roll in the compilation of these records. Digital photos shot during the day were often posted that night to web sites such as the North American Butterfly Association's South Texas Web site which alerted people to the fact that a great butterfly year was afoot.

The TX-Butterfly listserv served as an active conduit for useful information. Over 300 subscribers listened and learned about what was being seen and where, then went out and found their own interesting set of butterflies to e-mail to the list.

In South Texas, all the new butterfly gardens being planted served to lure butterflies out of the woods and concentrate them for easy viewing. Every park, wildlife refuge and nature center in the Valley has planted new butterfly habitat over the last few years.

Also in South Texas the Texas Butterfly Festival annually draws hundreds of people from across the nation to Mission. Festival participants go on daily tours and learn of the local hotspots which they then usually revisit several more times on their own.

Simple geography played a roll in the new records. Tamaulipas has the greatest biological diversity of any of Mexico's northern states. All the butterflies have to do is fly across the Rio Grande, which many obviously did in 2004.

But what were the conditions like in 1973 when 14 new U.S. butterfly records were reported? Well there were no close-focusing binos, digicams, internet, field guides showing living butterflies, butterfly gardens and no large number of butterfly watchers. In fact, the 14 new U.S. records in 1973 were reported by just two people, Mike Rickard and William McGuire collecting in Cameron and Hidalgo counties!

What 1973 and 2004 did have in common is that both years were the second of two consecutively wet years, a relatively rare condition in the semi-arid Rio Grande Valley.

As Tamaulipas has nearly twice as many butterfly species as south Texas, we can expect a steady stream of new U.S. records crossing our border, if it continues to rain...

Mike Quinn is an entomologist with Texas Parks and Wildlife Department working out of Austin.

## Did You Know?

... butterflies' and moths' wings are actually transparent? The iridescent scales, which overlap like shingles on a roof, give the wings the colors that we see.

... butterflies don't have mouths that allow them to bite or chew? They, along with most moths, have a long straw-like structure called a proboscis which they use to drink nectar and juices.



# Diversity of Texas bats

By Meg Goodman

Bats are found all over the world in a variety of places. In fact, with over 1,000 different species, bats make up a quarter of all mammals. The United States is home to 47 different species of bats, 33 of which have been recorded in Texas, making Texas the state with the highest bat diversity.

Texas has high bat diversity due to the variety of ecoregions throughout the state and availability of roosting sites. The Trans-Pecos region of Texas has the highest bat diversity within the state, with at least 22 different species having been recorded. Big Bend National Park is a great place to find a variety of interesting bats such as the pallid bat (*Antrozous pallidus*). This bat feeds mostly on or near the ground and has an extraordinary diet including things such as centipedes and scorpions. Another bat found in the area is the ghost-faced bat (*Mormoops megalophylla*). This is perhaps one of the most interesting looking bats in the state. It has flaps of skin around its chin and large rounded ears which make it appear as though its eyes are within its ears. The federally endangered Mexican long-nosed bat calls Big Bend National Park home during the summer months and is unique because it is a pollinator. It uses its long pointed nose and tongue in order to feed on the nectar and pollen of the century plant. Big Bend National Park is also home to the largest and smallest Texas bats. The largest is the western mastiff bat (*Eumops perotis*) and the smallest is the western pipistrelle (*Pipistrellus hesperus*). Most of these bats live high up on cliff crevices or in caves and are rarely encountered by humans, except for the pallid bat which can be found night roosting on porches



in the area.

If you want to encounter a large number of bats, head out to the Texas Hill Country during the summer months, where you can observe one of the nightly emergences of millions of Mexican free-tailed bats (*Tadarida brasiliensis*). These bats migrate up to central Texas from Mexico in early spring and give birth to one pup during the summer. These bats eat tons of insects each night, many of which are costly agricultural pests such as the cotton boll-worm moth and corn ear-worm moth.

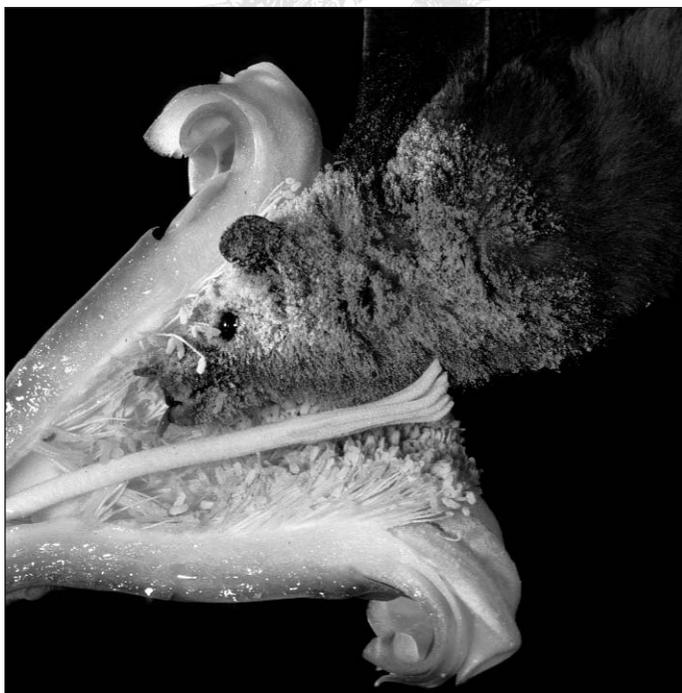
South Texas is home to the state-threatened southern yellow bat (*Lasiurus ega*) which can be found roosting singly in the dead fronds of palm trees. It is important that people refrain from trimming their dead palm fronds if possible, especially during the months of April through July when flightless young may be present.

The bottomland hardwood forests of east Texas host many interesting bat species including the state threatened Rafinesque's big-eared bat (*Corynorhinus rafinesquii*) which can be found in small groups in the hollows of large bottomland trees. Another interesting bat of East Texas is the Seminole bat (*Lasiurus seminolus*) which roosts singly in Spanish moss.

As you can see, Texas bats are very diverse and live in a wide variety of places. These bats are both ecologically and economically important as they are the primary consumers of night flying insects, many of which are pest species. It is important that we continue to learn more about these species and conserve their habitat. Texas Parks and Wildlife is doing just this with the many bat projects that they have going on throughout the state. If you would like to learn more about bats, places to see a bat emergence or about bat projects going on in the state, please visit:

[www.tpwd.state.tx.us/nature/wild/vertebrate/mammals/bats/](http://www.tpwd.state.tx.us/nature/wild/vertebrate/mammals/bats/)  
You can also contact TPWD's bat biologist at [meg.goodman@tpwd.state.tx.us](mailto:meg.goodman@tpwd.state.tx.us) or (512) 912-7042.

Meg is the bat biologist working out of Austin.



[I've got hummingbirds Continued]

and the hummingbirds are a welcome treat anytime as well.

The Texas Hill Country is the home of the Black-chinned Hummingbird, while the Ruby-throated Hummingbird patrols the regions below the Edwards Plateau. These birds may be joined by as many as 14 other species, making this regions potential quite significant. The great diversity is not expected, like it is in the Trans Pecos, but the 2004–2005 winter season



Black-chinned Hummingbird

had five species of hummingbird recorded in the greater Austin area. Summer visitors from Mexico often make that the time to be in the Hill Country though.

What is the secret to hummingbird diversity? While food plants and feeders will certainly

attract the birds, places where I enjoy the real rarities always have one thing in common — trees and brush. Shelter is vital to the survival of these birds, and more shelter often means more birds and different birds. This is becoming a significant message in publications, programs and workshops focused on hummingbirds and their habitats across the state.

A great way to learn more about these birds is by participating in one of the many hummingbird festivals or other hummingbird related events across the state. This year, a fourth festival was added to the hummingbird tour in Junction, Texas. Other festivals include the Davis Mountains Hummingbird Festival in August, and the Xtreme Hummingbird Xtravaganza in Lake Jackson and Hummer-Bird Celebration in Rockport, both in September.

More information on Texas Hummingbirds and the Texas Hummingbird Roundup can be found at [www.tpwd.state.tx.us/hummingbirds](http://www.tpwd.state.tx.us/hummingbirds).

Mark is coordinator of the Texas Hummingbird Roundup working out of Austin.

## Upcoming Events

### Hummingbird Workshops

**Barton Warnock Education Center**  
April 23 – 24

**Fort Worth Nature Center**  
Aug. 27

### Nature Festivals

**9th Annual Great Texas Birding Classic**  
Texas Coast  
April 16–24  
Carol Jones (866) GTBCLAS

**Red River Valley Birding and Nature Festival**  
Pottsboro  
April 21–24

**Birding In The Big Thicket**  
Kountze  
April 22–24  
Kountze Chamber of Commerce  
(866) 456-8689

**12th Annual Bluebird Festival**  
Wills Point  
April 23  
Wills Point Chamber of Commerce  
(903) 873-3111

**Nature Quest 2005**  
Concan  
April 26–May 1  
Texas Hill Country River Region  
(800) 210-0380

**5th Annual Texas Songbird Festival**  
Lago Vista  
April 29–May 1  
Lago Vista Chamber of Commerce  
(888) 328-LAGO

**2nd Annual Birdfest**  
Chappell Hill  
April 29–May 1  
Washington County Convention and Visitors Bureau  
(888) BRENHAM

**Spring Naturefest**  
Nacogdoches  
April 30  
(936) 569-7981

**6th Annual Dragonfly Days**  
Weslaco  
May 12–15  
Valley Nature Center  
(956) 969-2475

**Big Bend Nature Festival**  
Big Bend National Park  
Aug. 12–14  
(432) 447-2236

**Davis Mountains Hummingbird Festival**  
Fort Davis  
Aug. 18–21  
Chihuahuan Desert Research Institute  
(432) 364-2499

**Xtreme Hummingbird Xtravaganza**  
Lake Jackson  
Sept. 10  
Gulf Coast Bird Observatory  
(979) 480-0999

**Hummer/Bird Celebration**  
Rockport  
Sept. 15–18  
Rockport/Fulton Chamber of Commerce  
(800) 242- 0071

**A Celebration of Flight**  
Corpus Christi  
Sept. 22–25  
Joel Simon  
(361) 241-2617

**Texas Parks and Wildlife Expo**  
Austin  
Oct. 1–2  
Contact: (800) 792-1112

**National Wildlife Refuge Week**  
Statewide  
Oct. 1–9

[The Back Porch Continued]

Ornithological Society to accept this species for the state list because many people have seen them and numerous good images were taken, the number of birds known for the state will be 627 species. The next highest is California with about 619 and I think many of my bird friends in California are jealous of our Texas species count. Texas is blessed with a high hummingbird fauna. Texas has 18 hummers occurring here while the next highest state is Arizona with 17 hummers. I think most people would say Arizona is the hummer center of the United State. Not so! Keep feeding those hummers and enjoy them, too. The four counties in the Lower Rio Grande Valley have 505 species of birds recorded from them. That is more birds in those four counties alone than is known from the entire state of Oklahoma. Texas now ranks as the number one state for birdwatching in the United States. So that can be added to our number one ranking for hunting and number two ranking for fishing.

Our invertebrate fauna is very high in Texas. Although we are still accumulating the information, we know the final count of insects will be around 30,000 species. Other states are doing the same so we do not know how we rank. However, we rank very high in butterflies, so high in fact that the North American Butterfly Association International Butterfly Park was recently opened near the World Birding Center in Bentsen-Rio Grande State Park by Mission. Why do we have the butterfly park in the Lower Rio Grande Valley? Texas has a butterfly fauna of over 430 species but the three counties of Cameron, Hildago and Starr have over 300 species known from them. Six new records of species of butterflies were discovered and photographed in the LRGV in December, 2004, by amateur butterfly enthusiasts.

Those three Texas counties have more butterflies known from them than occur in all of the states east of the Mississippi River including Florida! Even visitors from overseas are coming to South Texas to see and photograph the butterflies, many of which are tropical species occurring no where else in the United States.

Karst invertebrate and plant biodiversity is also very high. But that is another article for a future column. Suffice to say in closing, you can be Texas Proud of our state's biodiversity. It ranks right up there with the best of the rest and outranks most of the best.



# Texas Nature Trackers workshops



April 8-9, 2005 – Waco, Texas

Texas Amphibian Watch and Texas Mussel Watch Training Workshops – Advanced training for Texas Master Naturalists. SBEC and TEEAC credit available for teachers. Sponsored by the Heart of Texas Master Naturalist Chapter and held at Lake Waco Wetlands Research and Education Center, 1752 Eichelberger Crossing. 3-10 p.m. April 8, 10 a.m.-5:30 p.m. April 9; fee \$10 per workshop; preregistration required; for registration or more information contact Nora Schell e-mail [noras@ci.waco.tx.us](mailto:noras@ci.waco.tx.us) or phone (254) 848-9654.

April 20, 2005 – Austin, Texas

Texas Amphibian Watch Workshop – Advanced training for Texas Master Naturalists. SBEC and TEEAC credit available for teachers. Held at the Beverly S. Sheffield Education Center, 2201 Barton Springs Road. 5:30 - 10 p.m. fee \$15 includes pizza; preregistration required; for registration or more information call: (512) 327-8181

April 29-30, 2005 – Abilene SP

Texas Amphibian Watch and Texas Mussel Watch Training Workshops – Advanced training for Texas Master Naturalists. SBEC and TEEAC credit available for teachers. Sponsored by the Big Country Chapter Texas Master Naturalists and held at Abilene State Park. 5-10 p.m. April 29, 10 a.m.-5:30 p.m. April 30; fee \$10 per workshop; preregistration required; for registration or more information contact Melissa Clifton, President, Big Country Chapter Texas Master Naturalist, e-mail [Melissa.clifton@aisd.org](mailto:Melissa.clifton@aisd.org) or phone (325) 529-5595, (325) 660-5610 or (325) 572-3204.

May 20-21, 2005 – Dallas, Texas

Texas Amphibian Watch and Texas Mussel Watch Training Workshops - Advanced training for Texas Master Naturalists. SBEC and TEEAC credit available for teachers. Sponsored by the North Texas Chapter Texas Master Naturalists. Location TBA. 3 -10 p.m. May 20, 10 a.m.-5:00 p.m. May 21, fee \$10 per workshop; preregistration required; for registration or more information contact Linda Sharp, e-mail [xxxsharp@aol.com](mailto:xxxsharp@aol.com) or phone (972) 458-8585.

**Duane is Program Leader for the Nongame and Rare and Endangered Species Programs.**



KEEP TEXAS *wild!*

# The Back Porch

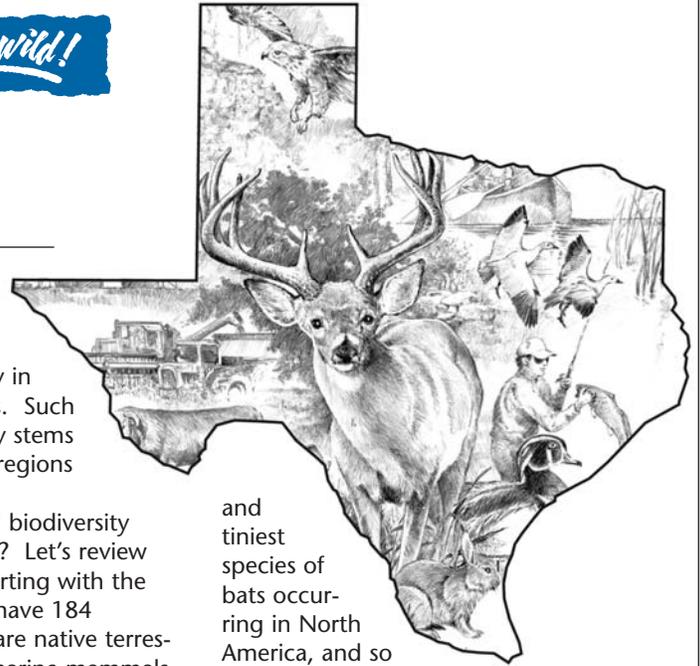
by Duane Schliter

If you have not been paying attention lately, let me remind you that Texas is a big place. For non-Texans who are not used to traveling across the state, it is hard for them to appreciate that the distance from Beaumont to El Paso roughly equals the distance from Washington, D.C. to Chicago. Texas includes 11 Ecoregions, from the Pineywoods of East Texas to the Trans-Pecos' mountain ranges and Chihuahuan Desert and from the South Texas Brush Country and Gulf Coast Prairies and Marshes to the High Plains and Rolling Plains of the Panhandle.

From the perspective of biodiversity, residents of Texas can proudly proclaim that our level of state biodiversity ranks up there with the best of the rest. In fact, Texas is blessed (I use that term because many of my friends, when asked if they were born in Texas,

respond with, "Yes, I was blessed!") with a high level of biodiversity in both plants and animals. Such an increased biodiversity stems from the numerous Ecoregions occurring in the state.

So how does Texas' biodiversity compare to other states? Let's review some of the groups. Starting with the mammals of Texas, we have 184 species. Of these, 143 are native terrestrial mammals, 29 are marine mammals known from the coast and 12 are species of exotics or nonnative mammals that have been introduced here. There are a couple of exotic ungulates that have been introduced but whether they will survive is still questionable. But interestingly from the standpoint of biodiversity, Texas has 33 bats living within its borders, including both the largest



and tiniest species of bats occurring in North America, and so more bats than any other state in North America.

The bird biodiversity in Texas is also a rich one. With the anticipated acceptance of the recently discovered tropical Social Flycatcher in the Rio Grande Valley, and we expect the Texas Bird Records Committee of the Texas

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