Texas Parks and Wildlife Department

THE CEDAR POST

NOVEMBER 2013 | News and Information for the Texas Hill Country | VOLUME 3, ISSUE 2

Black Bears (*Ursus americanus*)

A Hill Country Comeback

By Gilbert Guzman, Mary Humphrey and Ryan Schmidt

The mountains of northern Mexico are home to a very stable population of black bears from which individuals sometimes wander over into the Trans-Pecos and western Edwards Plateau looking for new habitat or to carry out part of their life cycle. In recent years, bears have been documented in several hill country counties that include Val Verde, Crockett, Edwards, Sutton, Schleicher, Kimble, Menard, and Kerr. These sightings and encounters are thrilling, but at the same time, this natural phenomenon is met with apprehension because of the misperception of black bears and how they fit into the Texas ecosystems. This mindset sometimes overshadows the awesomeness and value of the return of a long removed member of these ecosystems. Black bears in Texas are rare, protected and listed as a State Threatened species. There are 3 known subspecies of black bears in Texas which include the New Mexico black bear located in the Guadalupe Mountains, the Mexican black bear located in West and Central Texas, and the Louisiana black bear located in East Texas, which is also federally protected. It's a violation of the law to kill a black bear in Texas and can carry penalties of up to $10,000, civil restitution fines, jail time, and the loss of all hunting privileges.

Mature adult black bears weigh between 130-300 lbs. and grow to a length of 4 to 7 feet long. Adult male black bears are larger than female bears. Black bears have a straight face with flat shoulders, semi-pointed ears, round head, and a short tail. The fur color can vary from black to chocolate brown with gray combinations. Adult bears as well as cubs are excellent climbers.

Black bear paws have short claws to help them climb, dig, gather plant food, and attack small mammals. They use their claws like fingers when they eat. Their front footprints or tracks have an oval base with a curved toe line. The hind paw will have a triangular indentation and the toes are spread out. They also possess an acute sense of smell which they use to their advantage. The black bear is very adaptable, intelligent and quite curious. But on the other hand, this smaller bear species is very shy and generally avoids confrontations by fleeing the area when given an opportunity to do so.

The black bear mating season or breeding usually occurs from May through August with a gestation period of 60 to 70 days. Females generally mate every other year. Mexican black bears do not experience a long term hibernation episode. Birth occurs during January or early February with a litter size of 1 to 3 cubs that are born with their eyes closed and weigh about 1 pound. Baby cubs will stay close to their mother for about 1-1/2 years before leaving to establish their own home territory. As adult bears, male home ranges are very large and can average 20,000 acres; female home ranges are smaller and can average 5,000 acres.

Bears are considered omnivores and by nature are opportunistic feeders that will eat just about anything that is available to them. Their food habits in the Hill Country are very diverse. Approximately 80% of their diet consists of vegetation such as sotol, Texas persimmon, prickly pear cactus, agarita berries, acorns of different species, plant roots, tubers and various grasses. In addition to vegetation, their diet also consists of insects such as ants, grubs, termites and beetles. Small mammals such as rodents, rabbits and of course carrion, often in the form of road kills, are also eaten by black bears.

Trail camera picture from a ranch in the Edwards Plateau

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Editors:

Mary Humphrey | Kory Perlichek | Evan McCoy

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Black Bears cont...

Bears can become habituated to unnatural or manmade attractants such as the following: garbage in dumpsters or landfills, pet foods, and deer feeders filled with corn or protein pellets. Once bears are habituated to these "easy and accessible" foods, they are very hard to drive away and break this negative habit.

The likelihood of having a bear encounter in the wilds of Texas would be uncommon. Within the Hill Country a majority of the reported bear sightings have been associated with some type of manmade food item. Hunters have asked, "What do I do on the deer lease if I encounter a bear?" It is very important to remember that all bears are protected in Texas. In the past, feral hogs have been misidentified for black bears, especially during low light conditions when hunting. Key feral hog physical characteristics include a long head with pointed ears, a definite snout, and eyes positioned on the sides of the head. In comparison, a black bear's head is rounded with semi-pointed ears and forward-oriented eyes.

Recommendations for hunters and the general public in Texas to minimize the likelihood of having a black bear encounter include:

- Keep headquarters or camps clean to prevent odors that attract bears – Black bear sense of smell is 100 times better than humans and they can smell food items up to 5 miles away
- Store pet food items and other attractants in a secure place
- Modify trash dumpster lids and keep them locked from any bear access
- Hunters can use automated feeders hung 8-10 ft. above the ground and out of reach of bears
- Use deterrents such as electric fencing or unwelcome mats made with 1" nails to keep bears away from buildings and feeders
- Do not offer deer corn in piles or in open feeders
- Discard gut piles away from any human structures
- If a bear regularly visits your deer stand, scare it away with rocks, a slingshot or air horn

Black bears are normally shy and not aggressive toward humans, but if you do encounter a black bear in the wild at close range, talk in a calm manner while slowly backing away. DO NOT MAKE DIRECT EYE CONTACT and DO NOT RUN! This can trigger a bear's chase instinct. NEVER APPROACH A BEAR! But if a bear approaches you, stand your ground and make yourself appear larger by raising your arms, backpack or jacket. Yell at the bear to scare it off and if by chance you are attacked, fight back aggressively with anything available. Let the bear know you are not easy prey and, by all means, do not play dead when attacked by a black bear.

TPWD policy is to use "aversive conditioning" techniques on nuisance black bears rather than trapping and transplanting. Aversive conditioning associates a negative stimulus such as pepper spray or noise makers with unwanted behavior – in this case coming near humans, human food or human developments. The Department's Official Response Policy is to respond to all black bear sightings or interactions and complete a sighting-incident report. Please report all black bear sightings to your local TPWD Office.

Most recent documented case of a black bear sow raising 2 cubs most likely born in the western Edwards Plateau. Trail camera pictures captured the trio eating corn from several deer feeders and frequenting ranch water trough to 'take a dip' and cool off on hot days of summer 2013.

For more information on bears go to:
www.tpwd.texas.gov/huntwild/wild/species/blackbear/

Gilbert Guzman is a TPWD biologist stationed in Junction, TX
Mary Humphrey is a TPWD biologist stationed in Sonora, TX
Ryan Schmidt is a TPWD biologist stationed in Rocksprings, TX

Scaling Management to Meet the Needs of Wildlife and Landowners: Building Small Units into Effective Landscapes

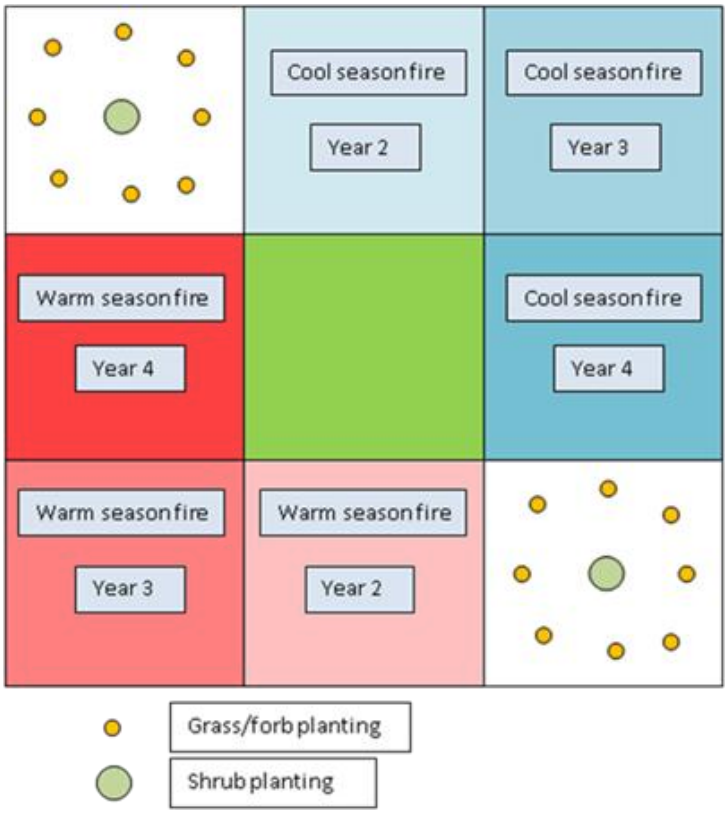
By Jim Gallagher

The most basic aim of wildlife management is to provide what the animal needs at the appropriate scale so that they can make best use of the available habitat. Sometimes this aim is not as clear as we would like it to be. What should we do if we are trying to manage for multiple species at different scales, or if the scale of ownership doesn't match well with the spatial needs of the species? Consider three rather different types of wildlife; the Texas horned lizard, the white-tailed deer, and the Rio Grande wild turkey. The Texas horned lizard typically has a home range of 1 – 2 acres, the white-tailed deer spends most of the year living in an area of 300 – 600 acres, while the annual home range of the Rio Grande wild turkey may be 1,500 – 3,000 acres! For most landowners, any habitat management you do on your place is readily available to turkeys at some time during the year (assuming that there are any turkeys around!). On the other hand, if you are trying to make life better for horned lizards you need to make sure that they can actually take advantage of what you have provided. Everything they need to survive has to be readily available in a very small area.

So, does all of this mean that we have to decide up-front what species we are going to manage for and what the scale of management will be? Do we have to write-off the Texas horned lizard if we want to manage for deer? Is there any way to manage habitat that might benefit a large number of species? The astute reader will have already guessed that there must be, otherwise there wouldn't be any need for this article!

Until fairly recently, most rangeland was managed pretty exclusively for livestock. For a long time we recognized the problem of grazing out the best plants and the decline of range condition. The obvious solution was to achieve the most uniform use of the resource possible in order to avoid having the range become dominated by less favorable plants. Even use should result in a homogeneous stand of vegetation, resulting in less spot grazing and over-use of preferred plants. While this might be good for livestock and rangelands, it is not always ideal for wildlife.

Not only do different species of wildlife live at different scales, but they also use different types of habitat throughout the year. Quail nesting habitat is different than brooding habitat, deer fawning habitat is different than winter habitat, and so on. If you use livestock to produce a uniform stand of vegetation, some of the needs of wildlife will go unmet. How do we manage for a variety of different habitat types?



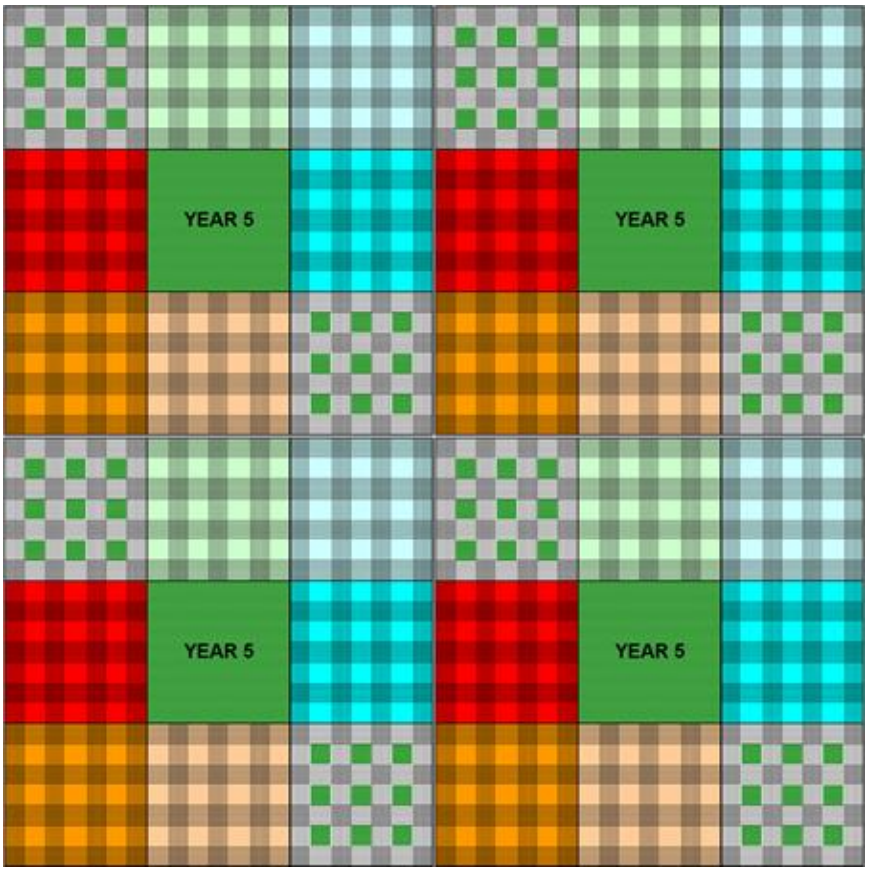
The need for variety in habitat structure and composition gave rise to the concept of "patch burn and graze" about 10 years ago. Prescribed burning is used to remove tall, rank vegetation from a relatively small area. Livestock are attracted to the fresh, green growth that results. Livestock grazing of these areas removes much of the grass and leaves the vegetation short, creating conditions that we refer to as "early successional". Over the course of a few growing seasons these patches will then return to the well-developed community that was there previously. By continuing to implement the "patch burn and graze" management on different patches every year we can insure that there are multiple patches of early-, mid-, and late-successional vegetation available.

Now that we have a tool for creating a variety of habitat conditions we need to decide how big the patches should be and how often they will need to be burned. Research currently underway at the Mason Mountain Wildlife Management Area is investigating the use of patches 2-3 acres in size. These patches are arranged in a rough square of 9 such patches. The plan is to burn the outside patches every 4 years, once with a cool-season fire and once with a warm season fire. The center patch will not be burned. The prescribed burns are rotated around the outside so that 1

Building Small Units into Effective Landscapes cont…….

cool-season and 1 warm-season fire take place each year. This allows each patch 4 years to regrow after each fire. It also means that there should be a wide variety of habitats available in a relative small area. The size of the individual patches is aimed at relatively non-mobile creatures like lizards, snakes and small mammals. The 9 patches taken together should provide the space and variety needed to support species like the bobwhite quail. Now we just need to figure out how to make it work for the wildlife that live at a larger scale.

The handy part about working with a burn management unit like this is that they can be replicated across a pasture or property to impact larger areas. Landowners could create just one unit, or a handful, or a dozen depending on their needs and how much time and effort they have to dedicate to the management process. Livestock stocking rates need to be adjusted so that they spend the majority of their time on the current and one-year-old burn patches. There is no need to turn an entire property into burn management units, but it is probably best to put several together in one area to provide the greatest habitat variety and simplify management. With a little planning, a little work, and a little luck it should be possible to provide for all the habitat needs of a wide variety of wildlife species.



Creating multiple management units across the ranch will result in a large mosaic of different habitat types that will benefit both small and large wildlife species.

Jim Gallagher is a TPWD biologist stationed at Mason Mountain WMA in Mason, TX.

FROM THE PASTURE

Dung Beetle (*Phanaeus vindex; Onthophagus gazella)*

by Evan McCoy

Dung beetles are amazingly quick at finding freshly deposited animal feces. They will roll it up into a ball and push it to a deep burrow found beneath excrement where the female will then lay its eggs inside. The larvae will later use the nutrient rich ball for nourishment. These beetles are often attracted to light. There are several species of dung beetles in North America. They are about a half inch to one inch in length and can range in color from black to various bright, metallic colors. They provide a very important benefit to the ecosystem. In fact, one of our more common species in Texas was actually introduced by the USDA in the 1970's to help remove and recycle livestock feces on the range. This also helps reduce breeding habitat for flies.

Visit for more info: https://insects.tamu.edu/fieldguide/bimg146.html

Evan McCoy is a TPWD biologist stationed at Kerr WMA in Hunt, TX

Yellow Stonecrop (*Sedum nuttallianum)*

by Evan McCoy

Yellow stonecrop is in the Crassulaceae or orpine family which is characterized by storing water in their fleshy leaves. This annual forb is often seen growing in sites with little soil on rock outcrops where few other plants are able to grow. It is a small (2-4 inches), succulent plant that often grows to form into a dense mat. The flower is yellow with five petals and can be seen in late spring. It is not a preferred food for grazing animals though it has been found to occur in summer deer diets on the Kerr Wildlife Management Area.

Evan McCoy is a TPWD biologist stationed at Kerr WMA in Hunt, TX

Attention! Have You Seen This Bird?

by Robert Perez

TPWD has initiated a pilot project to document the occurrence of Montezuma Quail (*Cyrtonyx montezumae*) in the Edwards Plateau. This secretive bird was once found across most of the hill country but has long since disappeared from its former range. Today, sightings have been documented in Edwards, Real, Kinney and Val Verde counties. Researchers hypothesize that Montezuma Quail may be increasing in abundance due to current trends in land management practices such as cedar removal and reduction of livestock. Typical habitat is found in areas with steep slopes, pockets of deeper soils, few shrubs, and established bunchgrasses, like little bluestem, that are at least 2 feet tall.

The Montezuma Quail is one of four species of quail found in Texas and is classified as a game bird with no open season. Also called "Fool's quail", these birds rely on their camouflage to avoid detection and hesitate to flush unless there is no other option of escape. Food items include insects, greens and acorns, but most importantly they require plant tubers as part of their winter diet. Pink-flowered wood-sorrels (*Oxalis drummondii*), wild onion and wild garlic (*Allium spp.*) and some species of sedge (*Cyperus spp.*) offer underground plant material that can be dug up and eaten. Winter foraging areas or "dig sites" can be an indication of the presence of Montezuma quail.

If you have seen Montezuma quail in your area, please contact TPWD via email at robert.perez@tpwd.texas.gov

Robert Perez is the TPWD Upland Game Bird Program Leader

IN A NUTSHELL

Proof of Sex

Notice: It is **unlawful** to possess a deer or pronghorn antelope **with proof of sex removed** unless the deer or antelope is at a final destination and has been quartered. Proof of sex for deer or antelope is:

- the head (skinned or unskinned) of a buck deer with antlers attached;
- the head (skinned or unskinned) of an antlerless deer;
- the unskinned head of a pronghorn antelope; or

a completed Managed Lands Deer Permit, Landowner Assisted Management Permit, Antlerless Mule Deer Permit, TPWD Drawn Hunt Legal Deer Tag, or Antlerless and Spike-buck Control Permit

DSHS Urges Precautions for Hunters and Ranchers

The Texas Department of State Health Services is urging hunters and ranchers to take precautions to protect themselves from diseases transmitted by animals.

Deer, sheep, goats, cattle, horses and other animals can contract anthrax, a bacterium that can cause a severe, life-threatening disease in both humans and animals.

The first case of anthrax this year was recently confirmed in a sable antelope herd on a ranch in Edwards County, an area of West Texas where anthrax is most likely to occur. Animals usually get the disease by swallowing anthrax spores while grazing. Anthrax is a naturally occurring disease with worldwide distribution, including Texas.

"Hunters and livestock owners should be aware of anthrax cases in their area and take steps to protect themselves, such as not touching sick or dead animals," said Dr. Tom Sidwa, manager of the Zoonosis Control Branch at DSHS. "Basic precautions can minimize the chance of contracting anthrax or other diseases transmitted by wildlife."

People usually get anthrax through handling a dead or sick animal infected with anthrax. Anthrax infection in humans usually involves infection of the skin. Skin infection is typically itchy and resembles an insect bite. Within two to six days it progresses into a painless ulcer with a depressed black center.

Although humans are susceptible to anthrax infection, no cases have been reported in Texas this year. Basic precautions can effectively reduce the risks of humans contracting anthrax and other diseases from livestock and game animals.

- Do not harvest animals that appear ill or are acting abnormally.
- Wear long-sleeved garments and gloves when handling, dressing and processing game.
- Use sanitary practices such as hand washing with soap and water and laundering clothes immediately after animal exposure.
- Minimize contact with animal fluids, brain and spinal tissues.
- Keep pets and children away from dead animals.
- Avoid direct contact with animal bones, horns or antlers.
- Cook all meat until well done before consuming.

People should contact a doctor if they develop an unusual-looking sore on the hands, arms or other exposed skin. Although it is very rare to contract skin anthrax, this infection requires treatment with antibiotics prescribed by a physician.

News release from Texas Department of State Health Services: http://www.dshs.state.tx.us/news/releases/20130927.aspx

FIELD NOTES

News and Information from our Wildlife Management Areas

Investigating New Ways to Control Feral Pigs

by Justin Foster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It is probably no surprise to you that Kerr WMA staff is involved in ongoing investigations to develop new tools for feral pig control. Rather than spending too much time justifying these efforts, I will summarize by saying that KWMA staff and our chain of command believe: 1) Feral pigs pose significant danger to human health through transmission of disease; 2) Feral pigs are a threat to our native flora and fauna; 3) Feral pigs are a threat to our livestock markets and economy; and 4) Controlling feral pigs is very costly. Although I am speaking of North America here, the case is very similar across the globe. Because TPWD's WMA system is the research and demonstration arm of the Wildlife Division, it only makes sense that we focus our efforts and resources on an issue that is so important to many of you.

Our current goal is developing a tool(s) that reduce the cost of controlling pigs on your property. Our primary objective is to develop and register a toxic bait and delivery system with the United States Environmental Protection Agency that is feasible, user friendly, and environmentally safe. The golden goose egg here is to develop a product that can be a cost-effective way to reduce pig numbers without having negative impacts on the resources that all native Texans cherish.

Our current investigations are centered on sodium nitrite (not sodium nitrate). Sodium nitrite ($NaNO_2$) is an inorganic compound that is commonly used in medicine, the food industry, and industrial chemistry. It affects our lives frequently as it is one of the most common food additives used for preserving meats. If you eat bacon, jerky, or cured meats, you are almost undoubtedly eating $NaNO_2$. Don't worry; the miniscule amount you consume could never have the acute effects upon you that intended doses can have on pigs. In fact, the bacon you consume will have more $NaNO_2$ in it than the meat from a pig that is killed by sodium nitrite intoxication.


© TPWD

Sodium nitrite shows potential because: 1) its effect is rapid, lethal, and clinically humane in pigs; 2) it is readily available; 3) it is inexpensive; 4) there is an antidote (i.e. methylene blue); 5) user hazards are manageable; and 6) delivery can be environmentally safe. In a nutshell, sodium nitrite has the potential for safe and effective control of feral pigs.

The drawbacks to sodium nitrite are that it is highly unpalatable to pigs and it is also very unstable which means it can potentially react with bait ingredients. Such reactions not only reduce the potency of $NaNO_2$, but may also breakdown to more noxious products causing pigs to reject it. This reactivity prevents any chance of creating an effective nitrite based bait in the barn at home. Whether rejection or potency, do it yourself chemistry is undoubtedly going to result in product that is not lethal to pigs.

FIELD NOTES

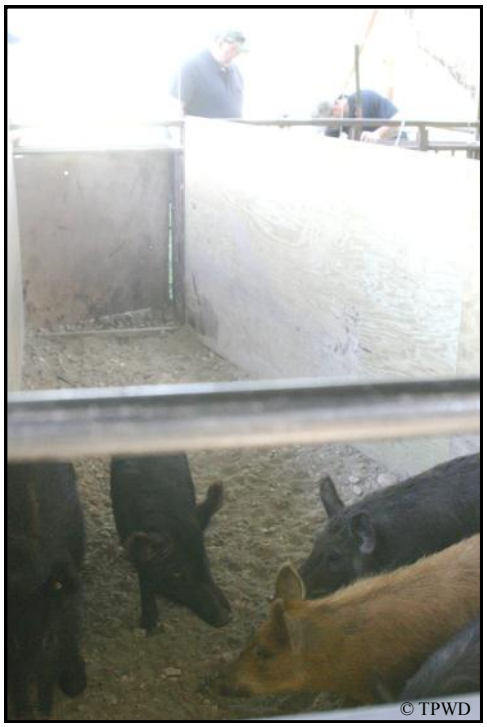
News and Information from our Wildlife Management Areas

Feral Pigs cont…….

Nonetheless, the aforementioned qualities of NaNO2 warrant further investigation. This is where KWMA gets involved. To uphold our mission to manage and conserve the natural resources of Texas, we are directly involved in testing the safety and efficacy of feral pig baits. To do so, we have partnered with the Texas Department of Agriculture, USDA-APHIS, and Animal Control Technologies (Australia). Investigations to date include: 1) *Effects of sodium nitrite on feral pigs and Texas non-target wildlife;* 2) *Effectiveness and target-specificity of a novel design of food dispenser to deliver a toxin to feral swine in the United States*; and 3) *Effects of 2 formulations of sodium nitrite on feral pigs.* The aforementioned investigations created need for new facilities to address future questions on toxic bait development. The collaborators responded to this need by funding and constructing a new facility at KWMA for investigating feral pig control tools and related pig biology. Today, this facility spans 11 acres and has been identified as a critical location for conducting research under EPA registry guidelines.

In the near future, our collaboration will evaluate the efficacy of multiple formulations of toxic baits in the KWMA feral pig research facility. Should any of these baits prove palatable and effective the collaboration will enter into 3 years of research to meet EPA requirements. The works will include both captive and free-range evaluations of bait efficacy. We are hopeful that we will understand the utility of NaNO2 as a candidate active ingredient before the end of 2014. Let's all hope that a suitable formulation is identified. Thanks for your support.

Feral pig being released into the research pen facility



Justin Foster is the Region 2 Research Coordinator stationed at Kerr WMA in Hunt, TX.

ON THE HORIZON

Don't forget your MLDP harvest data is to be submitted by April 1, 2014

Wildlife for Lunch: Songbird Management

When: Thursday, December 12th, from noon to 1:00 pm
Presented by: Cliff Shackelford, TPWD
Where: your home or office computer
Cost: FREE!
How to sign on: Simply point your browser to https://texas-wildlife.webex.com on the day of the webinar and click to join the Wildlife for Lunch webinar. Each web based seminar is fully interactive and allows you to engage the experts, make comments, and ask questions during the course of the presentation.

Wildlife Tax Valuation Seminar
3 Day Series

When: January 11, 18 and 25, 9am-1pm
Cost: Members $90 person and $110 couple
Non-members $110 person and $135 couple
Where: Cibolo Nature Center, Boerne, TX
Registration Required: (830) 249-4616

Land Stewardship Workshop for Central Texas Brush Contractors
Contractors and Landowners Welcome

When: January 24, 2014
Where: : EAST LLANO COUNTY ANNEX BUILDING
8347 West RM 1431, Buchanan Dam, TX
For more information contact Clint Faas cfaas@texas-wildlife.org

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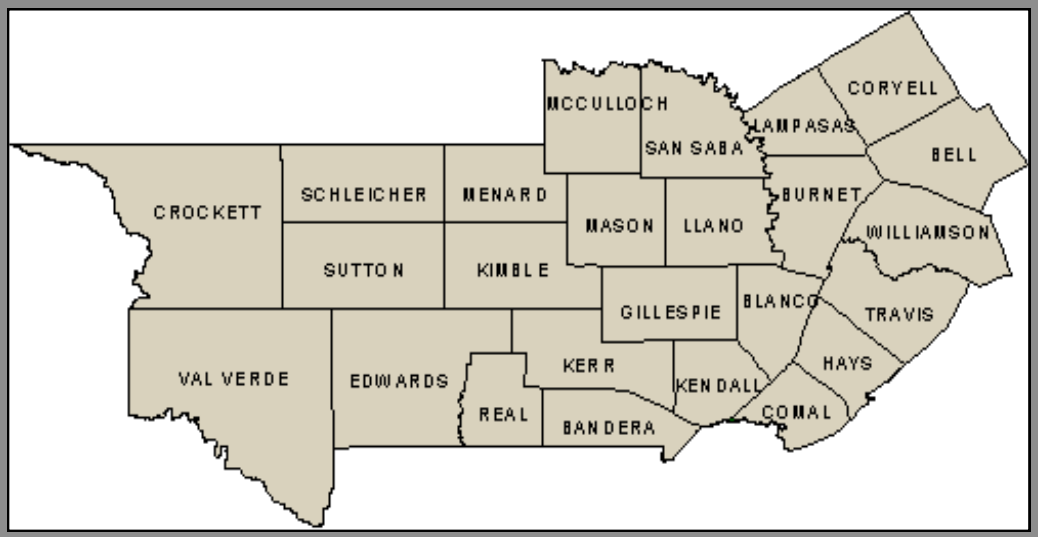
Cost Share Program Available for Landowners

Texas Parks and Wildlife Department is expanding the Landowner Incentive Program (LIP) Watershed Funding Series to the Pedernales watershed. The LIP is a cost-share program designed to help landowners implement conservation actions that positively impact the Pedernales Watershed. The program encourages and supports a wide array of sustainable land-use activities that are compatible with aquatic resource conservation. If you are interested in being considered for this funding opportunity, please contact your local wildlife biologist or Megan Bean, Watershed Ecologist, at megan.bean@tpwd.texas.gov.

Hunters for the Hungry

The website for Hunters for the Hungry is up and running at www.texashuntersforthehungry.org. On the site, there is information on the program, a sortable list of approved processors, helpful links for sportsmen, and a few recipes. This program is a win-win for everyone. The sportsman is able to extend his season beyond his personal use or freezer capacity, the landowner is able to effectively manage their herd, and hungry Texans are provided with an excellent source of protein. Check it out!!

HILL COUNTRY WILDLIFE DISTRICT



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