



North Texas Wildlife Management News



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Fall Is Here

October has to be one of my favorite months of the year. Cooler temperatures, football season, fall colors, anticipation of upcoming holidays, the start of archery deer season, and approaching fall cold fronts all get me excited for the upcoming outdoor recreation season.

If you are fortunate to spend any time outdoors this time of year you should recognize a few of these sights, smells and sounds: acorn drop, coyote howls, a falling moon, squirrel "talk," sandhill cranes heading south, a barred owl at last light, a deer grunt, floating spider webs, the big dipper, the smell of cedar, a flushed covey of bobwhite quail, chirping crickets, falling leaves, the damp and cool air in the creek, or the sounds and smells of a campfire.

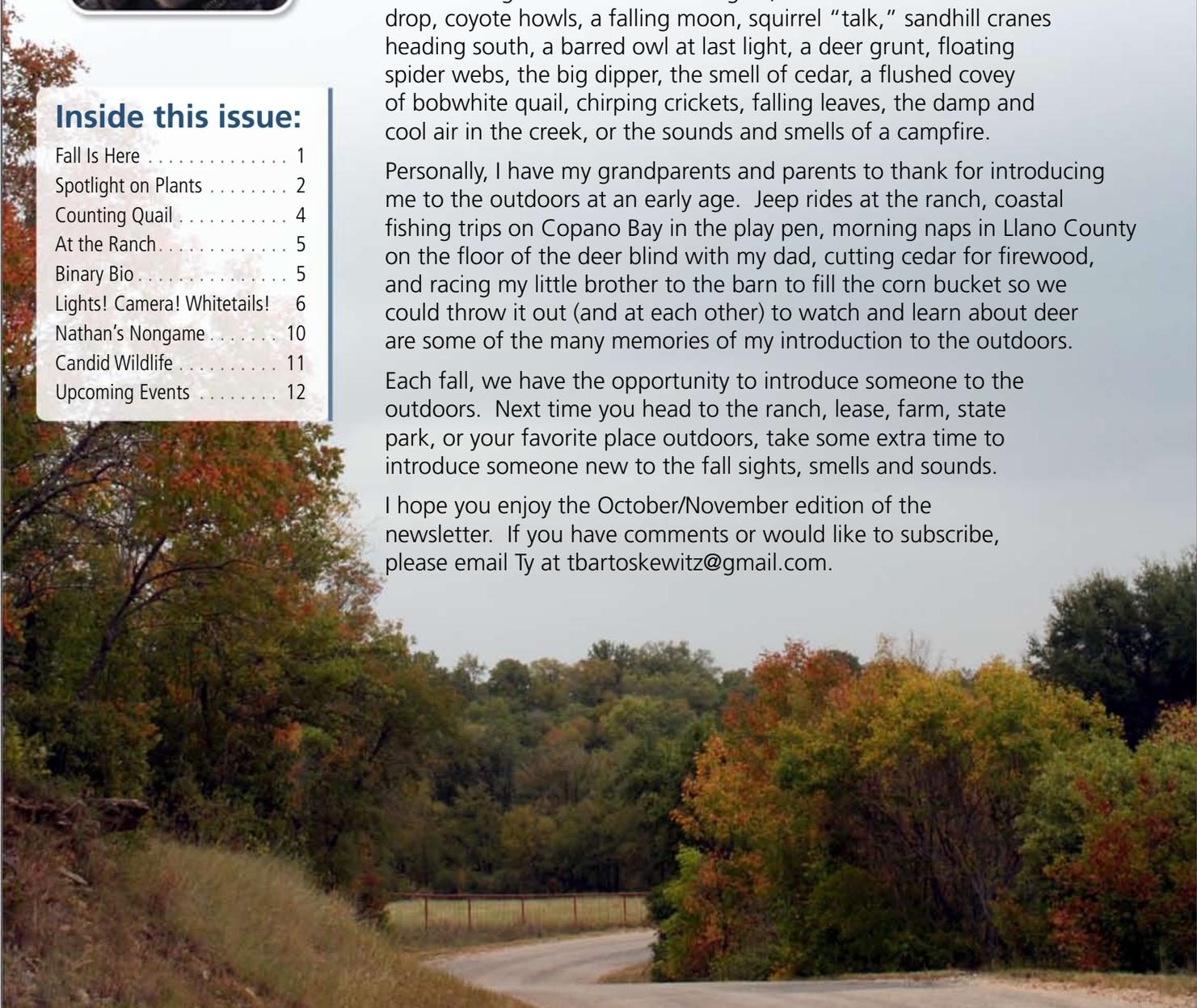
Personally, I have my grandparents and parents to thank for introducing me to the outdoors at an early age. Jeep rides at the ranch, coastal fishing trips on Copano Bay in the play pen, morning naps in Llano County on the floor of the deer blind with my dad, cutting cedar for firewood, and racing my little brother to the barn to fill the corn bucket so we could throw it out (and at each other) to watch and learn about deer are some of the many memories of my introduction to the outdoors.

Each fall, we have the opportunity to introduce someone to the outdoors. Next time you head to the ranch, lease, farm, state park, or your favorite place outdoors, take some extra time to introduce someone new to the fall sights, smells and sounds.

I hope you enjoy the October/November edition of the newsletter. If you have comments or would like to subscribe, please email Ty at tbartoskewitz@gmail.com.

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SPOTLIGHT ON PLANTS: The Oaks

The oaks are in the Beech family (*Fagaceae*) and in the genus *Quercus* which includes some of the most important native hardwoods in North America. The oaks are mainly deciduous with a few evergreen species occurring in the warmer climates. There are two main sub-groups of oaks: white and red.

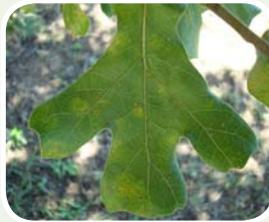
WHITE OAK leaves are rounded on the tips and lack bristle or spiny tips. Bark tends to be light gray and scaly in texture. Acorns are generally less bitter than red oaks and mature each fall. The inside of the white oak acorn cups are smooth. Post oak and shin oak are common white oaks in north Texas.

RED OAKS have leaves with bristles or spiny tips at the end of the leaf. The bark on red oaks is usually deeply furrowed and black in color. Acorns are bitter to taste and mature in the fall of the second year with two sizes of acorns usually common on the same tree. The inside of the acorn cup has dense hairs or fuzz. Texas oak and blackjack oak are common red oaks in north Texas.



Post oak (*Quercus stellata*), Iron oak

Post oak (*Quercus stellata*), is a medium-sized tree that typically occupies rocky or sandy ridges and dry woodlands with a variety of soils and is considered drought resistant. The wood is very durable and widely used for fence posts. Post oak is a valuable contributor to wildlife food and cover. Acorns provide high energy food during fall and winter and are considered important in the diet of wild turkey, white-tailed deer, squirrels, and many other rodents. The acorns mature in one growing season and drop soon after ripening, from September through November. Late freezes after the start of flowering and leafing may cause acorn crop failures. In common with many other oaks, post oak begins to bear acorns when it is about 25 years old. Good acorn crops are produced at two- to three-year intervals. Post oak is intolerant of competition and is classed as intolerant of shade. Because of its slow growth it often is overtopped by other trees, including most other oaks. On poor soil sites, however, post oak tends to persist and become dominant because it is more drought resistant than many of its associates.



Shin oak (*Quercus* spp.), Bigelow oak (*Q. sinuata*), Mohr oak (*Q. mohriana*)

Shin oak, also referred to as "scrub oak," is a thicket-forming shrub common along limestone outcrops and sand sheets in Texas. Shin oak will sometimes grow into a small tree with maximum heights of 20 feet. Leaves are shiny dark green above with dense gray hairs and prominent veins below. There are several varieties of shin oak in north Texas. Bigelow oak is common in Mills County and can be found from central Texas north to Cooke county along the Red River. Mohr oak is common west of the 100th meridian (west Texas and the panhandle) but can be seen along the Callahan divide in Taylor, Nolan and Callahan counties around Abilene.





Bur oak (*Quercus macrocarpa*), Blue oak, Mossycup oak

Bur oak is a tree with very large acorns reaching 50 to 80 feet tall. Leaves are dark green and slightly shiny above and are broadest beyond the middle with the lower half deeply lobed (four to six) and the upper half with five to seven shallow lobes. The acorns are distinguished by the very deep fringed cups and large size. The cup of the acorn is very hairy around the fringes and acorn sizes range from one to two inches long and wide. Bur oak is in the white oak group.



Texas oak (*Quercus shumardii* var. *texana*), Spanish oak

Texas oak or Spanish oak is endemic to Texas and the Edwards Plateau and is in the red oak family. Areas north and east of the Plateau likely have trees that are genetic mixes with the Shumard red oak. Texas oak is more drought tolerant, smaller and shorter lived than its cousins to the north and east. This oak is likely to have multiple trunks with white patches on the bark. The Shumard oak is named after Benjamin Franklin Shumard (1820-1869), who was the state geologist of Texas. Texas oak is an important habitat component for many songbirds and mammals in Texas and its leaves are sought after by deer.



Blackjack oak (*Quercus marilandica*), Jack oak

Blackjack oaks have an open and irregular crown with crooked branches that sometimes reach to the ground. Leaves are slightly triangular shaped and broadest near the tips with three shallow bristled lobes. They are commonly found on sandy and clay soils in conjunction with ridges. Blackjack and post oak are the most common species in the Cross Timbers region of Texas and Oklahoma.



Live oak (*Quercus virginiana*)

Live oak is an evergreen oak that occurs throughout central and southeast Texas. Live oak grows best on well drained clay loams and gravelly clay loams. Some varieties do well in coastal sands. Live oak timber was once important for building ships and the earliest timberlands were purchased in 1799 to preserve live oak trees for that purpose. There are many varieties of live oak in Texas from escarpment live oak to coastal live oak to hybrids of the two. Escarpment live oak is generally found in the Edwards Plateau and north. Coastal live oak is found in the deep sands of Aransas, Brooks and Kenedy Counties along the coast. The true live oaks in Texas are limited to extreme southeast Texas in counties such as Jefferson, Chambers, Brazoria, etc. All of the area in between is a mix of the live oak and escarpment live oak.



COUNTING Quail

by Kyle Brazil



Quail hunters become increasingly restless and less able to carry out everyday tasks as opening day approaches. Excuses are made to justify oiling their favorite shotgun (again), and bird-dogs are given some final polishing. This is also when my grandfather, an avid quail hunter, began planning practical jokes to play on his hunting buddies during the coming season — but that's a different story.

This time of year, hunters and managers alike ask the same question; how many quail do we have? Attempting to count small, well camouflaged birds, that live in fields of tall grass and brush, prefer walking to flying, and attempt to stay out of sight is a challenge. While we don't yet have survey methods that give us accurate measures of abundance (although helicopter surveys are showing promise), a number of good monitoring techniques exist that, if done consistently and repeatedly, give managers insight as to the general trend – increasing, stable or decreasing – of the population. This information is used to determine the success or failure of

management practices and to set harvest guidelines. One technique that can be easily and effectively implemented is fall covey counts.

Fall covey counts can be conducted beginning the 1st of October through mid-November. The technique is simple; an observer counts the number of coveys heard whistling from a permanent listening post (it is important to note that fall covey call counts are not applicable to scaled quail). Listening posts are generally the same as those used for spring whistle counts, and are placed ½ to 1 mile apart. When a covey is heard, the observer plots the estimated location on a data sheet made up of concentric circles. Plotting the location of the covey helps the observer avoid counting a covey more than once, and aids in making sense of the data later. During the fall, only one listening post per morning can be surveyed by an observer (this is a good reason to enlist the help of fellow quailophiles to cover more ground). Observers should arrive at the listening post at least 45 minutes before official sunrise and start listening for the

bobwhite covey call, which sounds like "koi-lee." Once the first call is heard, the observer should continue to listen for at least 20 minutes in order to record all covey locations and give the late-rising coveys a chance to be heard. Each point should be sampled at least three times per season. The more consecutive years that fall covey counts are conducted, the more valuable and useful the information becomes. More information on quail population monitoring and additional techniques can be found in the Texas Cooperative Extension publication "*Counting Quail*" by Rollins et al. (2005). Data sheets can be found at the Team Quail website at <http://teamquail.tamu.edu>.

EDITOR'S NOTE

Kyle Brazil is Program Manager of the Audubon Texas Quail & Grassland Bird Program <http://www.tx.audubon.org/Quail.html>. He specializes in quail and grassland bird habitat management and planning and forming grassland bird management cooperatives. Kyle Brazil can be reached at (361) 595-0360 or via email at kbrazil@audubon.org.

This month **AT THE RANCH**

- Finish up spotlight and aerial deer census counts
- Monitor supplemental food sources
- Plant cool season food plots
- Fallow disking will promote germination of cool season seed producing forbs
- Conduct morning covey call counts for quail
- Harvest does and management bucks early in the season
- Begin to prepare fire lanes for the upcoming burning season
- Good time of year to plant brush seedlings and wildflowers for re-vegetation practices
- Flood moist soil impoundments for waterfowl
- Collect age, weights and species specific measurements from all harvested wildlife



BINARY Bio

2 – length of a bur oak acorn in inches

4 – number of quail species in Texas

47 – average flight distance, in yards, of a bobwhite quail

100 – number of harvester ants a Texas Horned Lizard can eat in a day

1,000 – estimated age in years of Texas' largest live oak in Aransas County

5,728 – watershed area, in square miles, of the Clear Fork of the Brazos River

Lights! Camera! Whitetails!



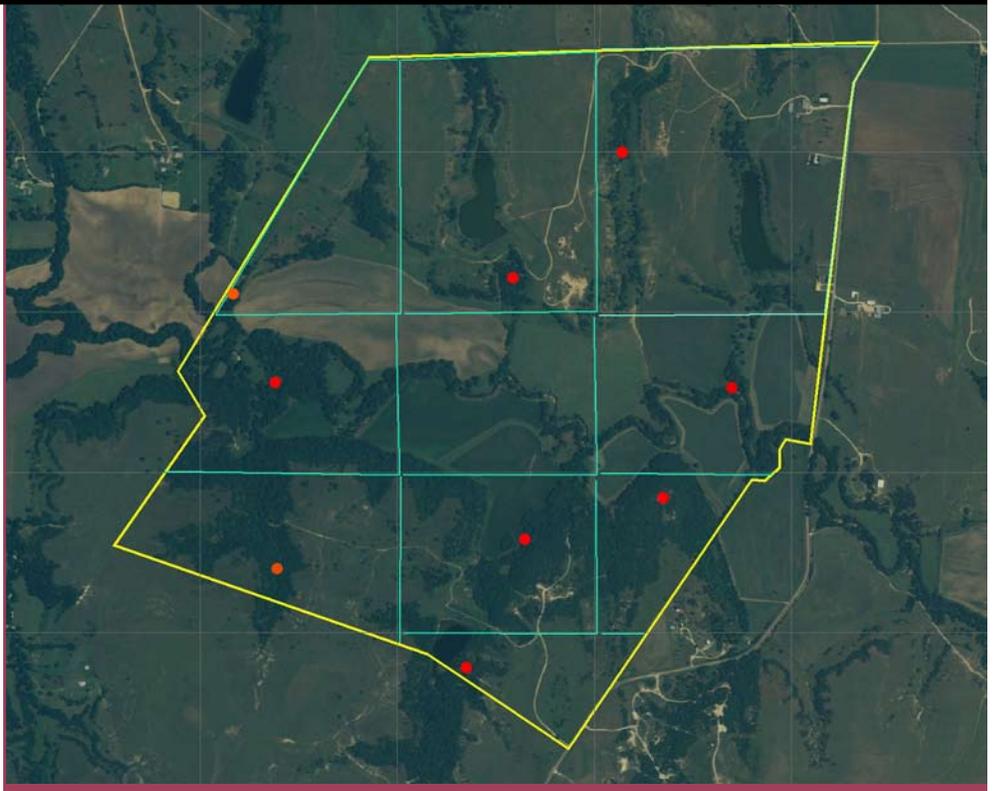
The popularity of trail cameras has increased exponentially in the last several years. Just open any popular hunting catalog or spend some time watching the Outdoor Channel commercials and you will see numerous entries into the market. Trail cameras have primarily been used as scouting and monitoring tools for sportsmen. In the past few years, wildlife biologists have experimented with cameras to estimate deer population density and herd composition data. Land fragmentation, better camera technology, and increased interest in quality deer management on smaller properties are all factors that have helped refine the technique today.

The infrared-triggered camera survey technique was developed and refined by Mississippi State University researchers. This technique can provide a great deal of useful information on your deer herd, especially when used in conjunction with observation data, harvest data and habitat evaluations.

To get started with the survey, you will first need to obtain an aerial or topographical map of your property. Lay your map out and grid the property into approximately 100-acre blocks. Select camera locations within the 100-acre blocks that are heavily utilized by deer. Old seismic lanes, edges of food plots or agricultural fields, natural funnels, and heavily used trails make great camera locations. Cameras should NOT be placed on established corn or protein feeder locations for the survey. Social behaviors specific to gender and age near established feeder sites will bias your sample data. I like to record a GPS waypoint for each camera site for map purposes and to make it easier to find the same camera stations each year. At each site, you will need to clear any vegetation that could cause false events on your camera. Examples include tall grass or low hanging limbs. Next, make sure your cameras are working properly with cleared storage cards (1 GB min.) and new batteries. Set all of your cameras with the correct date and time and to a five or 10 minute picture delay. Mount your cameras 22 to 25 inches off the ground and face them in a north/south direction as much as possible to avoid glare from the rising and setting sun. Leave the cameras in the OFF position.

Once the site is prepped, you must pre-bait for at least five to seven days with corn. Corn should be present at each camera site for each day of the pre-bait period. After the seven days of pre-bait, turn on your cameras and start your survey for 14 consecutive days. Bait should be present at each location throughout the survey.

Pre-season surveys are generally conducted in September just prior to the hunting season. Post-season



surveys are generally run from late January to early February. All population estimation techniques involve a certain number of assumptions. With camera surveys, the two major assumptions are corn is an effective attractant and bucks and does visit your bait sites with the same frequency. A perfect example is the effect that a good acorn year can have on a poorly timed camera survey. If acorns are dropping in full force, deer will almost always pull away from your corn and hit the acorns.

Once your survey period is over, compile all of your photographs and carefully count the number of bucks, does and fawns. With does and fawns, don't worry if you suspect that you are counting the same deer more than once. Count the total number of does and fawns including known repeats. With bucks, you need to tally two numbers: the total number of bucks in the photos including repeats, and the actual number of unique bucks.

For example, your survey photos may include 60 photographs of bucks, from which you can identify 17 recognizable individuals. When counting the number of unique bucks, simply use antler characteristics such as number of points, abnormal points, tine length, spread, rack configuration, and any other distinguishable body characteristics such as cut ears, double throat patches, scars, etc.... If you end up with a few deer that are unidentifiable, simply throw those deer out of the survey. Do not make guesses on deer just beyond the range of the flash. If you have a significant number of photographs that are difficult to identify, it is advisable to seek help or ask a biologist.

To separate the number of individual does and fawns from the repeats, we must compute what the researchers call a population factor or index. Simply take the number of unique bucks (17 in our example) and divide this by the total number of bucks photographed (60). The resulting population factor (17 divided



Camera Set up Tips

- Face north or south to avoid sun glare
- Bottom of camera should be about 22-25 inches from the ground
- Use natural vegetation for stand, otherwise install a suitable post
- Clear away grass and overhanging limbs from photo area
- Label your feeder or backdrop with a unique ID or number

Good spots to place your camera

- Trails leading to concentration points
- Fence crossings holes, open gates
- Food plots use a trail or corn
- Feeders corn or protein
- Scrapes good prior to rut
- Water good for summer use
- Natural funnels/travel corridors



by 60 equals 0.28) is then multiplied by the number of does and fawns counted in the photographs. If you have a total of 100 does in your photographs, multiplying by your population factor of 0.28 gives you an estimate of 28 individual does. Obviously, this assumes that bucks and does are equally likely to visit the camera sites. Some studies have found no difference in usage rates while others in Texas have detected a 23 percent decrease in visitation at bait sites by does. Once you have estimated the total population, you can calculate a buck to doe ratio, a density estimate, and your fawn survival.

Research conducted by Dr. Harry Jacobson and his associates in Mississippi sought to determine the accuracy of a camera census by surveying a deer population with color-coded collars for individual identification. These researchers conducted the survey for 14 days. During the first year of their two-year study, they "recaptured" 30 of 30 deer (100 percent) on photographs using a camera density of one for every 160 acres. During this first field season, 29 of 30 deer were bucks. Researchers photographed 97 percent of marked bucks and 73 percent of marked does during the second year of the study.

Demarais and McKinley (2006) compared photographic recapture rates of tagged animals on two enclosed Mississippi study areas and a third enclosed study area in Oklahoma. They evaluated effects of camera density (one camera per 100 acres and one camera per 200 acres) and sampling duration (one to 14 days) on accuracy of deer population estimates. Results showed greater numbers of deer "captured" with longer sampling periods and a greater camera density. Photographic recapture rates in their study varied from 92 percent for adult males and 89 percent for adult females in Mississippi to 22 percent for adult males and 34 percent for adult females in Oklahoma. A significant presence of oak on the Oklahoma study area provided acorns as a preferred food in the winter deer diet (Gee et al. 1994). In contrast, both Mississippi study areas were composed primarily of pine, so acorns were not available as an alternative to corn during the survey.

An ongoing study in central Texas on the Mason Mountain Wildlife Management Area is looking at various census methods for small landholdings in a 523 acre enclosure with known deer densities. In 2006, their camera surveys recaptured 23 of 23 bucks for a 100 percent recapture rate. No data for does was collected in 2006. In 2007, recapture rates were almost perfect for the entire population with 95 percent of bucks (21 of 22) and 100 percent of does (38 of 38) captured during the camera survey. The 2008 data is still being evaluated at this time. Cameras were placed at 100 acre intervals for 14 days.

Many questions still surround the camera survey method as a reliable estimate of a deer population. How habitat quality and alternative food sources affect survey accuracy needs further quantification. Add in other variables such as low/high fence, disparate buck/doe ratios, and varying ranch sizes and you raise more questions about accuracy. Regardless, they offer us another tool in our wildlife management box to manage landscapes and deer populations.

Sample Survey Calculations

Acres surveyed = 600
 Camera sites (1 camera per 100 acres) = 6
 Consecutive survey days = 14

Total # of deer photographed = 196
 Bucks = 36
 (Individual bucks identified = 11)
 Does = 108
 Fawns = 52

Use the ratio of individual bucks identified (11)
 to the number of bucks photographed (36) as
 the population factor:

$$11/36 = 0.31$$

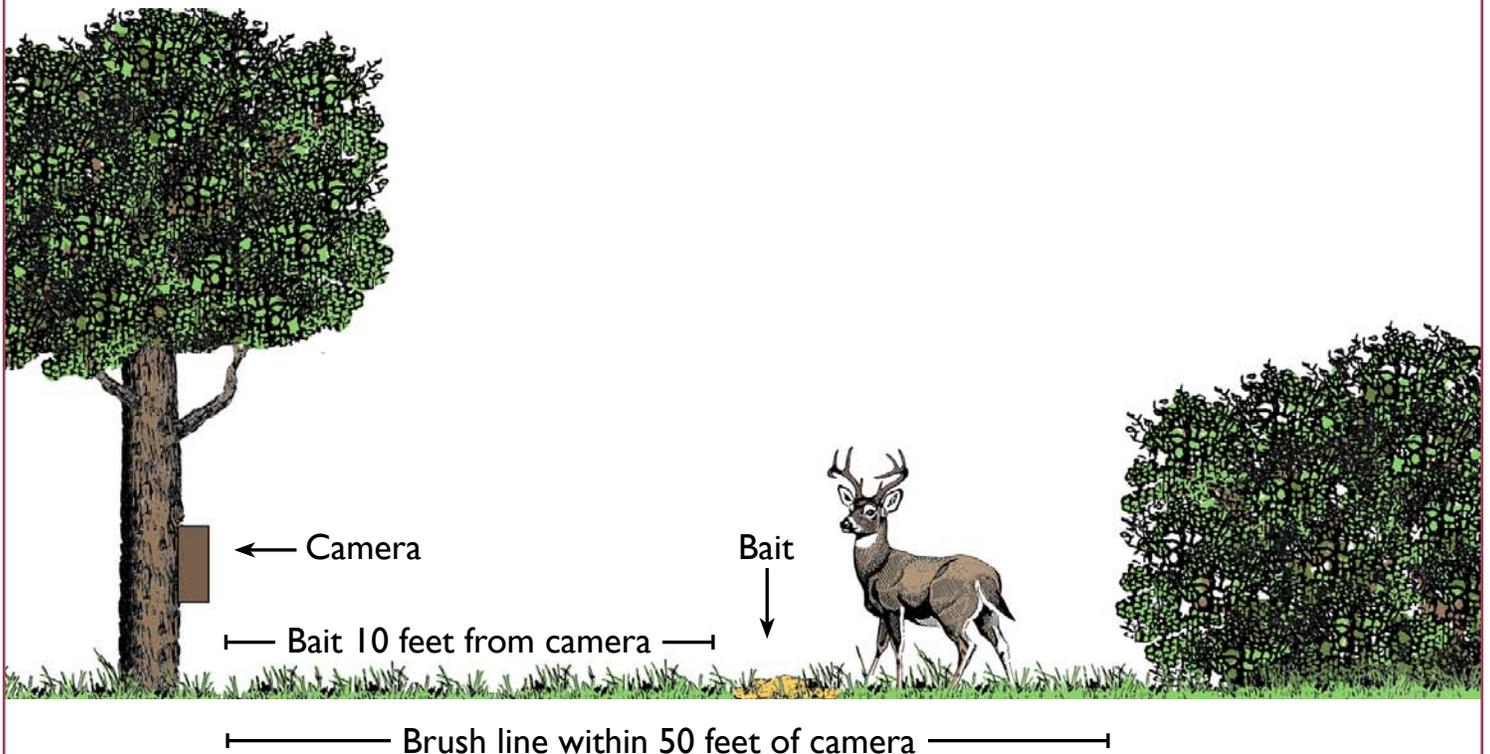
Estimated Population:

Bucks	=	11
Does	=	$108 \times 0.31 = 33$
Fawns	=	$52 \times 0.31 = 16$
Total Population	=	60 deer

Acres per deer:
 $600/60 = 10.0$

Doe to buck ratio:
 does/bucks = $33/11 = 3.0$ or 3:1

Fawn production:
 fawn/doe = $16/33 = 0.48$ or 48%



Nathan's NONGAME



Ronald Laubenstein

A Tail of Two Foxes

by Nathan Rains



TPWD

Mistaken identity, different pasts, English heritage...no this isn't Charles Dickens famous novel but rather a closer look at the two foxes that now call the Cross Timbers home. While most of us have seen a fox darting through the shadows at one time or another, did you know that we actually have two species of fox here in north-central Texas? They are often confused with and mistaken for each other (ala Mr. Dickens writings) and many folks are surprised to learn that, despite some similarities in appearance, they have very different histories.

The common gray fox (*Urocyon cinereoargenteus*) is native to Texas and is our most common resident. The red fox (*Vulpes vulpes*) found in the Southeastern United States, however, is originally from England where it was brought over for sport hunting purposes sometime between 1650 and 1750 and possibly as late as 1895 in Texas. Red fox actually occur on many continents and were even native to North America; however they were historically confined to our northern Boreal forests.

The gray fox has a gray, salt and pepper coat with reddish brown

legs. It has a white throat, cheeks, and underbelly, and a distinctive black tipped tail. The red fox is primarily rusty red with a white underbelly, black ear tips and legs, and has a bushy tail with an unmistakable white tip. Both foxes weigh approximately seven to 11 pounds as adults. Both species are also thought to be monogamous during the winter mating season. Mating primarily takes place in January and February with litters born about 53 days later. Gray foxes average about four young while red fox average up to six and occasionally more. Both foxes utilize dens but red foxes prefer holes dug in the ground while gray fox will readily use hollow trees, brush piles and rocky outcrops. The family group consisting of the parents and young stay together eight to 10 months until the young reach maturity and are subsequently "shown the door" by mom and dad.

Both fox species are primarily nocturnal or at least crepuscular (most active in late evening and early morning). Gray foxes prefer drier, brushy, rocky habitat, of which we have no shortage of here in the cross timbers. Red foxes prefer more heavily wooded habitats

as well as riparian zones and even urban areas. It's not uncommon to find them right downtown although they're seldom seen due to their secretive, late night habits.

Both foxes are opportunistic feeders but are primarily carnivorous and prefer small mammals as well as birds, eggs, insects, and some berries and fruit.

Both our native gray fox and our new resident from "across the pond" are attractive and interesting members of our Cross Timbers wildlife. Hopefully you'll have a little more to think about the next time you see one darting across the road in your headlights before disappearing into the dark. Maybe, like Charles Dickens, you can even say "It was the best of times..."



EDITOR'S NOTE

Nathan Rains is the Wildlife Diversity Biologist for north Texas and is based in Cleburne. He will be periodically writing articles for future issues.

CANDID Wildlife

Send your best and most unique trail cam photo. I will post a new picture(s) each month.



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UPCOMING EVENTS in North Texas

October 23-24, 2008: "Brush Sculpting...A Decade Later," workshop located in Snyder and Roby. For more information Visit the following link: www.texas-wildlife.org/Workshops&Events

October 24, 2008: Generations on the Land: Working for Land Stewardship, College Station. Visit the following link for more information: <http://www.sandcounty.net/programs/landholder/LCA/Generations>

October 25, 2008: Opening day of quail season in Texas. For more information visit www.tpwd.state.tx.us

November 1, 2008: Opening day of the general gun whitetail deer season in Texas. For more information visit www.tpwd.state.tx.us

November 1-30, 2008: North Zone Duck season in Texas. For more information visit www.tpwd.state.tx.us

November 8, 2008: West Zone Light and Dark Goose season in Texas. For more information visit www.tpwd.state.tx.us



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