Oaks and Prairies Wildlifer

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

TEXAS PARKS & WILDLIFE

October 2021

District Field Notes

BY DAVID FORRESTER

What a great summer we experienced! Yes, we did get dry at the end and had a few days in the 100s, but overall, it was a relatively wet and mild summer. Looks like fall is finally arriving and we just got some pretty good rainfall to break a brief dry spell. Range conditions are good to excellent. The native vegetation is in good shape and there are plenty of forbs and new growth. It looks like a decent acorn crop this year, so that does not bode well for deer coming to feeders this coming hunting season. Deer body condition is good and antler development looks great. Our spring and summer range conditions were very good and antler development benefitted from the good groceries. Fawn survival this year was good. I'm wondering if the rainfall we had in the spring/early summer may have kept folks from cutting hay as early as they would have preferred and possibly kept that cover on the landscape a bit longer, which benefitted some fawn survival.

District biologists have completed their state-run survey lines and the many wildlife management association lines. Most of the properties that opted to pay the new MLD fee should have been issued permits. Biologists are dealing with the last of permit issuance and have started gearing up for hunting season.

Biologists are gearing up for collecting CWD samples off hunter harvested deer, as well as road killed deer. If you or your hunters are interested in getting your deer sampled for CWD, contact your local biologist. The district also has a seasonal position focused on the collection of CWD samples. We should be able to collect samples in a timely manner. You don't have to get your deer sampled immediately after you've harvested it. We can still sample heads that have been in a cooler or on ice for a couple of days. Also, if you freeze the head, we can thaw it out and sample.

A reminder that we now have a 4-day antlerless season during the Thanksgiving holiday. The 4-day season this year will be Nov. 25-28. The season allows those hunting on properties not getting MLD permits to harvest antlerless deer using the tags off their hunting license. The bag limit is two antlerless deer.

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State of the District, continued

This bag limit is all seasons combined, so that includes archery season, the youth seasons, and the muzzleloader season. If a property receives MLD permits, then this 4-day antlerless season does not apply. Hunters on a MLD property would have to utilize an MLD permit for each antlerless deer harvested. If all the MLD permits have been used, then that property is finished harvesting antlerless deer.

Along with the 4-day antlerless season, hunters across the district that harvest antlerless deer using their hunting license tags must report their harvest within 24 hours. This mandatory reporting again includes archery season, the youth seasons, and muzzleloader season. You can report either via the My Texas Hunt Harvest App on your phone, or at this web address: https://apps.tpwd.state.tx.us/huntharvest/hunting/hunting.faces.

One of the goals of the new MLD fee was to add additional "boots on the ground" to help with the district biologist's workloads. District 7 would like to welcome Jon McLeod as the new biologist for Austin and Fort Bend Counties. We hired Jon from State Parks and he started August 1, 2021. Jon has a B.S. from Texas A&M University in Wildlife and Fisheries Sciences. He was working for State Parks primarily implementing prescribed burns and other habitat management practices on property that State Parks manages.

Jon is starting in a new position we created covering Austin and Fort Bend Counties. Previously, Clint Faas covered Fort Bend and Wharton Counties. Mark Lange covered Austin and Colorado Counties. Now, Mark Lange will cover Colorado County solely. Clint Faas will cover Wharton and Jackson County (north of Hwy 59). Todd Pilcik will now cover Brazoria, Matagorda, and Jackson County (south of Hwy 59). That frees up Brent Pierce to cover Lavaca County solely. We're expecting this hire to allow Mark and Brent to concentrate on two of our largest counties in terms of CO-OP membership. Additionally, pairing Austin and Fort Bend counties allows Jon to concentrate efforts on two counties with similar demographics and issues. We think splitting Jackson County makes sense. Hwy 59 is the historic dividing line for antlerless regulation differences as well as habitat differences.

We hope that you and yours have stayed safe during the pandemic. There's a ton of enjoyable things to do outside and it's easy to social distance. You can't beat hunting, fishing, bird watching with family or friends. I urge you and yours to 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.

2021 White-tailed Deer Population Survey Results

WRITTEN BY BOBBY EICHLER

Summertime is a busy time for both Wildlife Management Association (WMA) members and Texas Parks and Wildlife Department (TPWD) staff. It is during the short period of late July through August that population data is collected for white-tailed deer. This population data is then used to set harvest recommendations by permit issuance in mid-September. Both WMA members and staff across the Oaks and Prairies region of Texas put much effort into this collection period. This is the third year that deer population data has been published in the newsletter, for past data refer to the October 2019 and 2020 editions. As you browse through these results, there are a few points to make as well as some summarization that indicates the annual effort for these surveys.

- During the summer 2021 collection period, a minimum of 64 spotlight lines were sampled, some ran 2 - 3 times each.
    - This resulted in over 2134 miles of spotlight lines being ran, with just over 161,000 acres sampled across 16 counties.
- Incidental observations collected by WMA members, as well as TPWD staff, resulted in over 290,000 deer identified to help determine buck:doe ratios and overall fawn survival.
- Spotlight surveys are most important when analyzed across the long-term and as trend data. While the survey gives us an idea of deer densities, it is obviously not 100% accurate (we can't even count human populations accurately). Individual line data for a one-year period should always be viewed looking at the 'big picture' and in conjunction with several years.
- This past summer was an above average year for rainfall, so vegetation was more dense than in years past. Most lines do not collect 'visibility' readings annually. This can affect the ability to see deer so acres per deer and fawn crop numbers will likely also be affected to some degree.
- Deer densities vary by habitat suitability. It is meaningless to compare your part of the county with other areas in hopes of obtaining higher densities. Different areas across the landscape have different carrying capacities, and we manage to keep populations within that capacity.

White-tailed deer does.
Photo©Chase A. Fountain, TPWD

Lastly, as always, we urge you to stay involved with your local WMA and volunteer during these counts. Help is always needed and appreciated, and there is nothing more educational than getting on back of a truck several times during the summer and seeing what is out there.

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2021 White-tailed Deer Population Survey Results, continued

Wildlife Management Association or TPWD Deer Management Unit Survey	County	Spotlight Surveys				Incidental Observations		
		Miles of Survey	Acres of Visibility	# Deer Seen	Acres Per Deer	# Deer Identified	Doe per Buck	Fawn Survival
Austin County WMA / DMU	Austin	16.0	1224	26	47	6031	1.8	37%
Austin County WMA (Welcome)	Austin	19.4	1044	80	13			
Austin County WMA (Cat Spring)	Austin	17.8	868	55	16			
Pin Oak Creek WMA	Bastrop	45.0	2240	53	42		4.3	3%
Paint Creek WMA	Bastrop	45.0	3000	141	21		5.0	6%
Red Rock WMA	Bastrop	48.0	8250	310	27		5.2	19%
Clear Fork Creek WMA	Caldwell	41.0	2373	222	11		2.4	22%
Tri-Community WMA	Caldwell	45.0	4155	509	8		6.9	27%
Harvey Creek WMA	Colorado	24.6	1960	182	11	5169	2.0	43%
Sandy Creek WMA	Colorado	28.4	1550	117	13	10540	2.0	35%
Central WMA	Colorado	29.0	1762	211	8	3017	2.1	36%
Colorado River WMA	Colorado	13.6	1174	159	7	4113	2.0	34%
North East WMA	Colorado	24.2	1128	108	10	8833	2.3	39%
Oakridge WMA	Colorado	32.0	1415	422	3	4519	2.0	56%
Central DeWitt WMA-Central	DeWitt	56.0	3648	252	14	2941	2.5	33%
Central DeWitt-WMA Friar	DeWitt	54.0	3308	569	6	8048	2.6	37%
Central DeWitt- WMA Sandies Clear Creek	DeWitt	24.3	2076	316	7	3475	3.1	25%
Central DeWitt WMA Edgar Stratton	DeWitt	50.7	2787	437	6	8423	2.6	32%
Meyersville WMA	DeWitt	39.0	3054	284	11	6603	3.5	33%
Western DeWitt WMA-Howard Kulawik	DeWitt	30.0	2178	321	7	3028	1.9	40%
Western DeWitt WMA - Nordheim	DeWitt	38.1	2310	332	7	4514	4.0	31%
Western DeWitt WMA - Cotton Patch	DeWitt	39.9	4593	325	14	2066	2.5	34%
Buckners Creek	Fayette	42.2	1976	136	15	8062	2.3	41%
Colorado River	Fayette	23.4	2154	335	6	5522	2.7	37%
Cummins Creek	Fayette	28.0	2770	156	18	1587	2.3	36%
East Navidad	Fayette	48.0	4452	416	11	5586	3.4	37%
North Central Fayette	Fayette	52.5	4548	484	9	2880	2.7	35%
Rabbs Creek	Fayette	64.5	5472	740	7	5715	2.9	37%
West Navidad	Fayette	53.3	5925	334	18	2671	3.6	27%

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2021 White-tailed Deer Population Survey Results, continued

Wildlife Management Association or TPWD Deer Management Unit Survey	County	Spotlight Surveys				Incidental Observations		
		Miles of Survey	Acres of Visibility	# Deer Seen	Acres Per Deer	# Deer Identified	Doe per Buck	Fawn Survival
Thompsons Bottom WMA	Fort Bend	67.5	4230	512	8	1847	2.1	36%
Guadalupe County WMA Sandhills West	Guadalupe	15.0	574	81	7	624	6.9	37%
Guadalupe County WMA Sandhills Nockenut	Guadalupe	11.6	460	50	9	3666	2.1	21%
Guadalupe County WMA Darst Field	Guadalupe	60	2361	287	8	3720	2.8	34%
Guadalupe County WMA Blacklands	Guadalupe	*	*	*	*	1004	2.9	44%
Guadalupe County WMA Marion	Guadalupe	*	*	*	*	283	4.6	24%
Guadalupe County WMA River Bottom	Guadalupe	*	*	*	*	4474	2.2	28%
Guadalupe County WMA Sandhills East	Guadalupe	*	*	*	*	1524	2.7	32%
Guadalupe County WMA Sandhills Sawlog Youth Haven	Guadalupe	*	*	*	*	2063	3.0	36%
Goliad WMA-Ander	Goliad	23.1	1782	102	17	6619	2.5	30%
Goliad WMA-Bego	Goliad	54.8	4360	525	8	8797	2.7	35%
Goliad WMA-Berclair/Riverdale	Goliad	31.5	1101	38	29	2245	2.5	31%
Goliad WMA-NorthCentral	Goliad	24.2	1768	139	13	12550	2.5	33%
Goliad WMA-San Antonio River	Goliad	33.3	2925	74	40	3370	2.7	30%
Hamon River Bottom WMA	Gonzales	18.0	1166	97	12	1349	3.1	21%
Belmont, San Marcos River, and Northeast Gonzales	Gonzales	15.0	1418	27	53			
Belmont WMA	Gonzales	*	*	*	*	2345	2.4	31%
Northeast Gonzales WMA	Gonzales	*	*	*	*	3311	2.3	37%
San Marcos WMA	Gonzales	*	*	*	*	1083	2.6	38%
Sandies Creek and Salt Flat WMA	Gonzales	33	3433	269	13			
JCWMA Sandy Creek	Jackson	35	3952	256	15	5869	2.7	42%
JCWMA Texana	Jackson	30.4	2400	178	13	546	2.7	33%
JCWMA Lavaca River	Jackson	44	4484	339	13	5637	1.9	32%
LCWMA West Lavaca	Lavaca	48.0	4336	236	18	10132	2.2	43%

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2021 White-tailed Deer Population Survey Results, continued

Wildlife Management Association or TPWD Deer Management Unit Survey	County	Spotlight Surveys				Incidental Observations		
		Miles of Survey	Acres of Visibility	# Deer Seen	Acres Per Deer	# Deer Identified	Doe per Buck	Fawn Survival
LCWMA Honey Creek	Lavaca	20.0	1802	126	14	8015	1.8	41%
LCWMA West Sandy Creek	Lavaca	43.0	1524	140	11	6218	1.7	34%
LCWMA Vienna	Lavaca	28.0	1340	205	7	13734	1.8	46%
LCWMA South Central	Lavaca	30.0	2606	141	18	9180	1.7	44%
Blue Branch WMA	Lee	10.6	802	51	16	501	4.2	39%
East Yegua WMA	Lee	47.7	3819	289	13	2647	1.8	44%
South Lee WMA	Lee	12.5	1137	62	18	4031	2.1	53%
Two Creeks WMA	Lee	35.1	2043	185	11	2634	2.6	39%
West Yegua WMA	Lee	32.4	3132	147	21	7682	3.2	47%
Guadalupe River North WMA	Victoria	54.0	3018	225	13	14544	2.0	36%
Southwest Victoria WMA	Victoria	34.5	2064	481	4	2693	2.0	34%
Victoria Prairie WMA	Victoria	68.3	7458	131	57	4132	2.5	35%
Post Oak WMA	Washington	15.7	1194	35	34	2750	4.0	23%
Mount Vernon WMA	Washington	14.9	1191	43	28			
Greenvine DMU	Washington	16.8	859	73	12	855	5.2	30%
Rocky DMU	Washington	14.8	805	63	13	5499	3.3	24%
Sun Oil WMA	Washington	12.2	493	92	5	1178	3.5	
Sandtown WMA	Washington	13.3	736	35	21	1299	0.5	35%
New Years Creek WMA	Washington	13.7	1194	54	22	1364	4.7	31%
Lost Prong WMA	Wharton					4629	2.3	31%
Egypt WMA	Wharton					693	1.5	32%
TOTAL		2134.8	161361			290,679		

* Guadalupe and Gonzales Counties - Due to urbanization some of the WMA lines are no longer conducive due to housing developments and heavy traffic. Alternative methods by members are used to estimate population densities.

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.

Filter Strips

WRITTEN BY ROBERT TRUDEAU

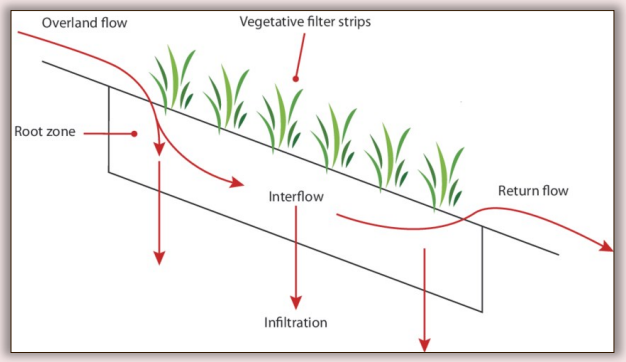
Though we may think we're prepared, there's no doubt Texas weather can surprise us from time to time. This year is no exception. With the intense freeze that pummeled the state, to the precipitation through the spring and summer, it has been an interesting year to say the least. As with most years, this year included biologists across the state receiving multiple phone calls and emails from landowners that were concerned about the water quality and/or erosion issues within their tanks and ponds. Whether it's a buildup of algae on the water surface, the general murkiness of the water itself, or even the initial stages of erosion issues popping up, landowners here in Texas have a wide array of valuable habitat management practices they can utilize to mitigate these erosion issues. Filter strips are one such practice. Commonly referred to as vegetative buffer strips, filter strips are an excellent land management activity that can provide a wealth of benefits to a property and the associated wildlife while improving water quality.

Filter strips, for all intents and purposes, are areas or "strips" of vegetation that are purposefully left in places where runoff from rainwater can present possible erosion issues. The purpose of a filter strip is to slow down the flow of runoff across the surface of the ground, allowing sedimentation and particulates to settle out while also "filtering" out any pollutants. By slowing down the flow of runoff, filter strips allow the water to infiltrate into the sub-surface soil layers; thus, increasing the water retention within the ground. Rainwater runoff poses a handful of problems for not only the landowner, but a multitude of other people, animals, and habitats. Besides poor land management practices, runoff is the leading culprit (in a natural sense) for erosion issues worldwide. Either by wind or water, erosion is the active displacement of topsoil and leads to a wide variety of problems such as diminished crop production capabilities, the loss of terrestrial and aquatic habitats, diminished water quality, damaged waterways, and dilapidation of other water features such as stock tanks, ponds, aquifers, and wetlands.

Once erosion begins, it can progress rapidly and cause real problems on the land. Filter strips are an ideal management strategy to prevent erosion from progressing out of the sheet erosion stage and advancing to the rill or gully erosion stages. In addition to mitigating extensive erosion issues, filter strips are vital in combating water quality issues that arise from excess runoff. Not only does the associated erosion of topsoil cause extensive sedimentation issues within water features and waterways, but the runoff also picks up other pollutants on its journey downhill. Pesticides, herbicides, fertilizers, fecal matter, heavy metals and other chemicals and elements are common pollutants. These pollutants can accumulate to the extent of causing algae blooms and fish kills, making the water unsuitable for use, and possibly harming surrounding habitats.

Appropriately sized filter strips can intercept the flow of runoff, allowing 70-100 % of the soil sediment to settle out. By capturing the soil sedimentation, filter strips can capture the nutrients and minerals that have bonded to the soil particles and will be able to make use of them through the vegetation uptake process. When it comes to any pollutants that may be in the rainwater runoff, an effective filter strip will promote the degradation and transformation of such pollutants into less toxic forms and can easily capture and remove over 60% of pathogens (*E. coli*, fecal coliforms, etc.) from the runoff.

Photo©U.S. Department of Agriculture



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Filter Strips, continued

Photo©U.S. Department of Agriculture

Another major benefit that comes from using filter strips, is that filter strips drastically increase water infiltration and retention on the property. Water infiltration is the process of surface water being drawn into the sub-surface soil layers and water retention is the volume of water that is capable of being stored in the sub-surface layers. In other words, the more we can slow down the flow of the runoff by installing a filter strip, the more residual time water has to soak into the ground. The longer it can soak in, the deeper the water molecules go, thus the more water volume we have retained in the ground. Water retention, especially here in Texas, is key for our plants to have the needed water resources to continue to grow through the summer months when the rainfall all but disappears.

Filter strips have been used for quite a long time in the crop production industry; however, filter strips can work perfectly well on non-cropland properties. Filter strips work best on slopes and grades of less than 5%; however, they can be utilized on slopes up to 15%. Keeping in mind that the flow rate of water increases as the slope increases, filter strips have been an excellent addition to the installation of dikes, levees, berms, terraces, and ditches, on slopes that are greater than 15%. Since water flow rate increases as slope increases, the width of a filter strip should also be increased as the slope and flow rate increases. The width of a filter strip is the primary variable that will influence its effectiveness. The ability of a filter strip to catch sedimentation and filter out pollutants increases as the width of the filter strip increases. In general, for slopes that are 1 to 3% in grade, the ideal minimum width should be 25 foot. For 4 to 7% grade, width should increase up to 35 feet and for slopes 8 to 10% grade, width should increase to 50 foot. Keep in mind though that every situation is not going to be perfect or ideal. In some cases, as with a lot of land management practices, modifications may have to be made to tailor it to one's personal property. Even if a well-established filter strip is situated perfectly, rainwater runoff quantity and flow may still exceed the filter strips capability. In such cases, the strip can be made wider, or creating in-field filter strips can help adjust the quantity and flow rate of the runoff as it makes its way to the main filter strip. In-field strips usually average 6 to 10 foot wide and, depending on the slope grade, should be placed every 10 to 100 feet apart. Distance between in-field strips should decrease as slope percentage increases.

The second variable that influences effectiveness of a filter strip is its vegetation composition. As with changes in width due to changes in slope, filter strip widths should increase or decrease depending on the type of vegetation that makes up the strip. The ideal vegetation within a filter strip should be primarily composed of native grasses. Such species should be perennials, tall-growing, hardy and be extremely sturdy with a well-developed and extensive root system. As we look back on the infiltration benefits of a filter strip, a well-developed root system is going to be essential in the process of drawing water into the sub-surface soil layers. A good root system will also prevent the vegetation from being washed away by the runoff and will ensure the vegetation holds the soil together. In conjunction with the native grasses, a wide variety of other native plant species can help fill out a healthy, vibrant filter strip. Smaller, more flexible, native grasses can help fill in between the taller native grasses, while the addition of legumes and other forbs can help boost nitrogen levels and habitat value. Adding some native trees and shrubs will also help increase the infiltration capabilities of the filter strip; while, also increasing its habitat value for wildlife and personal enjoyment.

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Filter Strips, continued

Deciding where to place and create filter strips should be done strategically. One will want to start by knowing where rainwater accumulates and then work their way up slope, following the path of the runoff. Since runoff flows down-slope, creeks, streams, rivers, tanks, ponds, and the like are key areas where water is going to accumulate. These are the areas where there is the highest volume of runoff and are ideal places to establish a well-developed filter strip. Moving up-slope, while following the runoff, drainages, water diversion structures, and prominent hill sides are going to be key locations for the installation of filter strips. These are key areas where rill erosion can create extensive problems. Finally, and usually less noticed, are areas that are relatively flat and impermeable to water infiltration. These impermeable areas, such as barns, shops, houses, driveways, and parking lots automatically start off as runoff during a rain event and are usually diverted and displaced to a flat landscaped yard surrounding it, putting the increased water volume in a different location that may be susceptible to erosion. These types of areas are also key locations of where increased levels of pollutants and contaminants can be picked up by runoff. Placing filter strips around these areas will help start the process of infiltration and water retention, while helping to slow down the flow of water at the source. It will also start the filtration process for soil particulates and pollutants.

Photo©U.S. Department of Agriculture

Filter strips are not a “place and forget” type of project. Periodic maintenance and management are vital to the health and productivity of an effective filter strip. Periodic inspections should be conducted to see if there are any growing points of concern. Bare spots, signs of erosion or channeling, or heavy sedimentation buildup, especially after a heavy rain event, should be mitigated and replanted. In some areas, an irrigation system may be needed to establish to help maintain the healthy vegetation during times of drought. Noxious, exotic and invasive vegetation (especially turf grasses) should be eradicated to help promote native grasses. Excessive traffic from humans or livestock can cause problems as well, so exclusion fencing and limiting heavy traffic within a filter strip will help prevent additional issues. Over time, vegetation biomass will build up and the occasional mowing, shredding, bailing, or burning of the filter strips will help remove the biomass accumulation and increase the health of the vegetation. As with many other land management projects, continual monitoring will help you know how well the filter strips are working or if adjustments are needed. If there is a change in the water flow, the volume of runoff, or an increase/decrease in sedimentation and/or pollutant levels, then one will want to make the necessary adjustments. It’s always better to get control of an erosion or water quality problem before it starts.

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.

Species Spotlight: Black Skimmer

WRITTEN BY TREY BARRON

The Black Skimmer is one of the most iconic birds on the Texas Coast. The contrasting black and white body with long pointed wings and long, thick, bright reddish orange and black beak make it one of the most recognizable coastal birds in the Gulf of Mexico. So recognizable that the silhouette of the skimmer is used on the brown, metal highway signs that have been marking the Great Texas Coastal Birding Trail since 1996. Black Skimmers are unique among North American birds in that it is the only bird with a lower mandible that is longer than the upper mandible. This character allows for its unusual foraging technique and behavior for which it was named. The skimmer flies low, just barely above the water, with its bill open and its lower mandible in the water. It skims the top layer of water until it contacts a fish and then instantly snaps shut to secure its prey. They feed on primarily fish but will also consume small crustaceans.

Black Skimmer, Cameron County. Photos©Trey Barron, TPWD

Black Skimmers are strictly coastal and included in the group of birds referred to as colonial seabirds or waterbirds. Colonial waterbirds nest in large groups, often on islands in our bays, and prefer sites that are bare sand or gravel just inches above sea level. Skimmers nest colonially atop bare sand or gravel often on coastal beaches and spits that are only inches above sea level. Many of our colonial waterbirds are experiencing declines and the skimmer is no exception. This species has shown a decline of 70% from 1973 to present times and despite current efforts the decline continues. This decline led to the skimmer being designated as a Species of Greatest Conservation Need (SGCN) since the first edition of the Texas Conservation Action Plan in 2005. The Black Skimmer is a long-lived species and numbers of adults appear to be relatively stable, yet most of their eggs and nestlings do not appear to survive at most breeding sites. Anecdotal information has noted that nesting sites are being heavily disrupted by a variety of mammals, birds, and certain weather events, but none of these threats have been properly investigated in Texas.

In order to reverse this downward trend in skimmer numbers, we need to better understand the reasons for their decline. Coastal managers would benefit from understanding the vulnerabilities of these ground-nesting birds at various nesting sites along the coast. The 70% decline that's been documented continues and, at the present rate, could cause local extirpations within a couple of decades. To address these questions Texas Parks and Wildlife Department (TPWD) is utilizing Pitman Robertson Wildlife Research Grant Funding to partner with Coastal Bend Bays and Estuaries Program (CBBEP) and Texas State University to address the following objectives.

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Species Spotlight: Black Skimmer, continued

1. Determine threats and reasons for nest failure during the nesting season at various colony sites along the Texas coast
2. Utilize TPWD Coastal Fisheries bag seine data to determine prey availability during the nesting season for young and potential limitations for survival and nest success over time.
3. Conduct a human dimensions survey of coastal user groups (e.g., anglers, boaters, beachgoers, wind surfers) to determine their knowledge and attitude toward colonial waterbirds, like the skimmer, during the nesting season

We hope to be able to better understand some of the limiting factors of success for the Black Skimmer so we can better assist coastal land managers in protecting skimmers during vulnerable periods of their annual life cycle, determine what could be done if weather events (especially tidal flooding) are an important threat, and provide managers with insights on prey availability during the nesting season while young are being cared for.

Texas State University will be initiating the human dimensions portion of this work soon and CBBEP will start field work on the birds next spring. If you have any questions about this project or other coastal birds and their management, contact Trey Barron at trey.barron@tpwd.texas.gov.

Trey Barron began his career with TPWD in 2011 as a wildlife biologist in the Texas panhandle. In May of 2014, he moved to the coast to serve as wildlife biologist for Victoria, Refugio, and Calhoun counties. Trey is now the Wildlife Diversity (non-game) Biologist for Region 4 and is focused on species of greatest conservation need. He received his Bachelor of Science in Wildlife Biology and Master of Science in Biology from West Texas A&M University. He enjoys helping landowners manage habitat for a variety of species, but is especially interested in birds and herps.

Yaupon Holly: Natural History and Human Interaction

WRITTEN BY TRENT TEINERT

Yaupon holly (*Ilex vomitoria*) is one of the most biologically impactful native plants we have in the Post Oak Savanah woodlands in present time, however historically it had larger impacts that affected the global economy. The first thing that catches your eye when you see yaupon's scientific name, *Ilex vomitoria*, is that the species name resembles the word vomit! This is not by chance, but by design. Inside that name lies a little bit of truth and a little bit of misinformation designed to collapse economies and build kingdoms.

Yaupon encroachment at the M.O. Neasloney. Photo©Brendan Witt, TPWD

Some believe that consuming yaupon will make you vomit while others enjoy tea made from its leaves, so which belief is true? Let's clear things up a bit. Yaupon was consumed by Native Americans for around 8000 years!! It has no emetic compounds that could cause vomiting. However, it was consumed at Native American purification ceremonies where purging, or vomiting, was induced by consuming various plants like tobacco and other herbs while fasting. This little tidbit of its history was eventually used as a marketing scheme to discredit yaupon's reputation and make it undesirable as a drink. I know what you are thinking… "Really? This common scourge of a shrub, why would anyone care?" As it turns out, in the late 1700s tea was a big deal! Do you remember in grade school learning about the British East India Company and the Boston Tea Party of 1773, which lead to the beginning of the American Revolution? Ah, yes, I thought you did! Well, yaupon was in the background there and is connected to the founding of the United States of America!! In the late 1700s yaupon tea was becoming a popular drink exported out of colonial America and traded globally. Yaupon tea had the potential to provide colonial America with huge export revenue and reduce the influence and power of the British East India Company. The British East India Company recognized this competition, and with their powerful lobby, were able to restrict yaupon tea sale in Europe. Then, in 1789 a botanist appointed by King George III gave yaupon its scientific name *Ilex vomitoria*. This name was thought to be an acknowledgement of yaupon's use in Native American purge ceremonies. However, the name vomitoria invoked severe hesitation and the plant lost its appeal as a tea. Consequently, these factors led to the decline of the yaupon tea market to point where it was largely overlooked, as it is today.

Recently there has been a renewed interest in the yaupon tea market. Many people are realizing what was overlooked for so long. Yaupon makes a great tasting tea with caffeine levels similar to coffee and is rich in antioxidants. It grows readily in the southern United States (U.S.), to the point it becomes invasive. It is drought tolerant and can be a sustainable source of tea. Even better, now there are many commercial brands available, all made in the U. S., and a few grown and made exclusively in Texas.

Yaupon's hardiness, aesthetic qualities, and being an evergreen make it a great ornamental for landscaping. It is extremely drought resistant needing little water which is a great quality to have in an environment increasingly lacking water.

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Yaupon Holly: Natural History and Human Interaction, continued

It is deer resistant and generally not considered a preferred food being classified as a second choice browse. In areas where deer populations are high and browsing pressure is high, it can survive severe browsing. Yaupon can be hedged and shaped as well as any other ornamental hedge. Female yaupon produce red berries which add to the aesthetics of the shrub. Lastly, being an evergreen, it holds these qualities year-round and remains aesthetically pleasing summer or winter. Many varieties of yaupon ornamentals have been developed including dwarf varieties that flaunt these characteristics making it a great choice for landscaping.

Because yaupon's value was largely forgotten, it is generally thought of as a pesky invasive species. It spreads readily with its root runners and seeds. Naturally its density was controlled by wildfire and it was an understory plant scattered across the landscape. With the suppression of fire, yaupon can grow thick and choke out woodland understories as it grows over 20 feet tall. If a fire does occur, thick yaupon acts as a "ladder fuel" increasing fuel loading and carrying the fire to the tops of trees. This creates extreme fire behavior and tends to kill mature trees such as oak and pine. When a woodland becomes choked with yaupon, the yaupon tends to out compete other plants wildlife value for food and cover like native grasses, forbs, shrubs, and trees. Notably mature hardwoods like post oak and live oak can be severely impacted.

To reclaim an area overtaken by yaupon there are a few good options. On smaller projects, pulling out the plant, including the root, is the best form of control. This is not usually practical on large scales. On larger projects mulchers can reduce yaupon to ground level, allowing access for additional treatment options. Yaupon will resprout once top cut, so follow up treatments will be necessary. Herbicide is generally the next approach. It can be used to treat resprouting yaupon from prior treatments or to maintain an area and prevent encroachment. One of the best chemicals to use is triclopyr. It can be used as a basal treatment or sprayed on cut stumps to prevent resprouting. Prescribed fire is usually considered the ultimate form of yaupon control and the one most people should strive to implement. Implemented in safe conditions, prescribed fire can be used to control yaupon encroachment and in time restore a more native understory with diverse plants. Mulching followed by periodic fire is a great way to see results quickly and maintain low densities of yaupon on a landscape. In most cases, fire should be use as a long-term periodic maintenance tool once yaupon density is reduced.

Yaupon management at the M.O. Neasloney. Photo©Brendan Witt, TPWD

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Yaupon Holly: Natural History and Human Interaction, continued

When properly managed, yaupon provides valuable habitat for wildlife. Even though yaupon is not a deer's preferred food, it can be a staple during times of drought or in winter months when most other plants are dormant. Deer browse on the leaves and branch tips preferring the tender ends of new growth. Birds like cedar waxwings (*Bombycilla cedrorum*) and American robins (*Turdus migratorius*) also consume the red berries produced by yaupon. Berry production often coincides with bird migrations, making them a great source of food for migrating birds. Yaupon flowers also give off a nice aroma and provide nectar for bees, butterflies, and other pollinators.

Yaupon has existed on the North American continent and in its subsequent human cultures for millennia and it probably will for many more. Its medicinal, aesthetic, and wildlife values offer exceptional value for those willing to approach *Ilex vomitoria* with an open mind. As we continue our history with yaupon let us keep in mind all it has to offer, finding a balance of management, use, and provenance.

Cleared Yaupon at the M.O. Neasloney. Photo©Brendan Witt, TPWD

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Trent Teinert has a B.S. and M.S. in Range and Wildlife Management both from Texas A&M-Kingsville. Trent started his career in 2011 with TPWD covering Victoria, Calhoun, and Refugio counties. In late 2013, Trent transferred over into the South Texas District and took on responsibilities in Karnes and Wilson Counties. District 7 was fortunate to be able to lure Trent back in 2015 and he began covering Gonzales and Guadalupe counties and caring for the Neasloney Wildlife Management Area. Trent resides in Seguin, Texas and is married to a wildlife biologist.

Where it All Began: The Evolution of Muzzleloaders

WRITTEN BY MARK LANGE

Muzzleloader. Photo©Lee Smith, TPWD

It's easy to take modern-day luxuries for granted. Cars with every gadget imaginable, obsolete checkbooks as we can transfer money electronically in seconds, and then there are advancements in cell phones I won't even attempt to understand. In the sport of hunting, incredible advancements have also been made. Primitive hunters used sticks or rocks and today it seems like there is a new caliber of centerfire cartridges created to fit every scenario a gun owner could imagine. Much like people wanting to go back in time and drive classic cars, hunters desire to use more primitive weapons to create a more challenging experience. Archery advancements have led to more people hunting with bows and moving away from rifles. Some even hunt with long or recurved bows to increase the challenge instead of hunting with advanced compound bows. The same is true for firearms, some hunters choose to make their hunts more challenging by using the precursor to modern firearms, the muzzleloader.

The first muzzle loaded firearms were created as far back as 1000 AD; a simple tube with one end closed, loaded with gunpowder, and a handmade projectile. It was fired by applying a direct flame to the powder through a hole in the tube. In the 1400s, advancements were made by adding a trigger mechanism that would drop a flaming wick onto powder therefore allowing the shooter to keep both hands on the weapon for better aim. Continuous advancements were made in trigger mechanisms but more importantly methods to ignite the gunpowder. Flaming wicks were replaced with flintlock mechanisms which used a spark created by flint striking against steel to ignite the powder. Future progressions included percussion caps and then all the way to what is available today which is the in-line muzzleloader.

From the loading process to the actual firing and ballistics of the weapon, modern in-line muzzleloaders are much more efficient than their predecessors. While some in-line muzzleloaders still require you to use traditional gun powder, some ignite premade pelleted charges where all you need to do is drop a specified number in the muzzle before loading the projectile. Premade charges eliminate the need for the shooter to pre-weigh charges or have equipment to measure powder. After the powder is loaded in the muzzle, the projectile is loaded, and a rod is used to seat both in the firing chamber. Older muzzleloaders shot round lead balls of various diameters but today manufactures produce more traditional shaped bullets made for in-line muzzleloaders. A primer made for shotgun cartridges and similar to what you would see in any center fire cartridge is then placed in a modern muzzleloader and that primer is struck by the hammer or firing pin to shoot.

Muzzleloader action. Photo©Robert Trudeau, TPWD

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Where it all began: The Evolution of Muzzleloaders, continued

Like all firearms, it is important to keep them clean and in proper working condition. Muzzleloaders require more frequent cleaning than centerfire rifles and obviously take longer to reload, so when used for hunting it is critical to make that one shot count. Being that the bullet used in these firearms is larger than most centerfire bullets, they do not have the long-range capabilities like some centerfire cartridges do. The limitation on range, inability to reload quickly, as well as the fact that you must keep the powder dry as it is not protected by a metal casing like centerfire cartridges keeps many hunters from choosing to use a muzzleloader. Those same limitations are what draw some hunters to the challenge.

Many states, including Texas, have a muzzleloader season for deer. While you can use muzzleloaders during the general season, the muzzleloader season is closed to the use of traditional centerfire rifles by adult hunters and coincides with the late youth only season. Check the regulations for the county you hunt, but for the 2021-2022 season the muzzleloader season will be January 3-16. So, if you feel the desire to increase the challenge this season, take a step back in time and try hunting with a muzzleloader.

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.

Katy Prairie Conservancy Activities

WRITTEN BY ELISA MACIÁ DONOVAN

TEXAS COASTAL PRAIRIE INITIATIVE
prairiepartner.org

The Katy Prairie Conservancy is helping sustain a resilient Texas by preserving coastal prairies, wetlands, farms, and ranches to benefit people and wildlife forever.

Many landowners that own a farm, ranch, or natural area worry about the future of their land. Some want to preserve the Texas landscape and worry it will be lost once they are no longer able to own and manage the property. Others want to keep land in agriculture for local farmers and ranchers. And many landowners want to preserve open and connected spaces to help maintain the biodiversity of the coastal prairie, provide essential wildlife habitat, and sustain a resilient landscape. For all these reasons, the Katy Prairie Conservancy has been partnering with landowners since 1992 to ensure farms, ranches, and natural lands remain part of our Texas coastal prairie landscape for the benefit of people and wildlife forever. The protection of these natural spaces ensures healthier land, healthier watersheds, and healthier communities.

The Katy Prairie Conservancy's original focus was on the Katy Prairie in Harris, Waller, and Fort Bend Counties, but in 2017 the organization expanded its efforts to protect the regional coastal prairie ecosystem in Austin, Brazoria, Colorado, Jackson, Matagorda, and Wharton Counties. The Katy Prairie Conservancy now protects over 24,000 acres of coastal prairie in Texas. These lands are protected through three primary methods - conservation agreements, land sales, and land donations.

The threat of fragmentation and development pressure in the Texas Upper Coast makes this work especially timely. Not only have recent census figures confirmed that the population in Texas and the Gulf Coast area has exploded, a drive along I-10 or US-59 shows that people have been moving to the areas west and southwest of Houston in large numbers. While the Katy Prairie Conservancy recognizes that many areas will continue to be developed, it is working to make sure that natural areas remain for the benefits they provide people, such as access to nature, flood mitigation, carbon capture, and cleaner air and water. By planning ahead to protect large, connected areas, we also ensure the protection of rich habitat that provides food and nesting areas for the birds, mammals, and other animals that rely on this land to survive. This work will also keep land in agriculture for local farmers and ranchers and support outdoor recreation, such as bird watching and hunting.

Land Sale or Donation.

The Katy Prairie Conservancy is sometimes able to purchase lands if it has secured funds for this purpose, and usually only for lands that have been identified as the highest conservation priority. Landowners may donate land to KPC and receive a valuable tax deduction.

Conservation Easements.

Landowners that wish to keep owning the land, or eventually pass the land along to their heirs or sell to a third party, have options for conserving land through voluntary conservation easements.

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Katy Prairie Conservancy Activities, continued

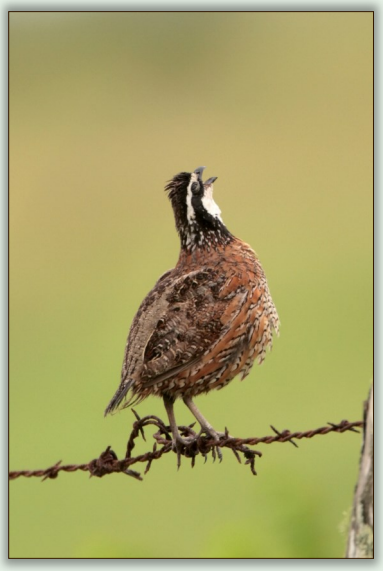
A conservation easement is a voluntary legal agreement with a landowner to protect the land's conservation values, such as natural habitats for wildlife or the preservation of open space – including farms, ranches, pasture land, or forest. Conservation agreements do not require public access, and the landowner will continue to own and use the land and may sell it or pass it on to heirs. The conservation easement is legally binding on all future owners so that the land will remain as a farm, ranch, or natural area forever. Each conservation easement is tailored for the property and designed to meet the needs of the individual landowner.

Sunset and Cranes. Photo©Don Pine
Cattle©Katy Prairie Conservancy

Texas Coastal Prairie Initiative.

KPC and 24 partner organizations, including state and local agencies, local universities, and conservation organizations, have partnered together on the Texas Coastal Prairie Initiative to permanently protect and enhance coastal prairie lands, including working cattle ranches, farmland, and natural areas. This initiative was selected for funding by the Natural Resources Conservation Service (NRCS) earlier this year in the amount of $7 million. The initiative includes dedicated funding that will be paid directly to private landowners interested in conserving their farms, ranches, and natural areas within a 13 -county area on the Texas mid-coast that includes Austin, Brazoria, Calhoun, Chambers, Colorado, Fort Bend, Galveston, Harris, Jackson, Matagorda, Victoria, Waller, and Wharton Counties.

Landowners may obtain cost assistance for practices that help manage and enhance habitat on privately owned lands for the benefit of the grassland and wetland-dependent species that reside on the coastal prairie, such as the loggerhead shrike, mottled duck and western chicken turtle. These practices include brush control, prescribed burns, native seeding, cross-fencing for grazing management, wetlands establishment, and a suite of other practices that are designed to enhance the native plant community and improve wildlife habitat.



Bobwhite. Photo©Greg Lavaty

The initiative also provides funds for land trusts, such as the Katy Prairie Conservancy, to pay private landowners that wish to permanently protect working and natural lands through conservation easements. Approved projects may be awarded up to 50% of the value of the conservation easement, and landowners will be asked to consider donating the other 50%. The donation of a conservation easement (whether full or partial) may afford income tax and estate tax benefits if it permanently protects the conservation values of the property and meets other federal tax code requirements. Katy Prairie Conservancy can help you navigate the requirements to determine if your land is eligible and assist with the application process.

Landowners may visit www.prairiepartner.org to learn more and sign up for notifications of funding opportunities, which will open in 2022.

Protecting the coastal prairie landscape now means current and future generations will continue to have access to these wide-open spaces.

Upcoming Events

JANUARY

22 **Western DeWitt WMA Scoring Day**
Lackey Ranch
9357 State HWY 119 North
Yorktown, TX 78164
Begins at 9:00 a.m. to 11:00 a.m.
Contact Stephen Gowens at 361-564-2977 or
Larry Franke at 210-215-7124

FEBRUARY

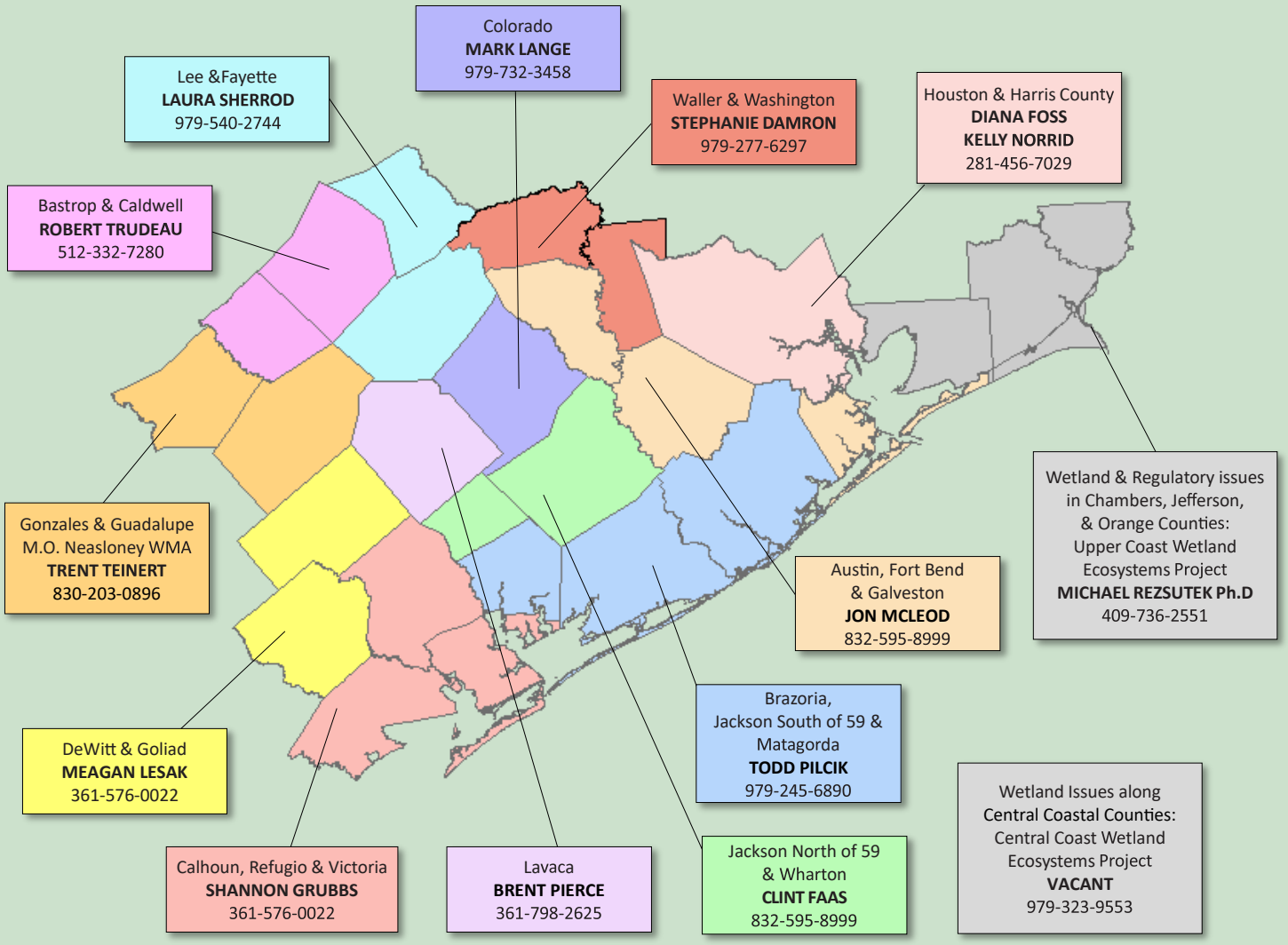
5 **Western DeWitt WMA Awards Banquet**
5D Steakhouse
632 West Main
Yorktown, TX 78164
Begins at 5:00 p.m.
Contact Stephen Gowens at 361-564-2977 or
Larry Franke at 210-215-7124

19 **Central DeWitt WMA Awards Banquet**
VFW Hall
934 US HWY 183
Cuero, TX 77954
Doors open at 5:00 p.m.
Contact Karen Flip
cdcwma@gmail.com

MARCH

28-5 **Ranching and Wildlife Expo with the Houston Livestock Show and Rodeo**
Educational seminars offered March 2-4 with virtual option available
Contact Clinton Faas at
Clinton.faas@tpwd.texas.gov or 832-595-8999
for more information.

Our Wildlife Biologists



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FOR MORE INFORMATION

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www.tpwd.texas.gov

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