
FALL 2019

The Wildlife Witness

Washington County Wildlife Society Newsletter
1305 E Blue Bell Rd, Ste. 105, Brenham, TX 77833
979-627-6212 *wcwildlife.org*



WILDLIFE NEWS INSIDE THIS ISSUE:

President's Remarks-2
Buck Math Year to Year- 3
Upcoming Events - 4
Texas Archaeology - 5
Quail and Grassland Conservation
Program - 8
A Fascination with Wings - 9
TX Bluebird Society
Announcement -10
Creature Feature - 10

Recovering America's Wildlife Act

submitted by Stephanie Damron, TPWD Biologist

Fish and wildlife populations are under increasing pressure from habitat loss, invasive species, emerging diseases, and extreme weather events in Texas and throughout the country. As many as one-third of our nation's species are on the brink of becoming threatened or endangered. A bill introduced in Congress last Friday seeks to reverse this trend. House Resolution 3742, known as the Recovering America's Wildlife Act, would provide \$1.3 billion annually to state initiatives, and \$97.5 million to tribal nations, to support at-risk fish and wildlife populations and their habitats. The funding would come from existing revenues, and would not require any new taxes. Texas is estimated to receive more than \$50 million per year. U.S. Representatives Debbie Dingell (D-MI) and Jeff Fortenberry (R-NE) introduced the bipartisan legislation with 60 original cosponsors (including 4 Texans!) and with nationwide support from conservationists, hunters, anglers, business people, oil and gas company representatives, and the outdoor recreation industry.

President's Remarks

We had another great turnout of members and friends at our August Fall meeting and fundraiser . Speaker Tim Siegmund enlightened us with his expertise in the TPWD Private Lands Program focusing on native grasses. Your Washington County Wildlife Society's plan is to hopefully implement some of his expertise in our Native Grass Restoration Corridor Project. I want to thank Tim for giving of his time in Speaking at the meeting.

We are still accepting generous contributions from our donors and sponsors in our fundraiser efforts in order to continue with our Good Works programs. The raffle ticket sale was fun and successful in helping with some of these funds. Once again, I want to thank the directors, co-directors, board members and volunteers for giving of their time to help at the meeting. Thank You to the many sponsors who donated items for the raffle and door prizes. Also, thank you to Mike Hopkins for donating the beer and Gary Goebel for preparing the great meal. Without everyone's help, the success of this event would not happen.

The WCWS wants to emphasize again that anyone can make a difference in contributing to LAND CONSERVATION. You do not have to own land to be a member of the wildlife society. You can join as an "at large" member and participate in any of our co-op's and our good works programs.

With this said, it is time for new officer elections. Your WCWS is searching for a new President, Vice President and Secretary. If you or anyone you know is interested in serving as a board member officer of the wildlife society, please let our nominating committee know (Stephanie Damron, Richard Thames or Trevor Dickschat)

I wish everyone a happy Fall!

Celeste Dickschat

Directory

WASHINGTON COUNTY WILDLIFE SOCIETY OFFICERS FOR 2019:

PRESIDENT- Celeste Dickschat, (979) 277-2331, maroon-out@hotmail.com

VICE-PRESIDENT - Trevor Dickschat, (979) 277-8353, trevord310@gmail.com

TREASURER- Ginger Bosse, gbosse@ssccpa.com

SECRETARY - Brick Peele, (979) 278 3778, brickpeele@aol.com

WMA DIRECTORS 2019

GREENVINE WMA

Director - Adam Seilheimer, (979) 830-3960, texastrophyscapes@yahoo.com

Vice-Director - Cary Dietzmann, (979) 203-3942, cary@acountryliferealestate.com

SUN OIL FIELD WMA

Director - Charlotte Von Rosenberg, (512) 924-3068, quebefarm@yahoo.com

Vice-Director - Judy Deaton, (979) 277-8426, jadtmn@gmail.com

ROCKY CREEK WMA

Director - William Amelang, (979) 337-4283, williamamelang@gmail.com

Vice-Director - John Knapp, (979) 289-5533 jknapp@knappfralick.com

POST OAK WMA

Director - Jon Wellmann, (936) 419-3910, jonwellmann@live.com

Vice-Director - OPEN

MT. VERNON WMA

Director-OPEN

Vice-Director-OPEN

SANDTOWN WMA

Director - Richard Thames, (979) 278-3053, rbthames@industryinet.com

Vice-Director - Amy Thomsen, (713) 408-6135, amy.thomsen@icloud.net

NEW YEARS CREEK WMA

Director - Terry Atmar, (281) 303-6023, terry.atmar@yahoo.com

Vice-Director-OPEN

RESOURCE CONTACTS

Stephanie M. Damron, TPWD Natural Resource Specialist III, Washington & Waller Counties, (979) 277-6297, stephanie.damron@tpwd.texas.gov

Kara J. Matheney, Texas A&M AgriLife Extension Service Agent-Agriculture/Natural Resources, (979) 277-6212, kjmatheney@ag.tamu.edu

Ben Garcia, NRCS District Conservationist, (979) 830-7123 Ext. 3, ben.garcia@tx.usda.gov

Washington County Appraisal District/Collections, (979) 277-3740

Gene Bishop, Web Administrator, g_bishop@austin.rr.com

Faith Chase, WCWS Coordinator/Newsletter, (979) 820-1673, faith.wcwildlife@gmail.com

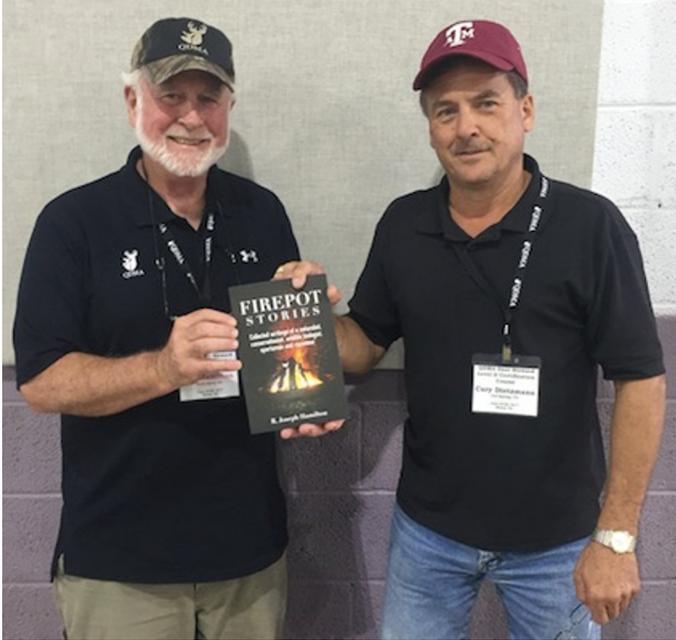
RECOVERING AMERICA'S WILDLIFE ACT (CONT.)

Texas is home to more than 1,300 of the 12,000 species identified nationwide as Species of Greatest Conservation Need. Many iconic fish and wildlife are in decline, including the much-loved Texas horned lizard, Pronghorn antelope, Guadalupe bass, sea turtles, and many kinds of grassland and coastal birds. H.R. 3742 represents a once-in-a-generation opportunity to change the course of history for these wildlife species, thus providing more regulatory certainty for businesses, land developers, the oil and gas industry, and governmental entities. "H.R. 3742 would be a game-changer for fish and wildlife – in Texas and across the country," said John Shepperd, a spokesman for the Texas Alliance for America's Fish and Wildlife. "The Recovering America's Wildlife Act is a cost-effective way to recover fish and wildlife populations without the more reactive, "emergency room" measures of the Endangered Species Act. Once a species reaches the need to be listed as Threatened or Endangered, the process of recovery is more difficult and expensive. It is much smarter to act before these at-risk populations reach a critical point. "Healthy fish and wildlife populations are the backbone of Texas' fast-growing outdoor recreation economy, which includes hunting, angling, wildlife watching, kayaking, nature tourism, and hiking. Research has proven children do better in school when they have a connection to nature. Functioning ecosystems provide food, fiber, timber, pollination, and clean air and water which benefit all of us." Janice Bezanson of Texas Conservation Alliance notes that "the Recovering America's Wildlife Act would bring much-needed funding to Texas for projects designed to keep species off the endangered species list, without raising or creating new taxes. This legislation is good for wildlife, good for business, good for Texans." H.R. 3742 directs existing federal revenues to the Wildlife Conservation and Restoration Program, established in 2000. State wildlife agencies will distribute the money through grants and partnerships within the conservation community for habitat restoration, research, land protection, establishing conservation easements, reintroducing wildlife, and other initiatives listed in each state's Wildlife Action Plan. Particularly interesting for a private lands state like Texas, the funding could expand cost-sharing programs for private landowners to conduct voluntary wildlife and habitat stewardship activities on their property. It will also be used to fund educational programs and introduce more Texans to outdoor recreation opportunities. The Recovering America's Wildlife Act gained a lot of support in the last congressional session; 116 Members of Congress cosponsored the House bill, evenly split between Republicans and Democrats. Texas had the second highest number of cosponsors of any state, 13 total, including 6 Republicans and 7 Democrats. The Texas Alliance for America's Fish and Wildlife is a coalition of more than 160 organizations and businesses which actively supports this important legislation. Every citizen can help, by urging their Member of Congress to co-sponsor H.R. 3742. You can learn more about the Texas Alliance for America's Fish and Wildlife and the Recovering America's Wildlife Act by visiting www.txwildlifealliance.org.

Here is a Texas Spiny Lizard (*Sceloporus olivaceus*), a non-game species that could benefit from this Act.



**"Our task must be to free ourselves... by widening our circle of compassion to embrace all living creatures and the whole of nature and its beauty."
~Albert Einstein**



Since we are on the cusp of the 2019-20 Deer season, let's talk BUCK math, that includes Age, Does, Spikes, Culling and my opinion.

In 2017, some of you may recall I conducted a series of presentations for several of the Wildlife Management Associations with the Washington County Wildlife Society on Quality Deer Management. It was also in the summer of 2017 that I completed a Quality Deer Management (QDMA) Deer Steward Level 2 course conducted at the 19,184 acre Wattensaw Wildlife Management Area located in Hazen, Arkansas. This course was multiple days of intensive professional classroom and in field Whitetail Deer education.

I'm pictured with QDMA Founder Joe Hamilton. Mr. Hamilton along with multiple other instructors during the course gave enlightening input on topics from Whitetail biology, habitat, management and deer populations. Whitetail deer math, as I call it was a portion of the education process. So let's start things up with some BUCK MATH!

ANTLER RESTRICTIONS! You can agree or disagree with me on them, that's o.k., but I know despite all the original moaning and groaning, and continued "TALL ANTLERED NARROW SPREAD" bemoaning by some....ANTLER RESTRICTIONS HAVE WORKED. Why? Simply because it became illegal to shoot mostly underaged bucks. Yes, there are mature bucks with illegal spreads. However, are they what you are hunting for? Don't think wide, don't think tall, please don't think points. Focus your hunting skills on fully Mature AGE Bucks and BUCK MATH.

For years I have been calling SPIKES "justification" bucks. I have heard every reason possible and presented for harvesting SPIKE bucks, and yes I have harvested SPIKE bucks in my past. "SPIKES are CULLS", "I needed venison for my sausage", "I had to shoot something, the deer lease is costing me \$\$\$\$". Yet a seldom discussed researched fact is that, most SPIKE bucks harvested are less than 1 1/2 years old or less! Most being in the 60-80% range of all SPIKE bucks harvested I would guess. Maybe higher depending upon the area habitat conditions. I am not stating an exact percentage as I have not researched the latest data, but I'm confident in saying that at least half of all SPIKE bucks harvested are probably not older than 1 1/2 years old.

Where am I going with these numbers? Well, a SPIKE is a BUCK!, and every BUCK removed from the deer herd makes your buck-to-doe ration worse, if you are not harvesting an equal number of female deer. I should note here that the cornerstone of QDM is herd management, which includes doe management.

Let's say you have 100 deer composed of 60 does and 40 bucks on your property or in your area. You have a 40/60 buck/doe ratio. If you have 30 bucks and 70 does, the ratio is 30/70. Some locations in and around the area have very skewed herds where doe numbers may represent even higher percentages of the overall herd. So let's analyze the area with a 40/60 ratio. Bell curve the 40 bucks by their age class. Meaning, how many are 1 1/2, 2 1/2, 3 1/2, 4 1/2, etc. Let's say the age distribution of the buck herd looks like this. Twenty bucks under 3 1/2 years of age, and twenty bucks over 3 1/2 years of age, a perfect distribution.

However, we know this (perfect scenario) is not realistic. Look at your game camera pictures, or stand observation numbers, or your minds eye view of the deer herd you see and figure out how many young, mature, and old bucks you are seeing. My guess is your seeing fewer Old deer than Mature, and fewer Mature deer than young unless your in an area that is an exception. Why? Because it's very difficult for a Whitetail Buck to get to 5 1/2 years old. Why? Life is hard on a Whitetail deer buck and LEGAL HARVEST (my opinion) is the most limiting factor in BUCK MATH. Not poaching, not vehicle road kill, not coyotes, not parasites, not starvation, not rut stress, not getting hung in the fence, certainly not old age...It makes every pull of the trigger very important to next years BUCK MATH especially when you combine all other causes of BUCK mortality. It might surprise you to consider that 10-30 percent of all bucks die each year from NATURAL CAUSES. That would possibly mean 4-12 bucks disappear from the heard before or after hunting season. This scenario leaving 28 Bucks in a herd of 100 deer that has ZERO hunting harvest. The national average for hunting success is around 40%. If this holds true for your area, then approximately only 16 Bucks of the remaining 28 Bucks in your herd make it to next spring!

BUCK MATH YEAR TO YEAR (CONTINUED)

My focus on BUCK MATH is this. Texas Parks & Wildlife can't antler restrict the surviving bucks in your area to get them to 5 1/2 - 6 1/2, or older years of age. But you and your neighbors possibly can via management and cooperation.

Here are DEER MATH (X) Factors:

- (1) HABITAT CONDITION - In places where the habitat has been degraded either by overpopulation or drought etc. Natural Deer mortality could be higher and nearly all young bucks under 1 1/2 years old could be spikes.
- (2) DISPERSAL - Is the process of a deer moving from where it was born to a differing location. Dispersal happens especially among young yearling bucks. This impacts your BUCK MATH. Your area or property could acquire or lose bucks via dispersal.
- (3) OVERALL MORTALITY - Poaching, vehicle collisions, Coyote predation, Feral Hog predation of fawns, rut stress, injury, disease, etc, all add up to effect the deer population.
- (4) RECRUITMENT - The number of surviving fawns obviously impacts the deer population. This is why quality habitat, the quality of unglazed or uncut fawning cover, and spring predator control are important to your BUCK MATH. Two or more consecutive years of low fawn crop can drastically alter the structure of your deer herd.
- (5) CULLING - This is a whole other topic. More opinions exist on culling than harvesting SPIKES or Doe deer. Let's refocus on BUCK MATH. In short, the effort to improve the antler characteristics on your property or in your area by removing lesser quality or inferior bucks has been repeatedly proven ineffective and reduces BUCK MATH. GOOGLE the topic and start your own research. Personally I envy the hunter who gets to see multiple 5 1/2 - 6 1/2 year old CULL BUCKS while in the stand.
- (6) DOE MANAGEMENT - One of the simplest ways to improve your habitat is by decreasing deer density. QDM involves harvesting an adequate number of doe deer to keep deer populations in balance. Simply put if your not harvesting doe deer your negatively effecting your BUCK MATH.

In summary, Quality Deer Management strives to hold deer densities within the habitats carrying capacity. I recommend you contact and work with your areas Wildlife Biologist to establish a realistic baseline deer population number and estimated carrying capacity number for your property or area. Start recording sighting information, game camera statistics, and annual harvest data and body weights.

As far as BUCK MATH goes, STOP shooting young spikes, and STOP trying to CULL your way to a trophy. Research it! (my opinion). Start harvesting doe deer, (review current regulations), start manipulating your habitat, start creating fawn cover areas, and start late spring predator control. If your a deer hunter, start watching good 4 1/2 year old bucks and letting them go...enabling them to pass into next season...it's called restraint, management, neighboring cooperation, education, and to all our benefit, better BUCK MATH.

UPCOMING EVENTS

10/25

RANGE MANAGEMENT AND NATIVE GRASS ID
SPONSORED BY SUN OIL FIELD WMA AT
THE WEISS STORE, 3755 HWY 390, AT 5:30PM
WITH CHOPPED BARBECUE BRISKET DINNER,
THANKS TO BOO CHRISTENSEN

11/9

GEOLOGY AND SOIL-SPONSORED BY
SANDTOWN, MT. VERNON, ROCKY CREEK, AND
GREENVINE WMAS

11/16

GRAZING NATIVE GRASSES-SPONSORED BY
POST OAK AND NEW YEARS CREEK WMAS AT
THE GIBLIN'S 11555 PALESTINE RD, 2-6 PM,
DINNER PROVIDED

1/24/20

JANUARY MEETING

Texas Archaeology

by Dee Wolff, member, Greenvine WMA

Washington county ancestors answering a call for freedom and well-being chose to emigrate from homes across the sea, across the world, to find a new home in the region around Burton, Texas. Each generation of those industrious settlers helped to domesticate the countryside, taming themselves in the process. Country homes are more than just dirt, trees, water and grasses. They are also the history and energy, sweat, blood and tears of those who inhabited the plains along with the birds and beasts.

Farm treasures which provide clues of that history percolate from piles of soil and leaves in various hidden sites around the farm. Objects and bits of items familiar to the settlers who emigrated from Germany, line a shelf on the old farmhouse porch. Pitted bottles, shards of rusted metal that were once parts of tools, petrified rocks, pieces of broken crocks and strands of twisted wire all have stories to tell about the hardworking people who lived and died on this place.

A cobalt blue bottle with a long crooked neck, reconfigured by age, dirt and heat, was found hidden in an old “dump pile” in the woods close to the house. Perhaps it once held some cure for croup, hiccups or headaches. It is a sweet little bottle, just right to hold fragrant wild onion blossoms. It is sometimes placed in front of an etching of ducks alighting from water, or set to be used as a centerpiece for dinner on the old pine table. A found small dog figurine holding a white flower must have been a gift for a young child. It sets with Cardinal birds’ salt and pepper shakers on a window sill in the kitchen.

The colorless glass bottle which has been etched into scratchy old age by weather appears to have been a bottle that contained vanilla. Perhaps Mr. J.R. Watkins of Plainview, Minnesota, who introduced Watkin’s Vanilla one hundred and twenty four years ago, sent his salesman to make the rounds in rural Texas. The salesman’s traveling bag of wonder must have been filled with vanilla, cinnamon, soda and brushes. The pie safe in the kitchen of this old farmhouse was once graced with buttery cinnamon crusted coffee cakes and cooling, vanilla laced sugar cookies, perhaps thanks to Mr. J.R. Watkins.

Since liquor was banned in the house, on the porch, or around the house, it is not an accident that the distinctive bottles which contained “spirits” were found on the far side of the pasture in gnarled tree trunks and under bushes. The great outdoors was a natural bar....a “bottle club” of sorts for visiting menfolk- brothers, cousins, neighbors and friends. An old brown beer bottle was certainly a Shiner Bock and the clear and sometimes colored bottles might have contained an extravagant Old Tucker, Old Crow or Old Taylor whiskey. Perhaps a Gibson’s Rye made its way down South from relatives in Indianapolis. All found bottles were empty, a reminder, perhaps, of country camaraderie!

Tools hanging in the old shed are reminders of the everyday intensive labor that kept the family alive: The spade used to dig summer gardens by the wild plum trees and a rusted bucket now with a hole in the bottom, keep company together on the wall. Grandma, in her homemade bonnet with a blue cornflower pattern hauled bucket after bucket of water drawn from the deep water well down to the garden to refresh tomatoes, squash and beans.

An antiqued three-tined pitchfork, used to pitch bundles or sheaves of grass, hangs next to the spade. The curved steel handle and metal tines are worn thin, but still strong. Unlike the original straight handled wooden pitchforks that first appeared in Medieval times, the curved handles allowed a heavier load to be lifted off the ground. (Each time I see the pitchfork hanging on the wall, I think of old movies in which a hoard of peasants holding pitchforks and brooms chased poor Quasimodo or Frankenstein out of the village.)

A pocked metal plow shears that was once connected to wooden handles and hitched to mules, was used to dig the cotton field in the bottom, an area that would regularly flood in heavy rains. The incessant cycles of rain and drought which caused failing cotton crops, drove many young men to find work in Houston and other cities.



Texas Archaeology (cont.)

A “misery whip”, a two man crosscut saw, is part of our farm collection. This saw has an “M” tooth pattern, unlike earlier saws that had plain tooth patterns. I can only imagine the amount of man hour labor for the two “sawyers” who cleared the land of junipers and oaks in order to make way for the simple farmhouse-a wedding gift that was hauled across the road on logs pulled by mules.

Part of our discoveries are parts of hammers, blades for a scythe, something that looks like a sword- but is actually a homemade sickle to cut weeds, old nails, hinges, handles and unidentified metal pieces of objects that were once important to survival. Bits of tools, handles from shovels, plow shears, and jigsaw pieces of rusted iron, are now used as garden art in our flower beds. An aged handmade wheelbarrow with a steel wheel is filled with geraniums and wild flowers. Ol' Bessie's cowbell which she used to lead the cows into the wood fenced stock yard has become our gate doorbell. I am hoping that ancestral spirits are smiling at this tribute to their home.

Twisted strands of rusted barbed wire collected from rock- like cedar posts placed along property lines before 1912, or hanging, encapsulated in tree trunks, have all but fallen apart in our hands. The peach orchard, vegetable gardens, and the house were fenced with this wire to separate the grazing cattle from the yard proper.

Another fence in the “bottom” by cow patty pond, kept the cattle from straying out of the homestead. Twenty feet of rusted wire found one day in a grove, was so fragile that it fell into a rubble pile when we tried to roll it. This wire may have been created by John Wayne Gates of the Southern Wire Company. Around 1876, he demonstrated his wire in Military Plaza in San Antonio and took orders for it at the Menger Hotel. We think that the wire we found was a “double twisted” wire.

Farm relics hanging inside the house, include Grandpa's wooden cane, still sturdy and strong. It graces the wall along with Grandma's wooden butter paddles and stirring spoon. I wonder if Grandma knew that butter was considered peasant food by upper classes in Europe or that butter was first made as long ago as 2000 B.C. I doubt that she was thinking such thoughts as she churned butter to put on her beautiful homemade yeast bread, or on the top of a pie made from peaches from her own orchard!

A hand forged metal knife, a rusted horse shoe and a looped metal object used to whip egg whites into dewy mountains, complete this sacred wall altar. Each tool is a reminder of the amount of energy expended to butcher a hog, or to make butter, bread, cakes, or a pot of beans. The dented tin drinking cup holding earth cooled water to quench summer thirst was once at home in a white enameled pot with a red rim. This daily drinking and cooking water was lifted by a pulley and rope from the depths of the well which was hand dug in 1912 by two neighbors from across the road. This water must have been especially delicious and cooling on a Texas hot summer day.

The farm treasures that we have excavated and rescued from dirt, rock, and leaf piles may look insignificant to others, but they remind us of the hardy souls who treasured and tamed the farm land. They are a part of the history of toil and tears, frustrations and everyday rewards of those who were adventurous enough to set foot on a new land. Our ancestors must have experienced such hope as they raised crops and children and educated themselves in the Texas frontier. We cherish these found objects and hold them as country relics of lives passed and days gone by, in memory of those who lived here and whose spirits still live here.



Quail and Grassland bird conservation program

Decline of Grassland Birds

For more than 50 years grassland bird populations throughout Texas and Oklahoma have been steadily declining. Among these declining birds is the Northern Bobwhite, a popular game bird and an icon of the American south. Since 1965 the population of Northern Bobwhite in Texas has decreased by over 80%, with populations in the central zone of the state predicted to reduce by an additional 50% in the next 6 years. There are many factors that contribute to these population declines, but the primary cause is the loss of available suitable habitat needed to sustain these species. Conversion of native grasses to introduced pasture, grazing mismanagement, suppression of fire, and brush encroachment have all had a significant impact on the ability of Texas grasslands to provide for the needs of Northern Bobwhite and other grassland species. To address these drastic population declines, it is crucial that private landowners be encouraged and supported in their efforts to improve habitat for these birds on the lands they own and manage.

GRIP

The Oaks & Prairies Joint Venture (OPJV) Grassland Restoration Incentive Program (GRIP) is a multi-organization effort aimed at achieving grassland bird objectives in focus areas throughout Texas and Oklahoma. GRIP provides funding in the form of direct payment to landowners as an incentive for conducting approved grassland bird habitat improvement practices on their property. Priority practices include Prescribed Fire, Fire Breaks, Prescribed Grazing, Rangeland Planting, Cross Fence, Herbaceous Weed Control, and Brush Management. Eligible counties in Texas include Wilson, Karnes, Gonzales, DeWitt, Fayette, Colorado, Washington, Austin, Val Verde, Edwards, Kinney, Real, Uvalde, Ellis, Navarro, Throckmorton, Baylor, Archer, Clay, Montague, Wise, Shackelford, Stephens, Callahan, Fannin, Lamar, Red River, Delta, and Hunt.

Project proposals are prepared and submitted in coordination with local OPJV partner staff (Texas Parks & Wildlife Department, NRCS or other partners) working with individual landowners.

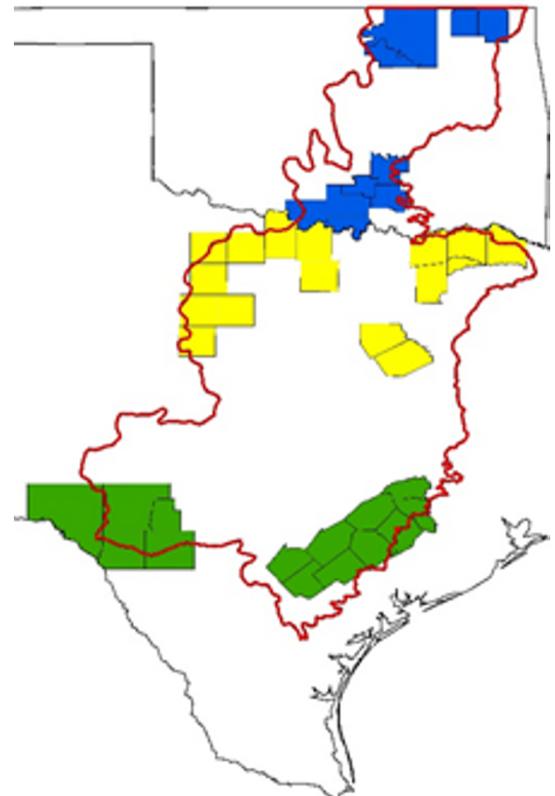
To learn how you can provide habitat for wildlife, improve production, AND conserve soil and water, contact the local USDA service center or your local wildlife biologist!

For more information visit OPJV.org

All members will have the opportunity to talk to Will about this program at the New Years Creek/ Post Oak sponsored WMA Meeting on November 16 (see pg 5)



Will Newman
Oaks and Prairies Joint Venture
Quail Forever
(817) 528-9455
WNewman@QuailForever.org



A Fascination with Wings

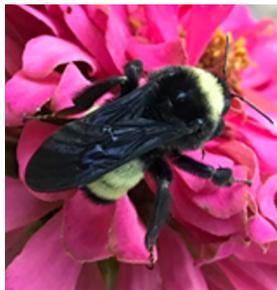
by Lori Buffum, Texas Master Naturalist

As I observe and study and photograph dragonflies, butterflies, and bees, I try to learn a little something more about these critters and so recently, I embarked on a little research into their wings. All of these insects have 4 wings – a pair of forewings and a pair of hindwings. Dragonflies use their wings to propel themselves up, down, forward, back, sideways, and at a hover, and can fly farther and faster than most insects. That maneuverability can be attributed to their ability to use their two sets of wings together or independently. Their powerful, though fragile-looking wings are composed of chitin (say it like a pro: kite-en), a component of the insect exoskeletons. Running through the chitin structure is a network of veins that provide strength and flexibility (and give the wings their lacy design when viewed closeup). The smooth, thin chitin structure gives the dragonfly wing its glassy look – especially evident when you see it at rest with its wings outstretched catching the sunlight. [Bottom Left: Great Blue Skimmer at the pond]

Let's look at bee wings. Like dragonflies, bees have a pair of forewings and a pair of hindwings composed of chitin membranes with a network of veins in between. Bee forewings are usually larger than the hindwings and shaped differently to fold neatly on top of the hindwing when the bee is not flying. Here is a fascinating feature: bee wings have Velcro! There is a short row of hooks (called hamuli) on the midsection of the hind wing that connect to grooves in the front wing when the bee takes flight so the wings beat together. Their flexible wings can beat up to 230 times per second and move in a sweeping motion front to back. Bees use their wings not only for flight but also for moving air at their hive or nesting site, and for buzz pollination (effectively releasing the pollen from a "stingy" flower). [Bottom Center: American Bumblebee on Zinnia]

Now what makes those butterfly wings so like a painting in flight? Scales, yes, scales that cover both the top and the bottom of each wing. The structure of the wings, underneath all that color, is that same chitin (the same two membranous layers between which run the same kind of vein network). Wing shape varies among butterfly species, but the forewing is generally shaped more like a triangle and the hindwing more like a clamshell. Like with bees, during flight, each pair of wings works as a unit (the fore and hind wings overlap with the hind pressing against the fore). When resting, butterflies hold their wings vertically (making it very tough on us photographers). Now about those scales (and hairs) – they are made of that same chitinous material and thousands of microscopic overlapping pieces are laid down on the wing structure in such a way that they create patterns of color (some of the color is pigmented color, much of it is structural color, observed as iridescence – intense, changing color). And one more fun fact: during migration especially, butterflies are high flyers, using the wind beneath their wings to fly at 11,000 feet or more. [Bottom Right: Eastern Tiger Swallowtail on Mexican Sunflower]

Next time you see a dragonfly zoom by or a bee working among your flowers or a butterfly warming up in the sun, think about those amazing four wings that carry them out into the world.



**"Conservation is a state of
harmony between men and land."**

~Aldo Leopold

Would you like to be a volunteer Nestbox Distributor for the Texas Bluebird Society?

Responsibilities include:

- Offer a free nestbox with a TBS membership and/or sell nestboxes.
- Provide printed information materials for new members.
- Accept a quantity of nestboxes (usually 5 – 10; but, can be up to 100, if you have the space and TBS needs nestbox storage in your vicinity.)
- As a distributor, your name along with email and/or phone # are listed on the TBS website in “Nestbox Distributors” section.
- Watch for a local festival where you might want to set up a TBS booth.

If anyone is interested, email execs@txblues.org, or contact Ann Thames, ann@H2G-Growers.com, 979-203-3455 (leave message if no answer).

Texas Bluebird Society is an all-volunteer grassroots organization helping bluebirds and other native cavity-nesting birds through increasing nesting sites while sustaining and increasing their food supply.



Creature Feature

Greater White-fronted Goose (*Anser albifrons*)

As the cold fronts roll through we will hear geese flying above, often so high we can't see them. When we do they are usually in a V-shape and we just assume they must be Canada Geese because they are the most common. I have chosen to highlight the Greater White-fronted Goose to remind us to be aware and be on the look out for other species of Geese this season.

This goose is the next most common to the Canada goose. They fly in a high, large V formation and their call is quick, high, laughing *ho-leeleek*. Flocks can be found grazing on ag-lands, marshes, and prairies, calling high rapid syllables and nesting in flocks on the low tundra near water. The birds graze on grasses, sedges, grains and small aquatic species.

This bird is brownish-gray overall without contrasting markings and has pale gray upper wings, white tip on tail, and dark bars on the belly of adults. Their orange legs very conspicuous, but do not confuse this bird with the Graylag Goose, or barnyard goose, a domesticated goose. These species are similar in coloration and size, but the graylag goose does not have the dark bars on the belly.

They lay 3-6 eggs and all incubation is done by the female from 22-27 days. Chicks are able to walk, swim, and feed themselves almost immediately after hatching. The chick's first flight is taken between 38-45 days. The chicks remain with their parents for one year then hang around them for a couple more years, breeding for the first time at 3 years.

