



# Oaks and Prairies Wildlifer

A newsletter for landowners in the Post Oak Savannah  
and Coastal Prairies Regions of Texas

TEXAS  
PARKS &  
WILDLIFE

July 2022

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## District Field Notes

BY DAVID FORRESTER

Well, we're finally experiencing a true summer. I really think the last two years, we dodged the major dog days of summer and experienced rather mild temperatures and decent rainfall. This year, we're setting record high temperatures in June and have gone significant days without any moisture. The area around La Grange and going northeast towards Bryan/College Station has probably fared the best of most of south-central Texas. As you travel south and west from La Grange, things continually get drier and range conditions worsen. Unfortunately, there is nothing in the near forecast that gives any hope for relief. I don't like looking for tropical activity to give us some help, but that may be the only way we get any measurable moisture in the short term.

Biologists have completed their dove surveys and have started trapping doves again this summer. Both mourning dove and white-winged dove are trapped and banded this time of year. Along with the survey data, the band data collected on doves during dove season gives us a good estimate of population numbers and is used to combat any restrictions that the U. S. Fish and Wildlife Service might want to put on dove hunting, whether it be season lengths or bag limits. Additionally, biologists are getting ready to begin running Deer Management Unit (DMU) spotlight lines. Spotighting begins the end of July and runs into September. Again, this year we're excited to see what sort of numbers we get back on these DMU lines. As many of you know, we implemented a 4-day antlerless season 3 years ago around Thanksgiving. Look for the article in this newsletter for more specific information on harvest numbers to date.

We experienced a below average spring in most of the district and we're behind on rainfall. June has been extremely hot and dry. Habitat conditions overall are below average. Fawn production so far appears to be normal, but fawn survival may suffer if fawning cover is lacking. Antler production will probably be a bit below average. If we continue dry and poor habitat conditions into the fall, we should be looking at deer readily coming to feeders.

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### *State of the District, continued*

With the initiation of Managed Lands Deer Permit (MLDP) fees, we hired an additional biologist for the district last August. Jon McLeod began his tenure with Texas Parks and Wildlife Department on August 1, 2021. Jon covers Fort Bend and Austin Counties. This freed up Mark Lange to cover only Colorado County. Additionally, we moved Clint Faas to cover Wharton and Northern Jackson Counties. This freed up Brent Pierce to cover only Lavaca County. Todd Pilcik, who covers Brazoria and Matagorda Counties will now also cover southern Jackson County. The intent of this MLDP fee was to be able to hire additional “boots on the ground” to ease demand on some of our biologists with large numbers of cooperators. So, we just hired a second biologist for District 7. Lee Williamson was hired and started on July 1, 2022. Lee is going to cover DeWitt County. Meagan Lesak will now take over Goliad and Refugio Counties. This will leave Shannon Grubbs with Calhoun and Victoria Counties. The plan is this additional work force allows us to reduce demand on some of our biologists and then they can provide greater quality service to their cooperators. I plan on seeing more landowner site visits, more landowner workshops, and more landowner field days. I want to see our biologists out on the landscape more providing good habitat management recommendations to landowners and managers. This includes the stand-alone cooperators, as well as, our wildlife management association members.

This summer has been extremely hot and dry so far. Stay hydrated and concentrate activity in the early morning or late evening, but make sure you and yours get out and enjoy the wildlife and habitat on your piece of Texas.



*David Forrester is the District 7 Leader in La Grange. He has been with TPWD since 2001 when he started his career as the TPWD wildlife biologist for Fort Bend and Wharton counties. David has a Bachelor of Science in Agricultural Economics and a Bachelor of Science in Wildlife and Fisheries Sciences, both from Texas A&M University, and a Master of Science in Range and Wildlife Management from Texas A&M University-Kingsville.*

# TPWD Urges Texans to Support Landmark Wildlife Bill

WRITTEN BY LOUIE BOND

*Bipartisan legislation will help fish and wildlife while boosting the economy.*

For decades, Texas biologists have toiled over solutions for species teetering on the brink, with some success.

- White-tailed deer, nearly wiped out by unregulated hunting in the 1900s, are now plentiful.
- Down to seven nesting pairs of bald eagles in Texas in the 1970s due to DDT — now there are 200-plus pairs here.
- Fewer than 100 brown pelicans existed in the 1970s, and now they're off the endangered species list.
- American alligators, with their valuable skin, were upgraded from endangered (1967) to threatened in 20 years.
- Aplomado falcons, Kemp's ridley sea turtles, eastern wild turkeys, peregrine falcons and so many other Texas animals have come back from near extinction, thanks to the efforts of conservationists.



But what if we could help more species, and help them earlier, before their situation becomes dire?

The answer has come in the form of proposed bipartisan national legislation — the Recovering America's Wildlife Act, or RAWA.

With broad bipartisan support, RAWA is poised for upcoming votes in the U.S. Senate and House of Representatives. The Texas Parks and Wildlife Department is asking Texans to voice their support for this ground-breaking conservation legislation that would bring nearly \$1.4 billion in new funding nationally, with \$50 million earmarked for Texas fish and wildlife. The money would come from existing revenues, so there would be no new taxes.

"The Recovering America's Wildlife Act represents one of the most promising and potentially transformative pieces of legislation that Congress has considered in decades to help benefit conservation," says TPWD Executive Director Carter Smith. "RAWA is at a pivotal place in Congress right now — that's where we need your help. I hope that you'll join me and the Texas Alliance for America's Fish and Wildlife with our "Crossing the Finish Line" campaign as we encourage members of congress to help support this critically impactful and needed piece of conservation legislation."

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### *TPWD Urges Texans to Support Landmark Wildlife Bill, continued*

What would these new funds mean for Texas wildlife and those who love our iconic species? The agency plans to apply funds to implement the Texas Conservation Action Plan, a statewide “road map” for research, restoration, management and recovery projects addressing Species of Greatest Conservation Need (SGCN) and important habitats, along with much-needed fish, wildlife and nature education programs.

The funding is needed more than ever, as one-third of all fish and wildlife species are at risk of extinction. Experts have identified 12,000 species of concern nationwide, including more than 1,200 in Texas. RAWA funds will help restore fish and wildlife habitat such as grasslands, prairies, forests, rivers, bays, and estuaries.

RAWA helps people as well as wildlife. Texas’ growing multimillion-dollar outdoor recreation industry depends on protecting these species and their habitats, offering more for Texans who now seek to be outdoors more than ever. Spending time in nature provides many physical and mental health benefits, and RAWA’s transformative funding would invest in future generations through increased nature education and wildlife-associated recreation. If passed, \$12 million would be available each year to invest in nature education, with an additional \$6 million a year to invest in providing more and better outdoor recreation opportunities such as hiking, paddling, bird watching and nature photography.

New jobs will come with new projects. RAWA could spark thousands of new public/private “shovel-ready” jobs for wildlife management, tree planting, river restoration and wildlife reintroductions.

Recovering America's Wildlife Act is the kind of breakthrough that comes once in a generation. Here’s how to contact your elected officials to tell them you support it:

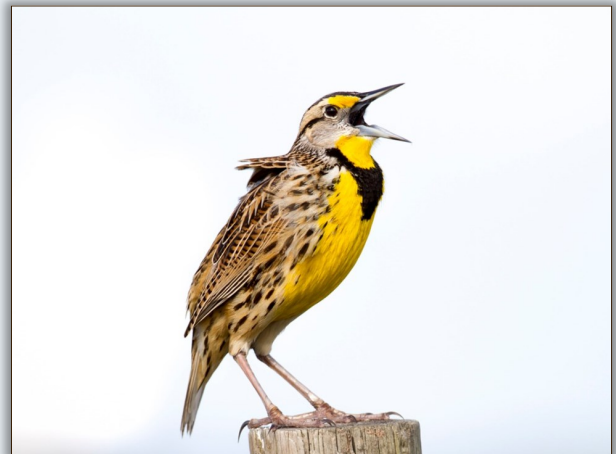
*Senator Ted Cruz: (202) 224-5922 Senator John Cornyn: (202) 224-2934*

*Your U.S. Representative: Use <https://www.congress.gov/members/find-your-member>*

*More resources: [www.txwildlifealliance.org/take-action](http://www.txwildlifealliance.org/take-action)*



*Kemps Ridley Sea Turtle. Photo©TPWD*



*Meadowlark. Photo©TPWD*

# How Times Have Changed: 20 Years of Antler Restrictions

WRITTEN BY MARK LANGE

To say many things have changed over the last 20 years would be an understatement. For this article I will focus on the changes we have seen in buck harvest 20 years after the 13-inch inside spread restriction was implemented. Prior to the antler restriction regulation, Wildlife Management Associations, as well as other organized wildlife groups, and individual landowners realized change was needed to protect young bucks and worked with Texas Parks and Wildlife Department (TPWD) to find a solution. This resulted in the 13-inch antler spread restriction regulation. While today we know the restriction isn't perfect, it has become very difficult to find anyone that doesn't think it has drastically improved the buck herd in this area and specifically the original 6 counties.

The first counties in Texas to have antler restrictions were Colorado, Austin, Lee, Fayette, Washington, and Lavaca Counties. In my career with TPWD working in some of those counties, I am frequently told how prior to the antler restriction if you saw any buck, you harvested it. While there may have been some respectable bucks harvested occasionally prior to the restriction, most hunters seemed to want to talk about how many points a buck had rather than the Boone and Crocket Score. Likely, this was because most bucks harvested then were young and didn't score much. The goals of implementing the restriction were to improve the buck herd age structure and increase hunter opportunity. Prior to antler restrictions, tremendous hunting pressure across the landscape resulted in a high harvest rate of 1.5-year-old bucks. Obviously, that made it incredibly difficult if not almost impossible to see mature bucks reach their full antler growth potential.

Fast forward 20 years and how the times have changed. The 13-inch antler restriction was based on research that showed that most bucks would have at least 13 inches inside spread of the main beams by 3.5 years old. The intension of the restriction was to protect more of the younger age class deer and provide them the opportunity to get to at least 3.5 years old. Like we did prior to the restriction, TPWD staff are always working to collect data on antlers during the hunting season. That is still in large part to monitor the effects of this restriction over time. The implementation of the mandatory harvest reporting deadlines for all Managed Lands Deer (MLD) cooperators starting in 2017 has also increased the confidence in estimating the overall number of bucks being harvested by MLD cooperators. Results of that data collection over the last 5 years show that in the original counties of the antler restriction, 70% of the bucks harvested are at least 3.5 years old whereas prior to the restriction only 20% of harvested bucks were 3.5 or older. Data collected by official scorers shows that 4.5-year-old deer specifically make up 42% of that subset. Additionally, 5.5+ year old deer make up 33% of the harvested 13 inch and greater bucks while 25% are 3.5 years old.

When we look at statewide averages in buck scores by age class from 2005-2020, 3.5-year-old buck scores vary by only a small margin statewide with only 3 inches difference across all ecoregions (range 112 6/8-109 5/8). Excluding the Edward Plateau region, there is also minimal variation in 4.5-year-old bucks with only 4.5 inches difference on average across ecoregion (120 2/8-124 6/8). Antler data from 5.5+ year old bucks across ecoregions shows more difference, but maybe not as drastic as many people would assume. A South Texas buck that is 5.5+ years old has an average score of 133 6/8 while bucks from the Post Oak Savannah Ecoregion where the antler restriction originated averages 123 7/8.



*Photo@TPWD*

*Continued on page 6*

*How Times Have Changed: 20 Years of Antler Restrictions, continued*

With data suggesting average age class of harvested bucks is increasing with time, the antler restriction is producing the desired outcome. Having higher abundance of mature bucks on the landscape has led to more balanced buck/doe ratios and higher deer density in many areas. The original 6 counties of the antler restrictions are now regularly producing 150+ inch bucks and some scoring considerable higher. Does that mean every buck out there is 13 inches or wider by age 3.5? No, most people that spend much time looking at bucks know there will be some out there that appear to be older but do not meet the restriction. However, most bucks will eventually reach the 13 inch minimum with age. It would be an entirely separate article to discuss genetics and all the variables that come into play for antler quality. What I will mention is that the doe provides half of the antler genetics, and the bucks offspring are not guaranteed to possess his antler traits. The success of the antler restriction in the original 6 counties is obvious and why it is now regulation in 117 Texas counties. A similar regulation has also been implemented in a few Texas counties for mule deer in recent years.



*Bucks harvested prior to the antler restriction.  
Photo©Jack Holman,  
Colorado County Landowner Representative*

While the legal restriction being implemented resulted in more hunting opportunity for quality bucks, it has also made landowners and hunters realize the potential of Post Oak Savannah whitetails. Now harvesting a 130-inch buck, while still a buck to be proud of, will not be the talk of the county like it would have been 30 years ago. Simply put, the restriction has also been a learning tool for local landowners and hunters. More hunters now have learned to age bucks on the hoof and resist harvesting younger bucks resulting in trophy quality improving over time.

Now after 20 years what can we do as hunters to make it even more successful? Never underestimate the importance of habitat management. The restriction has allowed for the deer to reach maturity, but nutrition found in the form of quality habitat will aid in producing quality bucks as well as healthy does and fawn survival. Having quality habitat conditions will also maximize the chances of those deer frequenting your property, which in turn improves your chances of being able to harvest one. The highest scoring bucks are usually in the older age classes (5.5+). Resisting the temptation to harvest young bucks that are legal will increase the potential of having higher quality bucks.

Last but not most certainly not least, get your bucks scored regardless of size!! The antler data supplied in this article comes from hunters bringing deer to certified scorers and it is important to say we are not just looking to score the “big bucks”. We need the data from all bucks to make the data meaningful. All TPWD biologist are certified Texas Big Game Awards (TBGA) scorers, and a few are also certified Boone and Crocket Scorers. When you harvest a buck of any quality contact your local biologist ([Find Your Biologist](#)) to get it scored. There are also additional TBGA and Boone and Crocket scorers in most counties and a list for those scorers can be found here [TBGA Official Scorers](#). You can get a copy of the scoresheet from any certified scorer and supply it to your local TPWD biologist so that the data is used. As landowners and hunters, I applaud you for being a large part of the success of the restriction and look forward to seeing more of the rewards in many years to come.

*Mark Lange is the wildlife biologist for Colorado County where he started in June 2012. He grew up in the Texas panhandle in the small town of Nazareth. He attended West Texas A&M University where he completed his Bachelor of Science Degree in Biology/Wildlife Science in 2006 and his Masters of Science Degree in Biology in 2011. Mark offices out of the Columbus field office. Mark has diverse interests and enjoys working with landowners towards their management goals.*



# 2021-2022 Antlerless Deer Harvest Breakdown: District 7

WRITTEN BY BOBBY EICHLER

This past deer season completed the third season in which the ‘Thanksgiving Doe Days’ were implemented across much of District 7. With the implementation of mandatory reporting for antlerless deer harvested under county regulation, as well as, harvest reporting requirements for Managed Lands Deer (MLD) cooperators, staff get a good idea of the overall harvest occurring across the district. Antlerless harvest was reported in the January 2022 Oaks and Prairies Wildlifer but did not include late season harvest (January) or the MLD harvest. Since buck harvest reporting is not mandatory, this summary will cover just the antlerless portion of the harvest during the 2021-2022 season.

First, we will look at the antlerless harvest which was conducted under the normal county regulations; this would include archery, both early and late youth seasons, the 4-day general antlerless season (Thanksgiving Doe Days), and muzzleloader season. This harvest is gathered from the mandatory reporting requirement. During these seasons combined for the 2021-2022 season, 2,581 antlerless deer were reported across 16 counties (Table 1). The 2021-2022 season had 975 less doe harvested than from the prior season, or a 27.4% reduction. Since mandatory reporting is not required south of highway US 59, this data does not represent the southern portions of Wharton, Jackson, Victoria, or Goliad counties.

Second, properties receiving MLD permits accounted for the remaining 80.2% of the antlerless harvest, an additional 10,516 deer. MLD antlerless harvest saw a reduction of just over 14% from the previous season. Combining antlerless deer from the county regulation portion and the MLD cooperators totaled 13,097 antlerless deer for the 2021-2022 season, also a reduction from the previous year of 17.3% when 15,851 antlerless deer were harvested across the 16 counties.

Lastly, we will look at a subset of counties that are not bisected by US 59 (Table 2). Within these counties, all harvested antlerless deer should be reported whether by harvest by a license holder or a MLD cooperator.

Table 1: Antlerless harvest by season and county for the 2021-2022 deer seasons. Data represents low fence acreage only.

County	Archery	Archery and Youth-Only	4 Doe Days	General*	Muzzleloader and Late Season Youth	Harvest Option MLD	Conservation Option MLD	Total Harvest	MLD Portion of Harvest	County Regulation Portion of Harvest
Austin	10	10	68	1	0	5	188	282	68%	32%
Bastrop	32	9	147	1	9	49	168	415	52%	48%
Caldwell	27	8	117	3	11	59	255	480	65%	35%
Colorado	34	4	171		8	39	969	1225	82%	18%
Dewitt	40	13	276		15	92	1574	2010	83%	17%
Fayette	28	11	201	3	29	70	598	940	71%	29%
Goliad	11	3	112	2	8	165	1024	1325**		
Gonzales	13	4	142	2	15	113	477	766	77%	23%
Guadalupe	21	2	100	1	13	24	395	556	75%	25%
Jackson	17	1	42		5	35	453	553**		
Lavaca	41	17	205	1	10	47	1182	1503	82%	18%
Lee	45	13	139	3	17	64	288	569	62%	38%
Victoria	11	0	59	1	2	95	1503	1671**		
Waller	5	0	31	0	2	59	12	109	65%	35%
Washington	19	2	105	2	7	68	171	374	64%	36%
Wharton	5	3	33	1	2	67	208	319**		
<b>Total</b>	<b>359</b>	<b>100</b>	<b>1948</b>	<b>21</b>	<b>153</b>	<b>1051</b>	<b>9465</b>	<b>13097</b>		

\* Reported antlerless harvest during the general rifle season but outside the 4-day antlerless season (illegal).

\*\* County is split by Hwy 59 so mandatory reporting not in effect south of Hwy 59, because of this 'Total Harvest' does not include harvest during 30-day antlerless season south of Hwy 59.

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### 2021-2022 Antlerless Deer Harvest Breakdown: District 7, continued

Table 2 gives a summary of the past 3 hunting seasons and the antlerless harvest. As you can see, the 2020-2021 season had the highest harvest while the 2021-2022 season was the lowest. Table 2 also breaks the antlerless harvest down by acreage across a county, as you can tell the antlerless harvest is still very conservative and ranges anywhere from a doe harvest for every 285 acres (DeWitt) to a doe harvest for every 3,000+ acres (Waller) with most falling in the 300 – 900 acre per harvested doe range.

As always, staff biologists will continue to closely monitor summer census data (i.e. spotlight counts) in conjunction with harvest data. This seasons decrease in the antlerless harvest has not caused concern within our District 7 biologists. When surveyed, biologists felt the largest factor in the decreased harvest was due to very mild weather during the fall and early winter, and the early onset of winter forbs. With killing frost not really occurring until early to mid-December, there was never a ‘pinch’ period for forage, resulting in less movement of deer and harder hunting. Biologists also pointed out rainy weather during the Thanksgiving period, likely resulting in less hunting pressure.

Table 2: Total harvest and acres per harvested antlerless deer, by county and season. Data represents low-fence properties only.

County	Antlerless Deer Harvest			Acres per Harvested Antlerless Deer		
	2019-2020	2020-2021	2021-2022	2019-2020	2020-2021	2021-2022
Austin	285	283	282	1421	1431	1452
Bastrop	559	573	415	1015	991	1433
Caldwell	588	663	480	585	519	741
Colorado	1440	1331	1225	419	453	496
Dewitt	2236	2473	2010	254	229	285
Fayette	1202	1164	940	494	510	657
Gonzales	889	965	766	753	694	894
Guadalupe	705	758	556	635	591	829
Lavaca	1728	1805	1503	335	321	389
Lee	657	737	569	605	539	729
Waller	102	113	109	3246	2930	3094
Washington	368	416	374	1066	943	1083
Total	10759	11281	9229			



*Bobby Eichler is the Technical Guidance Biologist for the Oak Prairie District. He has Bachelor and Master of Science degrees in Forestry both with emphasis in Game Management, from Stephen F. Austin State University. A native of Giddings, Bobby started his TPWD career in East Texas before moving to La Grange in 2007.*



# Species Spotlight: Southern Crawfish Frog

WRITTEN BY RACHEL LANGE

The Oaks and Prairies region of Texas offers a range of habitats and consequently hosts diverse species of wildlife. Residents and visitors can enjoy spotting an iconic white-tailed deer or monarch butterfly, a beautifully camouflaged timber rattlesnake, or hear the sounds of migrating sandhill cranes passing over in the fall. No less intriguing however are our smaller, less apparent wildlife. One such species we're fortunate enough to share our spaces with is the southern crawfish frog (*Lithobates areolatus areolatus*).

This robust, spotted frog with large eyes and a big mouth calls our region home. The southern crawfish frog is a resident of prairies and wetlands and, as one might expect, is associated with crayfish burrows. Typically, soils in areas inhabited by southern crawfish frogs will have a large clay component. Clay soils can be shaped, and will hold that shape, more readily than sands or silts thus enabling crayfish to construct the familiar chimneyed burrows that dot our moist prairies. Southern crawfish frogs, as well as other wildlife, utilize these burrows for refuge. Based on studies at the Attwater Prairie Chicken Refuge located in Colorado County, individual southern crawfish frogs utilized multiple burrows and were in those burrows approximately 30 percent of the time.

When southern crawfish frogs are not inside crayfish burrows, they may be found on "feeding platforms"- small patches of bare ground just outside the burrow. The frog will sit on the feeding platform waiting to ambush prey. Southern crawfish frogs will travel between burrows or from burrows to ponds. In the Attwater Prairie Chicken Refuge study, straight-line distances of frog movements were documented as averaging 344 yards with a maximum movement of 682 yards. These movement distances occurred over a period of several days.

Breeding takes place within low areas of the prairie which become ponded with sufficient rainfall. Southern crawfish frogs breed during late winter through early spring, at which time they travel from their burrows to the breeding pond, forming choruses and mating. To attract mates, male southern crawfish frogs produce a call that is described as a deep snore. Females lay gelatinous masses of eggs, usually near tall grasses. Tadpoles hatch, feed on various organic matter in the water, and finally metamorphose. Southern crawfish frogs will not reach reproductive maturity until at least three years of age.

In Texas, the southern crawfish frog is considered "vulnerable" based on the standardized NatureServe Conservation Status Assessment technique.



Top: Adult Southern crawfish frog.

Photo©James Harding

Bottom: Juvenile Southern crawfish frog.

Photo©Andrew Harding



Aerial view of monitored habitat showing frog locations near a breeding pond . ©

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**Species Spotlight: Southern Crawfish Frog, continued**

Texas Parks and Wildlife Department lists the southern crawfish frog as a “Species of Greatest Conservation Need.” Our concern for this species is largely driven by the usual suspects – habitat destruction and habitat fragmentation. Conversion of prairies to row crop agriculture, urban development, transportation infrastructure, or other uses incompatible with the habitat requirements of the southern crawfish frog has greatly reduced habitat and has undoubtedly led to population declines for this species. The introduction of carnivorous fish to

the breeding waters needed by southern crawfish frogs has also been identified as a conservation challenge.

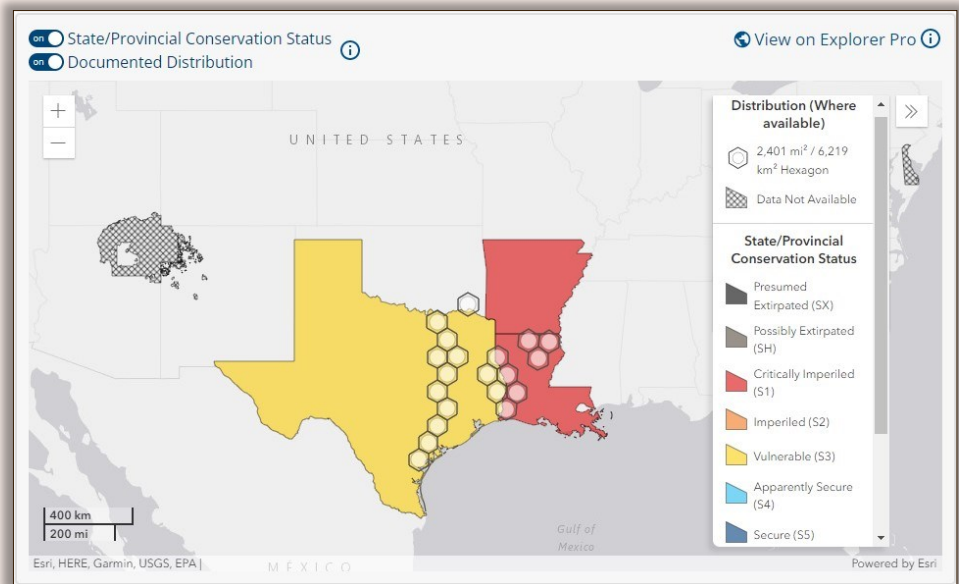
If you observe a southern crawfish frog, please consider uploading your observation using iNaturalist. Texas Parks and Wildlife Department offers the Herps of Texas project within iNaturalist; submitting observations of reptiles and amphibians will help our



Visit iNaturalist to add observation data for southern crawfish frog and other species. Photo©Herps of Texas

biologists better understand occurrence patterns and population trends for wildlife across our state, leading to more informed wildlife management decision-making and conserving our natural resources for generations of Texans.

*Southern crawfish frogs are found in the eastern part of Texas, where populations are considered “vulnerable”.*  
Figure©Nature Serve



Rachel Lange is a wildlife biologist in TPWD’s Wildlife Habitat Assessment Program, where she reviews development projects across 41 counties in southeastern Texas, including all of the Oak Prairie District. Rachel graduated from West Texas A&M University with a Bachelor of Science in Wildlife Biology and a Master of Science in Biology. Before joining TPWD in the fall of 2015, Rachel worked for Texas A&M AgriLife Research and then in private environmental consulting. Rachel strives to assist project developers in lessening negative impacts to Texas’ wildlife and other natural resources through a collaborative approach.

# Indicator Species

WRITTEN BY ROBERT TRUDEAU

In the United States the foundation for the profession of wildlife management was established in the 1930's. First, Aldo Leopold was granted the first university professorship in wildlife management at the University of Wisconsin, Madison. Second, Leopold's textbook 'Game Management' was published in 1933. Third, The Wildlife Society was founded. Fourth, the Journal of Wildlife Management began publishing. Finally, the first Cooperative Wildlife Research Units were established. Fast forward a few decades and it is evident that while conservation efforts continue to make beneficial impacts, some areas are still facing a wide variety of challenges. There is no denying that wildlife populations and habitats are continuing to change with the influence of human population growth and land fragmentation. Determining if changes are positive or negative is part of the job for wildlife biologists.



*Monarch butterfly. Photo@Chris Chow*

Wildlife biologists may rely on "Indicator Species" over time to determine the ongoing trends of our wildlife and their associated habitats. Indicator species are individual species or a group of species (plant or animal) that are sensitive to environmental changes. They can provide us with an indication of current environmental conditions. Being sensitive to their environment, indicator species can provide information regarding pollution, soil contamination, species competition, habitat fragmentation, habitat loss, disease outbreaks, and even climate change. A good indicator species should be easily observed and should respond quickly to changes in their environment. Thus, they should be relatively common. Ideal species should also be extensively studied, have a high reproductive rate, and have a specialized habitat requirements such as some endangered species. Another potential factor for a good indicator species is its value as an economically important species.

Indicator species are important components of our environment and should be continually monitored over time. Indicator species or groups of species include, but are not limited to, monarch butterflies, salamanders, bats, river otters, and black-tailed prairie dogs.

Monarch butterfly populations, in a significant decline over the past 25 years, are being monitored to evaluate the environmental health of the North American continent. This research is focusing on the combined effects of habitat loss, pesticide use, climate change, and pollution.

Due to their highly permeable skin that must remain moist for them to survive, salamanders make good indicator species for research within their range to monitor the effects of pollution, drought, water quality, and climate change.

Many bat species are indicator species because they manipulate their habitat by spreading seeds and act as pollinators, while some serves as highly refined insectivores. This makes many bats an ideal indicator species when monitoring habitat loss, fragmentation, urbanization, chemical pollution, light pollution, droughts, and agricultural variations.

River otters are an apex predator of aquatic systems. Bioaccumulation of toxins and pollutants through their diet makes this species a common indicator of water quality and pollution within our streams, creeks, and rivers.

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*Indicator Species, continued*

Black-tailed prairie dogs can be used as an indicator species. They create expansive colonies in which their burrow systems may total hundreds of miles. Also, the structure of their burrows and colonies have been well documented in hosting over a hundred other specialized insects and unique or rare wildlife species. Because they influence the environment in which they live, prairie dogs help conservationists determine the trends in habitat loss, fragmentation, and pesticide use across the Great Plains. They are also unique, as they are a primary food source for the endangered black-footed ferret. Therefore, by utilizing the black-tailed prairie dog as an indicator species in research, it allows for a better understanding of the impacts of habitat loss, land fragmentation, pesticide use, and agricultural practices for the recovery of the endangered black-footed ferret and many other species of conservation need.

As land managers here in the great state of Texas, we should want to know how our activities on the landscape change and alter the habitat for wildlife species. If we can identify a good indicator species and manage the habitat to benefit that species, we may be increasing the overall health of the habitat for other species and for future generations.



*River otter. Photo©TPWD*



*Robert Trudeau is the Wildlife Biologist for Bastrop and Caldwell counties and offices out of Bastrop. He graduated from Tarleton State University in 2011 with a Bachelor of Science in Wildlife Management and a minor in Biology. Robert was hired by TPWD in 2013, where he filled the position of Resource Specialist for the Lost Pines Complex until accepting his current biologist position in 2014. Prior to working for TPWD, Robert has also worked as a Biological Science Technician for the US Fish and Wildlife Service in South Dakota, Illinois, and Nebraska.*

## Spotlight: Edible Plant Recipe

SUBMITTED BY PAT ABRAMSON, PLANT PARTY PARTICIPANT

**POKE PLANT:** Makes beautiful fresh flower arrangement. Seeds still used as dye. Leaves rich in Vitamin C. Boil 2x, or just eat young leaves just in spring. Don't eat when stem and leaves take on purple color. Native Americans used leaves as poultice for rheumatism. Root tea used for eczema and to reduce swelling of infected wounds. Was also used as laxative and emetic.

### PATTY'S POKE & CHEESE CASSEROLE

*(First Place Winner at 2001 Ladonia, TX, Annual Poke Sallet Festival)*

#### Ingredients:

*6 slices bread, cut in quarters*

*Pre-boiled poke sallet, equivalent to 16 oz. of bagged spinach*

*1 medium onion, sliced*

*4 eggs*

*2 c cheddar cheese*

*2 c milk*

*½ t salt*

*Pepper to taste*

*Grated Parmesan cheese*

*Double boiler*

*Poke weed. Photo@Clinton Faas, TPWD*



#### Directions:

*In buttered casserole dish place bread snugly. Mix eggs, 1 cup cheddar cheese, milk, Salt and Pepper. In large mixing bowl add poke to egg mixture and "slosh around." Pour poke and egg mixture on bread. Top with onion slices. Sprinkle with Parmesan cheese. Top with second cup of cheddar cheese.*

*Put casserole in double boiler (i.e., put casserole in a larger casserole dish filled with hot water). Bake at 350° until firm (about 45 minutes). Wrap leftovers in plastic wrap and freeze for individual servings that can be microwaved, or in tinfoil to be reheated in oven.*



TEXAS  
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## Texas Coastal Prairie Conference: PRESERVING LANDS AND LEGACIES

Friday, October 28th & Saturday, October 29th

### SAVE THE DATE & REGISTER TODAY!

The Texas Coastal Prairie Initiative, made up of 25 conservation organizations, is proud to bring landowners and conservation partners together to discuss the preservation of wide-open spaces in Texas this fall!

The conference will include a full day of workshops and presentations on Friday, October 28th at the University of Houston - Clear Lake, followed by field trips to remnant and restored prairies as well as working ranches and farms on Saturday, October 29th. Conference attendees will be welcomed to a special networking dinner on Friday evening on the UHCL campus. Conference topics will include restoration and conservation success stories, new conservation easement funding opportunities in Texas, technical guidance for landowners, and more!



~~\$85~~ \$68 - General Admission  
~~\$45~~ \$36 - Student Ticket

USE CODE "EARLYBIRD" FOR  
20% OFF THROUGH AUGUST 1ST!



University of Houston -  
Clear Lake Bayou Building

Register today at [prairiepartner.org/conference](http://prairiepartner.org/conference)  
Sponsorships Opportunities Available

Karen Sachar



Karen Sachar

**Are you a landowner who would like to attend the conference for free?  
Email us at [tcpi-info@coastalprairieconservancy.org](mailto:tcpi-info@coastalprairieconservancy.org)!**

### TCPI Partner Organizations

ARMAND BAYOU NATURE CENTER

AUDUBON TEXAS

COASTAL PRAIRIE CONSERVANCY

COLORADO RIVER LAND TRUST

DUCKS UNLIMITED

ENVIRONMENTAL INSTITUTE OF HOUSTON

GALVESTON BAY FOUNDATION

GUADALUPE BLANCO RIVER TRUST

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HOUSTON-GALVESTON AREA COUNCIL

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# 18th South Texas Wildlife Conference

Changing Paradigms in South Texas Wildlife Management

Friday, September 9, 2022 | 8:30 am – 4:30 pm | Cuero, TX

**Don't miss this rare opportunity to hear from a wide range of practitioners, land managers, wildlife biologists and wildlife researchers about the latest developments in wildlife and habitat management.**



Life's better outside.™



To register or to find more information, visit:

**[18th South Texas Wildlife Conference Registration](#)**

and

**[Agenda](#)**

## 18<sup>th</sup> STWC: Agenda

- 7:30 – 8:30 AM Coffee, Pastries, Registration
- 8:30 – 8:40 AM Welcome and Introduction  
*David Hewitt, Caesar Kleberg Wildlife Research Institute*
- 8:40 – 9:00 AM Changing Demographics of South Texas Landowners  
*Roel Lopez, Texas A&M Natural Resources Institute*
- 9:00 – 9:30 AM Increasing Fragmentation of Properties:  
Tools for Changing Landscapes and Demographics  
*Meagan Lesak, Texas Parks and Wildlife Department*
- BREAK (30 min)**
- 10:00 – 10:30 AM Relevance and Consequences of Yesterday's Management Techniques  
*Fidel Hernández, Caesar Kleberg Wildlife Research Institute*
- 10:30 – 11:00 AM Traditional Ag Management versus Wildlife/Holistic Management  
*Eric Grahmann, 2022 Land Steward Award Recipient*
- 11:00 – 11:30 AM Integrating Brush Management and Cattle Grazing on the Coastal Prairie  
*Tim Anderson, U.S. Fish and Wildlife Service*
- LUNCH BREAK (1 hr)**
- 12:30 – 1:00 PM New Concepts in White-Tailed Deer Management  
*Charlie DeYoung, Caesar Kleberg Wildlife Research Institute*
- 1:00 – 1:30 PM Growing Interest in Diversity and Nongame Management  
*Trey Barron, Texas Parks and Wildlife Department*
- BREAK (30 min)**
- 2:00 – 2:30 PM How New Research Drives Quail Management in South Texas  
*Lenny Brennan, Caesar Kleberg Wildlife Research Institute*
- 2:30 – 3:00 PM An Overview of Carbon Credits  
*Jim Blackburn, BCarbon*
- 3:00 – 3:30 PM Solar Energy and the Future of Wildlife Management  
*Tony Falk, Texas Natives Seeds, Caesar Kleberg Wildlife Research Institute*
- 3:30 – 4:00 PM Closing Remarks: Tying it All Together  
*David Forrester – Texas Parks and Wildlife Department*

**ADJOURN**



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CAESAR KLEBERG  
**WILDLIFE**  
RESEARCH INSTITUTE

TEXAS A&M UNIVERSITY-KINGSVILLE







# TWA MEMBER MIXER

**IN CONJUNCTION WITH THE SOUTH TEXAS WILDLIFE CONFERENCE**

Sponsored by:



**Find out what is brewing at TWA!  
Bring a friend & join members  
at the famous Spoetzle Brewery**

**September 8, 2022**

**5:00 PM - 7:00 PM**

**Brewery tours & complimentary beer thanks to our  
Conservation Partners at Shiner Bock**

**Spoetzle Brewery  
603 E Brewery St  
Shiner, TX 77984 ·**

## Upcoming Events

### JULY

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**14-17 Texas Wildlife Association Convention**  
JW Marriott-San Antonio Hill Country  
23808 Resort Pkwy., San Antonio, TX 78261  
9:00 a.m. - 6:00 p.m.  
Contact David Brimager at  
[DBrimager@texas-wildlife.org](mailto:DBrimager@texas-wildlife.org)

**23 Gonzales County WMA Meeting**  
Gonzales Elks Lodge #2413  
1222 E. Sarah DeWitt Dr., Gonzales, TX 78629  
Begins at 6:00 p.m.  
Contact Ty Tinsley at [tytinsley@ymail.com](mailto:tytinsley@ymail.com)

### AUGUST

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**12 Guadalupe County WMA Fall Meeting**  
Big Red Barn  
390 Cordova Rd., Seguin, TX 78155  
Begins at 6:00 p.m.  
Contact [guadcountywma@gmail.com](mailto:guadcountywma@gmail.com) for more information.

**13 Central DeWitt County WMA Fall Meeting**  
VFW Hall  
934 US-183, Cuero, TX 77954  
Doors open at 5:00 p.m.  
Meal begins at 6:00 p.m.  
Contact Karen Filip at [cdcwma@gmail.com](mailto:cdcwma@gmail.com)

**13 Washington County Wildlife Society Semi-Annual Fundraiser**  
Washington County Expo Event Center  
1305 E. Blue Bell Rd., Brenham, TX 77833  
Social begins at 5:30 p.m.  
Meal begins at 6:15 p.m.  
Contact Stephanie Damron at 979-277-6297



*Sunset at Powderhorn State Park and Natural Area.  
Photo©TPWD*

**Continued on page 18**

*Upcoming Events, continued***SEPTEMBER**

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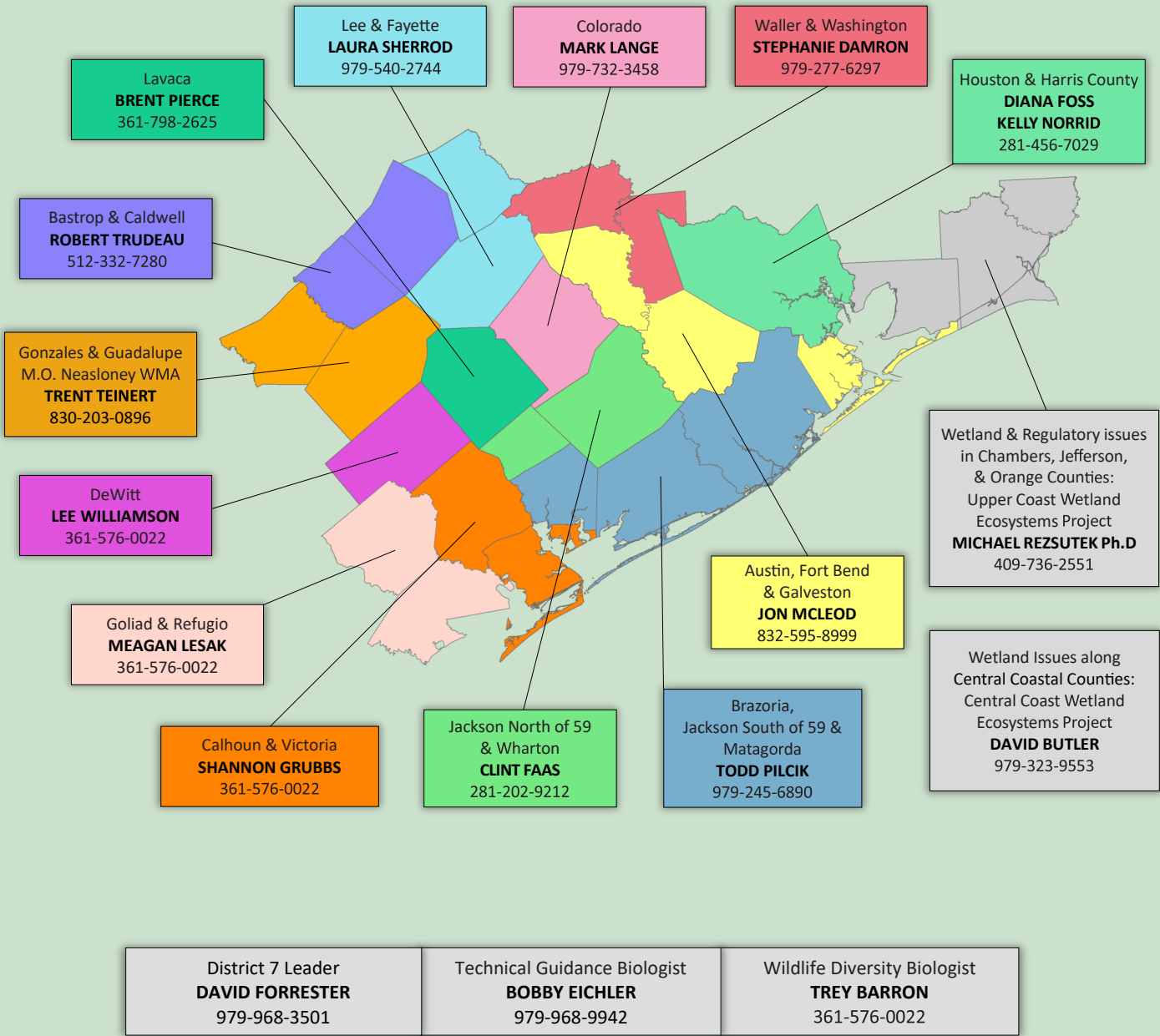
- 9**     **18<sup>th</sup> South Texas Wildlife Conference:  
Changing Paradigms in South Texas  
Wildlife Management**  
Cuero, TX  
Begins 8:30 a.m. to 4:30 p.m.  
Register at:  
[www.ckwri.tamuk.edu.south-texas-wildlife-conference](http://www.ckwri.tamuk.edu.south-texas-wildlife-conference)
- 18**     **Lavaca County WMA Fall Meeting**  
Knights of Columbus Hall  
321 US Hwy 77 S, Hallettsville, TX, 77964  
Begins at 10:00 a.m.  
Contact Joel Wagner at 361-798-6506 or  
[lavacacountywma@gmail.com](mailto:lavacacountywma@gmail.com)  
[www.lcwma.org](http://www.lcwma.org)
- 24**     **Goliad County WMA Fall Banquet**  
Memorial Auditorium  
935 South Jefferson St., Goliad, TX 77963  
Registration begins at 8:00 a.m.  
Meeting is 8:30 a.m. to 1:30 p.m.  
(Lunch included)  
Contact Brian Yanta or Alethea Albrecht  
(361) 645-8204 or  
[alethea.albrecht@ag.tamu.edu](mailto:alethea.albrecht@ag.tamu.edu)
- 24**     **Guadalupe River North WMA Meeting**  
Pattie Dodson Health Center  
2805 N. Navarro, Victoria, TX 77901  
RSVP required  
Contact Shannon Grubbs at 361-212-6975
- 24**     **Meyersville WMA Fall Meeting**  
Waskow Camp House  
13052 S. US HWY 183, Yorktown, TX 78164  
Begins at 5:30 p.m.  
Dinner at 6:30 p.m. with meeting to follow  
Contact Diane Chavez at  
[mdafchavez@gmail.com](mailto:mdafchavez@gmail.com)

**OCTOBER**

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- 28-29**   **Texas Coastal Prairie Conference:  
Preserving Lands and Legacies**  
University of Houston:  
Clear Lake Bayou Building  
2700 Bay Area Blvd., Houston, TX 77058  
Register at: [prairiepartner.org/conference](http://prairiepartner.org/conference)

# Our Wildlife Biologists



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Editors  
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**Bobby Eichler**  
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All inquiries: Texas Parks and Wildlife Department, 4200 Smith School Rd., Austin, TX 78744, telephone (800) 792-1112 toll free, or (512) 389-4800 or visit our website for detailed information about TPWD programs:

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