History of the Texas Master Naturalist Re-Certification Pins

The State of Texas has many symbols celebrating its unique natural history – the state flower is the bluebonnet, state large mammal is the Texas longhorn, and state grass is sideoats grama, etc. – all codified and ratified by the Legislature.

Texas Master Naturalists have their own symbols, beginning with the dragonfly certification pin, the Cyrano darner (Nasiaeschna pentacantha). The Cyrano darner is a monotypic genus, widespread in the eastern United States and Canada to Texas. It lives in sheltered forest ponds, streams, and lake coves, and perches on vegetation over water. It has a pronounced frons – essentially face – and blue eyes, and is named for the Cyrano de Bergerac of literature, referring to the prodigious proboscis! Of course, Cyrano was also very well educated and enlightened, as are Texas Master Naturalists.

Each year a Master Naturalist receives a re-certification pin - after a few years, you might have a pretty good collection. These pins have symbolism beyond hours accrued for service; they represent inhabitants and habitats from around the ecological regions of Texas. Should someone ask you about your master naturalist "bling", it might be wise to be prepared with a couple quick facts.

Beginning in **2002**, the very first pin represents a Post Oak leaf. The Post Oak (Quercus stellata) is a large, abundant tree, forming large stands in the prairie transition zones of the Cross Timbers region of Texas. It was used for fence posts – hence, the name. With especially thick taproots, Post Oaks grow best in sandy, rocky soils and tolerate extreme drought. Trees sprout prolifically when cut or burned and encroach rapidly into grasslands if prairie fires are suppressed. Acorns provide high energy food for wildlife. Tough like Texans, Post Oaks survive and thrive in extreme environments. If you own this pin and all the others, we salute you!

The Lindheimer daisy pin in **2003** honors the Father of Texas Botany, Ferdinand Jacob Lindheimer. Lindheimer collected plants in Texas from 1843-1852 and discovered several hundred new plant species. He is buried in New Braunfels; his house and grounds on Comal Street are a museum and garden showcasing his plants. The Lindheimer daisy (Lindheimera texana), also known as Texas Yellow Star, is a pretty little member of the Asteraceae from the Hill Country and is easily cultivated in garden settings. The entire genus is named for the first Texas botanist.

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The Green Treefrog (Hyla cinera) is considered one of the most beautiful treefrogs in North America. It lives throughout the South, in wet and damp habitats, such as swamps, borders of lakes and bayous, clinging to the undersides of green vegetation by day and hunting insects by night, often on house windows. It climbs rather than jumps and has a distinctive call “Duck! Duck!” or “Quank! Quank!” The Green Treefrog is the Louisiana (not Texas!) state amphibian, the model for Kermit the Frog, and the recertification pin for **2004**.

The **2005** pin is a Belted Kingfisher (Ceryle alcyon), a common waterside bird throughout Texas and North America. It announces its presence with a loud, rattling cry and is often seen perching or hovering over water, before plunging headfirst to catch a fish. It is sometimes mistaken for a Blue Jay, Cyanocitta cristata, but a Texas Master Naturalist will quickly learn the difference! Belted Kingfishers are frequently seen along Armand Bayou and other waterways.

The Texas prickly pear cactus (Opuntia engelmanni var lindheimeri) is the official Texas state plant and the **2006** recertification pin. Common in the drier area of South and Central Texas, Texas prickly pear is a thicket-forming and heavy-bodied cactus with a cylindrical trunk and yellow to red flowers blooming in June. Used extensively for food, the fruits - tunas - are eaten raw or preserved by humans and also favored by many birds and animals. Legend has it that the coyote brushes the spines off the fruits with his tail before eating them!

The grass shrimp (Palaemonetes vulgaris), pin **2007**, resides in the inshore shallow waters of the Gulf Coast and its bayous and is a vital decomposer and detritivore and a primary prey for fish and other carnivores. Among the most widely distributed, abundant, and conspicuous shallow water invertebrates, grass shrimp depend on marshes with dense growth of underwater vegetation for food and protection from predators. Loss of marsh habitat due to dredging, bulkheading, and subsidence caused noticeable decrease in grass shrimp abundance, affecting animals higher up in the food chain.

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In 2005, the Texas State Legislature designated Texas purple sage (Leucophyllum frutescens) the Texas native shrub. A member of the Scrophulariaceae (Figwort Family), Texas purple sage is native to central and west Texas southward. Also called Cenizo and Texas barometer bush, its purple blooms may flower any time of the year, noticeably after rain showers. Texas purple sage is our recertification pin for **2008**.

The Texas Salamander is an entirely aquatic, lungless salamander native to the United States and endemic to central Texas. It is the TMN **2009** pin. This is a species of concern, considered vulnerable, as it is known only from the immediate vicinity of spring outflows, under rocks and leaves and in gravel substrate in certain springs in Bexar and Kendall counties. The Texas Salamander receives no protection by either the State of Texas or the Federal Government.

The **2010** pin is the Wood Duck (Aix sponsa). A colorful duck of forested wetlands, many people consider it the most beautiful of all waterfowl. The Wood Duck is one of only a few North American ducks that nest in trees. Nests are often over water, but may be up to a mile away. Ducklings must jump out of the nest to the ground, up to 290 feet, and do so without injury, when it is time to fledge. Wood Ducks eat seeds, acorns and fruits, aquatic and terrestrial invertebrates. Wood Ducks reside throughout Texas all year. Populations are stable or increasing, following declines in the 20th century.

See: Midden 2/2010 for more information about the first ten pins.

The Texas horned lizard, *Phyrnosoma cornutum*, endangered species and Texas legend, is the most common and familiar horned lizard, formerly common in all parts of Texas except the piney woods. It is called a “horny toad” or “horned frog”, although neither a toad nor a frog. (*Phryno* = toad, *soma* = body) It has been the official Texas state reptile since 1993 and is the TMN **2011** re-certification pin. Texas horned lizards eat harvester ants, and have many predators. They are endangered throughout their normal range due to habitat loss, the pet trade, and the arrival of the imported fire ant. The most famous “horny toad” was Old Rip, entombed in a time capsule in the Eastland, TX courthouse in 1897 and found still alive when the capsule was opened 31 years later in 1929! Old Rip is still on display in a velvet-lined casket at the courthouse. So they say.

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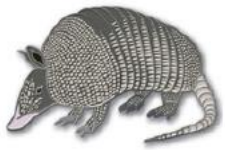
The Mexican free-tailed bat, *Tadarida brasiliensis*, is a medium-sized bat native to the Americas, the commonest species in the southwest, and probably the most numerous non-human mammal on Earth. It is the Texas "state flying mammal" and the **2012** re-certification pin. Nine million Mexican free-tailed bats live in Texas. They roost in colonies near water and prefer caves; Bracken Cave near San Antonio has the largest colony in the world. But, they also famously roost under bridges - the Congress Street bridge in Austin and the Waugh Street bridge over Buffalo Bayou. Leaving their roosts at sunset each night and foraging for flying insects, which they catch in flight, bats eat moths, beetles, dragonflies (!), flies, true bugs, wasps, and ants. Also great pollinators, Mexican free-tailed bats pollinate sugarcane and consume insect pests of sugarcane; therefore, they are the featured icon on the Bacardi rum label.

Probably the best-known butterfly in North America, or maybe the world, for its multi-generational migration, is the Monarch butterfly, Danaus plexippus, named Texas state insect in 1995 and the TMN re-cert pin for **2013**. Monarchs and related species - Southern, Queen and Soldier butterflies - eat milkweed plants and nothing else in their larval stage. Females lay eggs on the undersides of milkweed leaves; the young caterpillars hatch and spend about two weeks munching on milkweeds, ingesting cardiac glycosides from the plants before the chrysalis stage, becoming toxic or at least distasteful to predators. Monarchs are currently a species of great concern.

See: Midden 6/2011 for more information about Monarch butterflies.



The Nine-banded armadillo, Dasypus novemcinctus, is the **2014** master naturalist pin. Tied with the Longhorn for State Mammal of Texas in 1995, the compromise was to name the armadillo the state small mammal and the Longhorn the state large mammal. The Nine-banded armadillo is a relative newcomer to Texas, since the late 1800's, but expanding its range rapidly. Nocturnal and mostly solitary, armadillos dig burrows, have poor eyesight, share a susceptibility to leprosy with humans, and have the habit of jumping into the air when startled, bringing them into frequent collisions with car undercarriages. They can swim and "walk" on the bottom of a river. Armadillos will eat about anything they can

find on the ground or by digging, but most of their diet consists of insects and other invertebrates, including fire ants! We should wear our pins with great pride, just for that.

The symbol on the **2015** recertification pin is our state flower, the bluebonnet (Lupinus texensis). It was chosen for its iconic Texas symbolism and what it means to people of Texas, said Michelle Haggerty, TMN state program coordinator. In 1901 the National Society of Colonial Dames of America in Texas persuaded the Texas Legislature to designate the bluebonnet as the state flower. Alas, the Dames and the lawmakers chose Lupinus subcarnosus, which planted the seeds for a showdown because most bluebonnet fans wanted the state flower to be L. texensis, which is showier than L. subcarnosus. Seventy years later the Legislature ended the bluebonnet war by lumping both species of Lupines together and naming them the state flower. The politicians also said “any other variety of bluebonnet not heretofore recorded” would also be considered the state flower. So L. havardii, L. concinnus,L. plattensis and L. perennis won’t feel left out. Our new pin celebrates the bluebonnet that provides the spring carpet of blue in Central Texas.

The Guadalupe Bass was named official Texas state fish in 1989 and is the Texas Master Naturalist **2016** re-certification pin. Often also called Black Bass or Guadalupe Spotted Bass, it is found only in Texas, favored by sport fishermen, and adapted to life in small streams with fast flowing water, endemic to rivers of the Edwards Plateau - San Antonio River, Guadalupe River, Colorado River, and Brazos River. Populations found in the Nueces River have been introduced. Guadalupe bass numbers have seriously declined due to hybridization, plus habitat loss, threatening the long-term survival of this species, so a Guadalupe bass restoration initiative is underway to re-stock the streams with genetically "pure" young fish.

The Kemp's ridley sea turtle, Lepidochelys kempii, is our **2017** re-certification pin, representing our Texas State Sea Turtle - the world's rarest and most endangered sea turtle. Females come ashore only to lay eggs and only on Gulf of Mexico beaches; males spend their entire lives at sea. Kemp's ridley population numbers plummeted to only a few thousand turtles due to nest predation, beach development, and losses to fisheries. Legal protections enacted by the U.S., Texas, and Mexico and the efforts of many conservation organizations and volunteers since 1985, including

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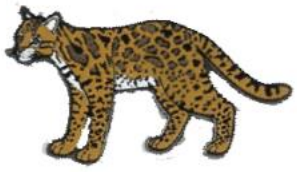
Master Naturalists, have had enormous positive results for the species; turtle numbers have increased and "our" turtle has backed away from extinction's brink.



One hundred years ago, the ocelot subspecies (*Leopardus pardalis albescens*) ranged widely across Texas, Louisiana, and Arkansas. Now, ocelots cling to life in two small populations in South Texas, probably between 50 - 80 individuals, total. The first ocelot group lives on private land in Willacy County (30,000 acres) and very little factual information is known about it. The second makes its home in Cameron County at Laguna Atascosa National Wildlife Refuge (20,000 acres), under the watchful eyes of the US Fish and Wildlife Service. Normally solitary and territorial, these beautiful nocturnal carnivores are trapped on two habitat "islands", surrounded by humanity and its accomplishments. Considered a species of Least Concern, still these creatures are protected wherever they live and are in grave danger of extinction in Texas. Master Naturalists will wear the ocelot re-certification pin in **2018**, because Texas is the last home for ocelots in the U.S.

2019 was the year the pin almost never came, but it was worth the wait! The Golden-cheeked warbler (*Setophaga chrysoparia*) is a Texas Hill Country bird, breeding only in Ashe juniper/mixed forests and building its nests from juniper bark. Look for it in many Texas state parks (SP) and natural areas (SNA), including: the Colorado Bend SP, Dinosaur Valley SP, Garner SP, Guadalupe River SP, Honey Creek SNA, Hill Country SNA, Kerr Management Area, Longhorn Cavern SNA, Lost Maples SNA, Meridian SP, Pedernales Falls SP, and Possum Kingdom SP, but only from March until August; it spends the rest of the year in Central America. Habitat loss from development and timber-cutting has caused population numbers to plummet and the golden-cheeked warbler is a critically endangered species.

The American bumblebee (*Bombus pensylvanicus*), subject of the **2020** re-cert pin, was first identified in 1773. In colonial times it was a common species - now in serious decline and quite uncommon. Bumblebees are large, hairy, yellow and black bees with long, hairy tongues for reaching down long flowers for nectar. Bumblebees are important pollinators. The "bumble" refers to the buzzing sound they make.

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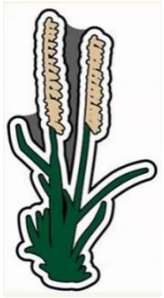
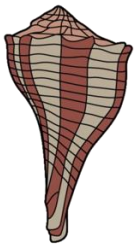
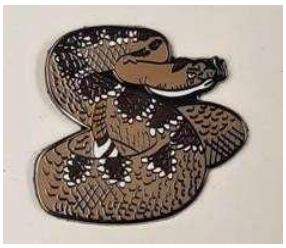


The state grass of Texas, so designated in 1971, is Sideoats grama, *Bouteloua curtipendula*, our **2021** re-certification pin. This tough, prairie grass grows in nearly every region of Texas. An important forage grass for many grazing animals, it is as important to rancher's cattle as it was to the bison before them. It is named for its side-hanging flowering spikelets. It prefers drier habitats than our Gulf Coast, so is not seen on our prairies, but would do well in anyone's sunny garden.



The Texas Lightning Whelk, (*Busycon perversum pulleyi*), is our **2022** re-certification pin. With a distinctively Texas distribution from Breton Sound, Louisiana to the coast of northern Mexico, the Texas Lightning Whelk was designated the State Shell of Texas in 1987. The lightning whelk is a carnivore and spends most of its life buried in the bottom sediments, preferably near seagrass beds, eating clams and anything else it can get. It is one of the largest shells found on Texas beaches and is easy to identify because of its opening on the left side, as observed by you when holding it up. Watch for shells and egg-cases on the beach and wear your pin with pride.

The **2023** TMN re-cert pin is a map of Texas, featuring 11 ecoregions: Pineywoods, Oak Woods & Prairies, Blackland Prairies, Gulf Coast Prairies & Marshes, Coastal Sand Plains, South Texas Brush Country, Edwards Plateau, Llano Uplift, Rolling Plains, High Plains and Trans-Pecos. Texas' large biodiversity reflects its huge size and variations in underlying geological histories and climate. Average temperatures decrease from west to east and south to north; rainfall amounts increase, while elevations decline steadily from west to east. Put it all together and we live in a huge mosaic of habitats. Take time to learn about them while celebrating our own Gulf Coast Prairies & Marshes!



The **2024** re-cert pin represents the western diamondback rattlesnake (Crotalus atrox), a venomous pit viper and the second largest rattlesnake in North America and Mexico. It resides in all habitats throughout Texas except the wettest areas - even on the dunes in Galveston. A heavy-bodied snake with a triangular head with two diagonal lines on each side of the face, dark diamond-shaped patterns along the back and black and white bands just above the rattles, it is a solitary predator, most often active at night Although not usually fatal to humans, it will strike and inject its venom if threatened - even the youngest snakes! Western

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diamondbacks may live up to 20 years and are a species of Least Concern.

Our **2025** re-certification pin depicts the Greater Roadrunner, (Geococcyx californianus), a year-round Texas resident, recorded in all counties. The roadrunner is a ground-dwelling cuckoo, - largest of the Americas - a strong runner, but weak flier that nests and roosts in small trees or shrubs. As with the nine-banded armadillo, it has expanded its range and appears to take advantage of the human-induced changes on the land of Texas. It is omnivorous and, in fact, is known to eat western diamondback rattlesnakes!

The **2026** re-cert pin represents the Texas Bobcat (*Lynx rufus texensis*) our state's most common wild cat. With more than 200,000 bobcats counted living in our woodlands, canyons, swamps, deserts, agricultural and suburban areas, Texas has the largest bobcat population in the United States. Bobcats are opportunistic hunters, slightly larger than most housecats, nocturnal or crepuscular, fond of rabbits, rodents, birds and occasional reptiles. When will you earn this pin?

See: Midden 2/2026 for more information.

(Further information may be found in Midden Archives: 2/2010, 4/2011, 6/2011, 2/2012, 2/2014, 2/2015, 2/2016, 2/2017, 2/2018, 2/2019, 2/2020, 2/2021, 2/2022, 2/2023, 2/2024, 2/2025, 2/2026)