

# TEXAS BATS



## Beyond The Road

TxDOT Environmental Affairs Division

TxDOT takes great pride in being good stewards of the environment. Since 1917, the highway department shaped more than 80,000 miles of roadway around the Texas landscape. Engineers built welcoming roadside parks and planted native trees and wildflowers to amplify the state's beauty. From *Don't Mess with Texas* and *Drive Clean Texas* to recycling programs and teams who support safe, sustainable road construction, TxDOT continues to take responsibility for the state's natural resources and cultural heritage. It is part of our charge and work *Beyond The Road*.

**How did it start?**  
Bats' use of bridges as roosts came to TxDOT's attention in 1980 when a colony of Brazilian free-tailed bats moved into the crevices beneath the newly reconstructed Congress Avenue Bridge in Austin. At the time, there were many unanswered questions about the bats' impact on the structural integrity of the bridge and potential health risks to the public.

A joint investigation led by TxDOT engineer Mark Bloschok and Merlin Tuttle, founder of Bat Conservation International and current head of Merlin Tuttle's Bat Conservation, found that bridges and culverts are among the favored man-made roosts for a number of bat species.

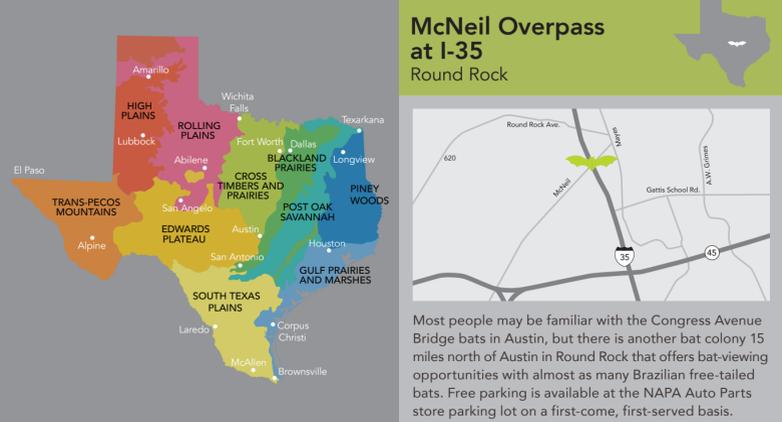
- Bat-viewing Tips**
- Do not shine flashlights or fire camera flashes into the faces of emerging bats; after bats have flown past it is okay to fire a flash camera.
  - Loud noises may cause bats to delay their emergence, spoiling the show.
  - Do not throw objects at flying or roosting bats.
  - Give emerging bats the right of way.
  - Bats found on the ground may be sick or injured. Please do not touch them.

**TxDOT's Bat Program**  
Equipped with information on bats' roosting preferences, TxDOT designs and retrofits bridges and culverts where it is appropriate and economical.

TxDOT's bridge engineers and biologists work together to evaluate and design bridges and culverts that can double as bat roosts. In areas where the presence of bats is not desirable, TxDOT biologists carefully and humanely exclude bats from their bridge roosts. TxDOT waits until the bats have migrated south and then makes minor changes to bridges and other structures that will make the structures unattractive to bat colonies.

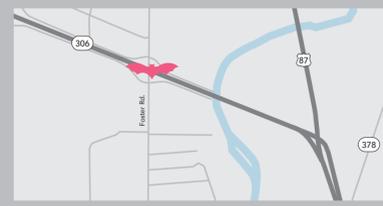
- Bat Facts!**
- Male bats sing during courtship.
  - Bats drink "on-the-fly," swooping over water for quick sips.
  - Baby bats are called "pups."
  - Recent research shows bats climb thousands of feet into the sky and use tail winds to reach speeds near 100 mph.
  - Bats are not blind. Echolocation is a supplement to their excellent vision.
  - Bat knees face backward as an adaptation to bats hanging upside down. Additionally, the tendons in their toes lock, allowing them to hang without using up energy.
  - Bats from a single bridge eat tons of crop pests in a single night. In spring, bats intercept migratory pests before they can reach Texas crops, saving farmers millions annually.

- Bats from a single bridge eat tons of crop pests in a single night. In spring, bats intercept migratory pests before they can reach Texas crops, saving farmers millions annually.



## Foster Road Bridge

San Angelo



The Foster Road Bridge over Loop 306 in San Angelo offers viewing opportunities for Brazilian free-tailed bats. The bats roost in narrow crevices on the underside of the bridge. They first arrive in late March and are wholly absent by the end of November. During the last decade, spring and early summer populations have fluctuated between a few thousand and 150,000 bats. But from late summer through October, when maternity colonies have mostly dispersed, up to 184,000 have been recorded. The best time for viewing is at sunset.

## McNeil Overpass

at I-35

Round Rock



Most people may be familiar with the Congress Avenue Bridge bats in Austin, but there is another bat colony 15 miles north of Austin in Round Rock that offers bat-viewing opportunities with almost as many Brazilian free-tailed bats. Free parking is available at the NAPA Auto Parts store parking lot on a first-come, first-served basis.

## Ann W. Richards Congress Ave. Bridge

Downtown Austin



The Ann W. Richards Congress Avenue Bridge, located in the heart of downtown Austin, hosts one of the largest urban bat colonies in the world, estimated at 1.5 million bats. It is a maternity colony, and mother Brazilian free-tailed bats (aka Mexican free-tailed bats) raise an estimated 500,000 pups each year at the bridge.

Large numbers of bats began roosting in the Congress Avenue Bridge in the early 1980s, shortly after it was renovated. Few people understood how valuable the bats were, and many feared them. Today, Austin loves its bats, and this international tourist attraction brings 140,000 people and as much as \$10 million to Austin every year.

Watch from the lawn of the Austin American-Statesman's Bat Observation Area, which offers educational kiosks year-round and volunteer bat educators on weekend evenings from May through September. You can also get nice views of the long columns of emerging bats from atop the bridge itself. Boat tours are available from Lone Star Riverboats and Capital Cruises.

## I-35 Bridges

at Salado Creek

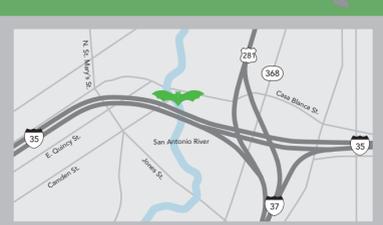
Salado



A large roosting colony of Brazilian free-tailed bats was discovered under the I-35 bridges over Salado Creek in Bell County near the village of Salado. When it was time to replace these bridges, TxDOT estimated the number of bats that roosted there, the amount of roosting habitat the existing bridges offered, as well as the microclimate where the bats roosted. Using this information, TxDOT placed specially designed bat boxes on the new bridges, replacing the habitat that the old bridges offered. The bats occupied the boxes shortly after they were placed. Viewing opportunities are available from Pace Park located off Main Street in downtown Salado; look northwest to the bridge over I-35.

## Camden Street Bridge

San Antonio River Walk



Nestled under the I-35 bridge where it crosses the San Antonio River near Camden Street, a colony of approxi-

mately 50,000 male Brazilian free-tailed bats roosts during the summer months.

Located along the Museum Reach segment of the River Walk, the expansion joint under the concrete bridge is the perfect home. The colony's close proximity to the river gives the bats an open area to glide through when they emerge for their nightly feeding of agricultural pests.

The San Antonio River Authority hosts annual Bat Loco events at the intersection of Camden and Newell streets to highlight the bat colony, educate the public about the importance of bats and spread awareness of bat conservation. The annual "Bat Loco Bash" in August concludes the event series with food trucks, educational booths, kids' activities, and, of course, the bats!

## Los Olmos Bridge

Riviera



A large colony of Brazilian free-tailed bats is present year-round at the bridge over Los Olmos Creek on US 77 near Riviera, 19 miles south of Kingsville. To access from the north heading south, watch for a gravel pull-off area on the west side of the road about 0.1 mile north of the actual bridge. To access from the south, cross over the bridge and watch for a gravel pull-off area on the east side of the road.

## Waugh Drive Bridge

Downtown Houston



Waugh Drive Bridge spans Buffalo Bayou, less than two miles west of downtown Houston. An estimated 250,000 Brazilian free-tailed bats call the bridge home. Upon emerging at sunset, the bats usually fly east along the bayou before dispersing.

While the majority of bats at other bridges and caves migrate to Mexico each winter, many of the Waugh Drive Bridge bats do not. Experts think these bats may make up the largest colony of Brazilian free-tailed bats that resides in Texas all year-round.

In 2006, a bat observation deck was installed in Buffalo Bayou Park, with free parking at Spotts Park. The park gives free bat presentations Thursday through Saturday during summer.

"Bat Chats" occur at the bridge on Friday nights from March through October. Plan to arrive 30 minutes before sunset to hear the presentation. Houston Area Bat Team members are on hand to answer general questions about bats as well as questions about the Waugh Drive Bridge colony.

Buffalo Bayou Partnership offers boat trips on the bayou.

**BEYOND THE ROAD**  
TxDOT

To learn more about TxDOT's Environmental Division, go to [www.txdot.gov](http://www.txdot.gov), keyword "Beyond The Road"

## 32 Bat Species in Texas

Arranged regionally. Color codes correspond to map.

Species Name	Conservation Status	Region	Description
Mexican Long-nosed Bat	Endangered	Trans-Pecos Mountains	( <i>Leptonycteris nivalis</i> ) A medium-size bat with short ears and no tail. This Mexican species enters Texas in the Big Bend Region. This bat is listed as endangered by the Texas Parks and Wildlife Department, although the species is vibrant throughout much of Mexico.
California Myotis	Threatened	High Plains	( <i>Myotis californicus</i> ) A small bat with short limbs and a relatively long tail and ears. This is a western species, found in the Trans-Pecos region of Texas.
Fringed Myotis	Threatened	Rolling Plains	( <i>Myotis thysanodes</i> ) A large bat with large ears featuring short stiff hairs. The species is migratory and can be found in the Trans-Pecos region of Texas during the summertime.
Long-legged Myotis	Threatened	Rolling Plains	( <i>Myotis volans</i> ) A large bat with a relatively long tail, short ears, and large feet. This species occurs in the central range of the Trans-Pecos region of Texas.
Western Red Bat	Threatened	Rolling Plains	( <i>Lasiorus blossevilli</i> ) A medium-size bat with a rusty red to brown coloration. Although this species is found throughout the far western areas of the United States and south into Mexico, only one specimen has been found in Texas in Presidio County.
Townsend's Big-eared Bat	Threatened	Rolling Plains	( <i>Corynorhinus townsendii</i> ) A medium-size bat with extremely large, flexible ears and a noticeable outgrowth on each side of its snout. This bat's coloration is a nearly uniform brown with slightly paler underparts. The bat can be found in the western half of the state.
Southern Yellow Bat	Threatened	Rolling Plains	( <i>Dasypterus ega</i> ) A small bat with a yellowish brown coloration. This species can be found from south Texas all the way down to Argentina. Texas Parks and Wildlife has listed this bat as threatened only because of its limited distribution in the southern part of the state.
Northern Long-eared Myotis	Threatened	Rolling Plains	( <i>Myotis septentrionalis</i> ) A small bat with long ears and a dull, gray-brown coloration. While widely distributed over eastern and northern North America, only one specimen has been collected in south Texas in 1942 from Dimmit County.
American Parastrelle	Threatened	Rolling Plains	( <i>Parastrelle hesperus</i> ) A small gray bat with a distinct black-leathery face. This species can be found throughout the western portion of the state.
Ghost-faced Bat	Threatened	Rolling Plains	( <i>Mormoops megalophylla</i> ) A medium-size, reddish-brown or dark brown bat with leaf-like appendages on its chin. In Texas, this bat resides along the southern edge of the Edwards Plateau and in the South Texas Plains and Trans-Pecos regions.
Eastern Red Bat	Threatened	Rolling Plains	( <i>Lasiorus borealis</i> ) A medium-size, distinctly reddish bat with short ears. This species is one of the few North American species that roosts in open trees rather than caves or tunnels. The Eastern Red Bat travels across the entire state, moving northward in the spring and south in the fall.
Hoary Bat	Threatened	Rolling Plains	( <i>Aeorestes cinereus</i> ) A large bat with short round ears. The coloration is gray to brown with heavily frosted-white tips. This species, like the Eastern Red Bat, roosts in the open and flies across the entire state, moving northward in the spring and southward in the winter.
American Perimyotis	Threatened	Rolling Plains	( <i>Perimyotis subflavus</i> ) A small bat with large ears and pale yellowish-brown underparts. This species can be found in the eastern half of the state, including the Rolling Plains west to Armstrong County and central Texas as far west as Val Verde County.
Northern Yellow Bat	Threatened	Rolling Plains	( <i>Dasypterus intermedius</i> ) A large, yellow-brown bat with short ears and long, silky fur. The distribution of this bat is restricted to the eastern portion of the state, extending from Lamar County southward to Cameron County and westward to Bexar County.
Seminole Bat	Threatened	Rolling Plains	( <i>Lasiorus seminolus</i> ) A medium-size bat with a rich mahogany brown coloration. The distribution of this species is closely related to the pine forests of the eastern regions of Texas, extending westward to Hunt, Dallas, Coryell and Williamson counties.
Rafinesque's Big-eared Bat	Threatened	Rolling Plains	( <i>Corynorhinus rafinesquii</i> ) A medium-size bat with extremely large ears, featuring a dark coloration with white-tipped fur. This species is restricted to a small portion of the pine forests of East Texas.
Pocketed Free-tailed Bat	Threatened	South Texas Plains	( <i>Nyctinomops famosus</i> ) A large bat with extremely large ears, featuring a black coloration and three large white spots (one on each shoulder and one on the rump). This species is uncommon retrieved from Big Bend National Park.
Spotted Bat	Threatened	South Texas Plains	( <i>Euderma maculatum</i> ) A large bat with extremely large ears, featuring a black coloration and three large white spots (one on each shoulder and one on the rump). This species is uncommon widespread in semiarid regions of the western United States, and is only known in Texas from specimens found in Big Bend National Park. The restricted range in Texas has landed this bat a spot in Texas Parks and Wildlife's threatened species list.
Yuma Myotis	Threatened	South Texas Plains	( <i>Myotis yumanensis</i> ) A small bat with relatively large feet. Their coloration is dull and pinkish, although it becomes darker with age, and features a nearly white underbelly. In Texas, this species is found in the southern Trans-Pecos region eastward to Val Verde County.
Western Bonneted Bat	Threatened	South Texas Plains	( <i>Eumops perotis</i> ) A free-tailed bat similar to the Brazilian free-tailed species but nearly seven times as large. This species features a brown or gray brown coloration and is restricted to Presidio, Brewster and Val Verde counties.
Pallid Bat	Threatened	South Texas Plains	( <i>Antrozous pallidus</i> ) A large yellowish-brown bat with large ears and feet. This species of bat is a common resident across the western half of the state.
Western Small-footed Myotis	Threatened	South Texas Plains	( <i>Myotis ciliolabrum</i> ) A small bat with small feet, short ears, and a relatively long tail. This species is primarily found in the Trans-Pecos region of Texas, although multiple records indicate a small population occurring in the High Plains of the Panhandle in Armstrong and Randall counties.
Southwestern Little Brown Myotis	Threatened	South Texas Plains	( <i>Myotis occultus</i> ) A small bat with long glossy-black hairs. Only one specimen of this bat has been collected in Texas in the early 1900s near Fort Hancock in Hudspeth County.
Western Yellow Bat	Threatened	South Texas Plains	( <i>Dasypterus xanthinus</i> ) Easily confused with the Southern Yellow Bat, this species features a brighter yellow underbelly and lacks the dark face coloration. The distribution of this species is restricted to a small region of southwest Texas from Jeff Davis County westward to Val Verde County.
Mexican Long-tongued Bat	Threatened	South Texas Plains	( <i>Choronycteris mexicana</i> ) A medium-size bat with a long, slender muzzle, featuring a gray to brown coloration. This Mexican species can be found in the extreme southern regions of Texas as well as in New Mexico and Arizona.
Cave Myotis	Threatened	South Texas Plains	( <i>Myotis velifer</i> ) A large bat with large feet, short ears, and dull-brown coloration. This species can be found across most of the Trans-Pecos region, south Texas, eastern portions of the Panhandle, north-central Texas, and the Edwards Plateau.
Brazilian Free-tailed Bat	Threatened	South Texas Plains	(aka Mexican Free-tailed Bat) ( <i>Tadarida brasiliensis</i> ) A medium-size bat with broad ears, large feet, short tail, and a coloration varying from reddish to black. This species can be found statewide, although some populations migrate southward to Mexico during the fall. The Brazilian free-tailed colony under Austin's Congress Avenue Bridge is the largest urban bat colony in North America. Additionally, the 10 to 20 million Brazilian free-tailed bats at Bracken Cave near New Braunfels is the largest bat colony in the world.
Silver-haired Bat	Threatened	South Texas Plains	( <i>Lasiurus noctivagans</i> ) A medium-size bat with broad ears, large feet, short tail, and a coloration varying from reddish to black. This species can be found statewide, although some populations migrate southward to Mexico during the fall. The Brazilian free-tailed colony under Austin's Congress Avenue Bridge is the largest urban bat colony in North America. Additionally, the 10 to 20 million Brazilian free-tailed bats at Bracken Cave near New Braunfels is the largest bat colony in the world.
Evening Bat	Threatened	South Texas Plains	( <i>Nycticeius humeralis</i> ) A small black or brown bat featuring small leathery black ears. This species' distribution is throughout the eastern portion of the state west to Clay County in the north and Val Verde County in the south.
Big Brown Bat	Threatened	South Texas Plains	( <i>Eptesicus fuscus</i> ) A medium-size bat with short wings and rich chestnut-brown underparts; ears are small but thick and leathery-black. This species is widely distributed over most of the eastern and western parts of Texas but is curiously absent from the central regions.
Big Free-tailed Bat	Threatened	South Texas Plains	( <i>Nyctinomops macrotis</i> ) A bat very similar in appearance to the Brazilian free-tailed, although much larger. This coloration ranges from light reddish-brown to dark brown, with paler underparts. The distribution of this species is scattered in the Trans-Pecos region, the Panhandle, and the southeastern portions of the state.
Southeastern Myotis	Threatened	South Texas Plains	( <i>Myotis austroriparius</i> ) A small bat with woolly fur, featuring a brown upper body and white-tipped hairs on its underparts. This bat resides in the Piney Woods region of eastern Texas and most of the southeastern United States.

Bat images courtesy of Merlin Tuttle's Bat Conservation; additional images at MerlinTuttle.org