T E X A S
Master Naturalist ™
TEXAS PARKS & WILDLIFE
TEXAS A&M AGRILIFE EXTENSION

The Texas Master Naturalist program activities are coordinated by Texas A&M AgriLife Extension Service and Texas Parks and Wildlife. Texas Master Naturalist and Extension programs serve all people regardless of socioeconomic level, race, color, sex, religion, disability or national origin.

*Celebrating and sharing our experiences along "**the roads**" we take through nature.*

Award Winning Newsletter of the El Camino Real Chapter

Milam County Texas Master Naturalist Fall 2014

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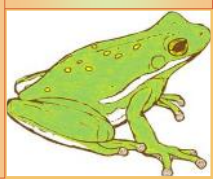
The Green Tree Frog



Did You Know?

What is the only insect that can turn its head 360 degrees?

See last page for the answer.

Prairie Tracks by Katherine Bedrich

The Virginia Opossum *Didelphis virginiana*

The Virginia Opossum is a member of the Order Marsupialia; and the Family Didelphidae.

Marsupials are the most primitive and oldest class of mammals in the New World. They are considered living fossils, unchanged for 50 million years. The opossum is the only marsupial found north of Mexico.

A pouch which has developed on the female abdomen is called the marsupium. Marsupialis is Latin meaning pertaining to a pouch. Usually there are 5-12 young per litter. There may be two litters yearly in February and June. After birth (1/5 of a gram) newborn opossums crawl their mother's fur into the pouch. They are blind, helpless, unaided in their journey and about the size of a honeybee. Eight newborns can be held in a teaspoon. As they attach to a nipple, it swells in their mouth, helping them to stay in the pouch. The newborns are embryonic at this time. They will stay two months in the pouch. As they develop, they venture in and out of the pouch, riding on their mother's back. Normal lifespan for the opossum is two years.


Roberta Wilkerson

Opossums prefer to live in hollow trees, rock piles, under buildings and in attics. They do not dig burrows; but they will make use of other animal dens. Leaves are used to make a nesting area. Their territorial range is around four acres.

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The opossum is nocturnal and solitary, usually feeding shortly after dark. Rats, mice, insects, frogs, bird eggs, and fruits and vegetable make up their diet. They are good swimmers and tree climbers. The naked prehensile tail is used to aid tree climbing and for balance in walking. Frostbite can nip their ears and tail. They do not hibernate.

Natural enemies are foxes, coyotes, horned and barred owls. Being hit on the road is a major problem. . They are immune to venomous snake bites and have a resistance to rabies and plagues.

When threatened the opossum may "play possum". Rolling over, closing its eyes and hanging out its tongue is how the opossum has fooled some enemies. Human activity has not deterred the opossum, in fact, it has adapted well to having us around.

Resources:

- The Mammals of Texas – William B. Davis; 1974
- Mammals of Texas, Field Guide – Stan Tekiela; 2009

Because Every Drop Counts and Zeroes Count Too

By Linda Jo Conn

Have you noticed that you may receive a few drops of rain, a neighbor down the road has a downpour, and neither amount agrees with the local TV report? Rain certainly does not fall the same over all.

Several El Camino Real Texas Master Naturalists, Little River Basin Texas Master Gardeners, and other Milam County residents have purchased official 4" diameter high capacity manual rain gauges and are reporting daily observations to CoCoRaHS. CoCoRaHS is an acronym for Community Collaborative Rain, Hail and Snow Network, a non-profit, community-based network of volunteers working together to measure and map daily precipitation. Using low-cost but highly accurate gauges, minimal training, and an interactive website, the volunteers provide high quality data for natural resource, education and research applications including the National Weather Service, other meteorologists, hydrologists, emergency managers, city utilities (water supply, water conservation, storm water), insurance adjusters, USDA, engineers, mosquito control, ranchers and farmers, outdoor & recreation interests, teachers, students, and neighbor in a community.

Bill Runyon, Texas State Co-Coordinator for CoCoRaHS, presented an introductory program in Milam County in August on the importance of daily data submitted by volunteers. He discussed the type of gauge necessary, its proper location for accurate and unbiased measurement, and demonstrated how to measure the liquid collected. Individual reports are recorded on the website or a mobile app. Data is then displayed and organized for end users to analyze and apply to daily situations ranging from water resource analysis to neighbors comparing how much rain fell in their backyards.

Runyon emphasized that "zeroes count, too". If no data is entered, it cannot be assumed that no rainfall fell. A zero report is actually a positive report.

For more information, see the CoCoRaHS website http://www.cocorahs.org and visit the tabs on frequently asked questions, videos, and training slide shows. Contact information for individual county CoCoRaHS coordinators is also listed.

More participants are needed to provide accurate area rainfall event results over the span of Milam County. This program is a community project that is an approved volunteer opportunity for Texas Master Naturalists. Everyone can help, young, old, and in-between. The only requirements are an enthusiasm for watching and reporting weather conditions and a desire to learn more about how weather can effect and impact our lives.

What's in the Water?

by John Pruett

I am a member of a small, but intrepid, group of ECRM naturalists that is roaming the historic El Camino Real Trail as it winds through Milam County, Texas. This we do in the same spirit of Ferdinand Roemer as he roamed Texas in 1845-1847, identifying and mapping the plants that reside along the trail. As our Master Naturalist chapter is a partner with the Trail we agreed that providing information regarding the trees and flora along the Trail in Milam County would be beneficial to all, and provide us with hours of interesting collecting, mapping, cataloging, and identifying specimens. Our multifaceted project is entitled, "*Floridus milamexd*", in recognition of our advisor Dr. Flo Oxley, and our home county of Milam.

To this end we started our quest recently on a rather warm morning in late summer at the junction of FM 908 and CR 429. This dusty caliche road is locally referred to as Sheckel's Lane, and leads to Sheckel's Bridge on the San Gabriel River. I have many fond memories of the old Sheckel's Bridge. It was a pony truss structure with a single board planked lane built circa 1940, seven years before my birth in Milam County. My dad would take me fishing down river from the bridge as we would set throw lines in the late afternoon and "run" them in the morning. Oh, the anticipation and excitement of seeing a willow limb shaking the next morning!

The old bridge was replaced in 2003 with a modern concrete structure, and now the old structure, rather than providing a path across the river, spans forlorn in an adjacent pasture. I am afraid that the new bridge and river are used for less wholesome activities today, which is a sad circumstance of our time. Litter and nefarious activities occur under the bridge as reported in an article by Jeanne Williams in the August 23, 2005 issue of the Temple Daily Telegram regarding the defacing of bridges of Milam, County. This is something that we as a society must address through education and enforcement. But, I digress from the plant collecting.

As we moved down the dusty and dry lane, towards the bridge, we took pictures and collected plants. Although there were few cars that passed us, most were polite and slowed as they approached so as to stir up as little dust as possible, however, some sped by leaving dust to billow behind them. As a result much of the vegetation was covered with a layer of dust, a condition that only added to the arid ambiance of the dry summer day coupled with the steady increase of temperature as the sun inched to its zenith.

However, as we approached Sheckel's bridge something strange began to happen. We encountered more shade, and even a cool breeze. In addition the number of flora and tree species began to increase significantly, as did the animal species as well. If Rod Serling of television's classic series "The Twilight Zone" had been with us he would have announced that we had just entered the "Riparian Zone". I have to admit that I am a water person. I honestly find no joy and comfort in a desert biome. I realize that others truly love the desert as an ecological system, and that is fine, but for me I choose to reside and study within the riparian ecosystem.

The riparian zone is the tree and plant lined corridor that lies adjacent to a river or any body of water such as a lake. The word "riparian" is derived from the Latin word for riverbank, ripa. There is a significant interaction between the surface water of the river and the ground water in the riparian zone. It is also an area of transition between the aquatic habitat of the river and upland ecosystems. The riparian zone is a unique ecosystem that is defined and maintained by the essential presence of both surface and ground water. The riparian zone has numerous roles and functions in maintaining a healthy and productive stream. Sometimes this interface between land and stream is poetically referred to as a ribbon of life, particularly in arid regions.

As a result of the influence of man's industrial, agricultural, and recreational demands of water, the health and well-being of the riparian zone is under constant attack. Over the next two issues of our newsletter I will be examining the riparian zone in detail. First I will present physical, chemical, and biological attributes of this unique ecosystem, followed by a look at the documented abuses that are so profound, and what we can better do to manage and maintain this extremely important ecosystem.

My Place in Nature

By Linda Jo Conn

My Confusion About "Native Plants"

For the past two years as a Texas Master Naturalist I have been learning the distinction between native and non-native plants. I am now aware that many wildflowers enjoyed in Central Texas were introduced from other areas of North America, South America, Europe, or Asia. I attempted to master classification of plants as native, indigent, naturalized, introduced, invasive, or cultivar.

Assuming that a wildflower is an uncultivated plant that grows without human intervention, I began to use the following definitions:

Native = Growing in a particular region over eons of time.

Indigenous = Existing naturally in a particular region or environment.

Naturalized = Established so that it lives wild in a region where it is not indigenous.

Introduced = Living outside its native distributional range and arriving by human activity, either deliberate or accidental.

Invasive = Having the tendency to spread and cause damage to the environment or human economy or health. To further complicate matters, the term can refer to either an introduced or a native plant species.

Cultivar = Plant selected for desirable characteristics that have arisen by cultivation or selection from the wild and is maintained by propagation.

For me, cultivars are easy to spot. They are the plants in garden centers, groomed parks and contrived landscapes. Their lantana specimens lack the odor, leaves, form and blooms of the once familiar Calico Lantana, *Lantana urticoides aka L. horrida* (Verbenaceae), a shrub commonly seen in pastures before introduced agricultural practices and herbicides.

As an introduced invasive, Bastard cabbage, *Rapistrum rugosum* (Brassicaceae), is easy to categorize. A relatively recent arrival in our area, originally from southern Europe and western Asia, it is overpowering desirable wildflowers along state highways.

White sagebrush, *Artemisia ludoviciana* (Asteraceae), is an attractive native. In the eras of regular prairie fires it was kept in check, but in my butterfly garden, it quickly became invasive and attempted to choke out more desirable milkweeds.

I was shocked to learn that pink evening primroses, *Oenothera speciosa* (Onagraceae), were introduced to our area of Texas by humans and are not considered a true native species. While attractive, it too can become weedy in a garden setting.

Shepherd's purse, *Capsella bursa-pastoris* (Brassicaceae), native to Eastern Europe and Asia Minor, was brought to North America for its culinary and medicinal properties. Now considered to be naturalized, it is also called a weed. In Britain, it is considered an archaeophyte or plant species that is non-native to a geographical region and introduced in ancient times rather than being a modern introduction. Archaeophytes are usually considered to be species introduced prior to 1492 when the Columbian Exchange began. Species transferred after this date are called neophytes.

By now, you are confused and wondering where in the world I am going with this diatribe.

The honest truth is that I am also at a loss. Overwhelmed, I now wonder which, if any, plant species on this earth are truly native and indigenous to any area. At one time, the location where I live was covered with ferns and bryophytes.

Aware of the accelerating pace of globalization through communication, increasing international trade and travel, the vast unknown pre-history of our planet, and consideration of the inherent mobility of life in all forms around the world, I wonder how we can blithely classify any species as "native".

I recall news reports of debris from a Japanese tsunami eventually washing up on the coast of California. I recall the

hazy Texas sky caused by Saharan dust that perhaps eventually settled in my backyard. Was it harmless trash and merely particles of sand? On a broader scale, what species have we introduced into the universe through space explorations, or vice versa?

Reading Charles C. Mann's literary tomes 1491: New Revelations of the Americas Before Columbus and 1493: Uncovering the New World Columbus Created during my internship as a Texas Master Naturalist irrevocably changed my vision of our earth. The future holds many changes and revelations in knowledge and understanding.

As a Master Naturalist, I welcome the challenge and opportunity to continue exploring and learning from my surroundings.

[Photos are Linda's or unrestricted use from Lady Bird Johnson Wildflower Center.]

Why Do Some Birds Fly in a V?

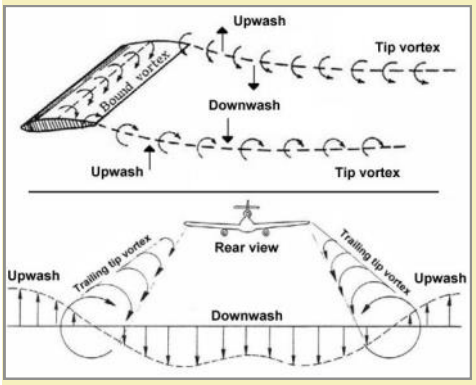
by Don Travis

Because it's easier than flying in a Z? Well, not exactly. But it is easier than flying in a line or just in a big flock.

Freudenthal Verhagen via Getty Images

Finding a way to fly efficiently and save energy is what these birds have done. It turns out that birds flying in a V are actually pulling off a feat that's more complicated and more impressive than anyone had imagined.

As a bird flaps, a rotating vortex of air rolls off each of its wingtips. Looking from behind the bird, the right wing tip trails a counter clockwise rotating vortex, and the left wing tip a clockwise rotating vortex. So the outside edges of each vortex creates an upwash, and the inside a downwash. So if you flew immediately behind the bird, both vortices would push you down, but if you flew off either side you would get the upwash. This is where birds in edges of a V get to save energy by mooching off the air flow created by its leader.



But there's more to the story.

Steven Portugal and his colleagues at the Royal Veterinary College, UK developed tiny data-loggers that are light enough to be carried by a flying bird and sensitive enough to record its position, speed, heading and wing flap motions, several times a second. However, the devices had one problem: they don't emit any information. If you strap them to, say, a flock of geese, the birds would fly off into the distance taking some very expensive equipment with them. They needed a system where birds were actually migrating, rather than flying in a wind tunnel, but where we could get the data loggers back.

Help was on the way.

Johannes Fritz, who worked for an Austrian conservation organization, was trying to save the Northern Bald Ibis—a critically endangered species that makes vultures look handsome. The Ibis went extinct in Central Europe in the 17th century, and Fritz is trying to reintroduce it into its old range. His team had reared several youngsters and taught them to fly along their old migration routes by leading the way in a micro-light aircraft.

The human/Ibis flock stops at fixed places along the route, and a support team follows them on the ground. That gave Portugal plenty of chances to fit the birds with loggers, record every flap of their wings for long stretches, and retrieve the data a few hours later.

The recordings revealed that the birds fly exactly where the theoretical simulations predicted: around a meter behind the bird in front, and another meter off to the side. Some Ibises preferred to fly on the right of the V, or on the left. Some preferred the center, and others the edges. But on the whole, the birds swapped around a lot and the flock had no constant leader.

Kate St John

But flying in a V isn't just about staying in the right place. It's also about flapping at the right time.

As each bird flaps its wings up and down, the vortex trail of upwash left by its wingtips also moves up and down. The birds behind can somehow sense this and adjust their own flapping to keep their own wings within this moving zone of free lift.

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They trace the same path that the bird in front traced through the air.

Imagine that a flying ibis leaves a red trail with its left wingtip as it moves through the air. The right wingtip of the bird behind would travel through almost exactly the same path. "It's like walking through the snow with your parents when you're a kid," says Portugal. "If you follow their footprints, they make your job easier because they've crunched the snow down."

This is a far more active process than what Portugal had assumed. "We thought they'd be roughly in the right area and hit the good air maybe 20 percent of the time," he says. "Actually they're tracking the good air throughout their flap cycle. We didn't think they could do that. It's quite a feat."

The Ibises can also change their behavior very quickly. As they switch places in the flock, they sometimes find themselves directly behind the bird in front, and caught in its downwash. If that happens, they change their flapping so that they're doing the opposite of what the bird in front does. Rather than tracing the same path with its wingtips, it flies almost perfectly out of phase. "It's almost like taking evasive action," says Portugal. "They seem to be able to instantly respond to the wake that hits them."

How do they manage? No one knows. The easiest answer is that they're just watching the bird in front and beating their wings accordingly. They might be using their wing feathers to sense the air flow around them. Or they could just be relying on simple positive feedback. "They're flying around, they hit a spot that feels good, and they think: Oh, hey, if I flap like this, it's easier," says Portugal.

Whatever the answer, it's clear that this isn't a skill the Ibises are born with. When they first followed the micro-light plane they were all over the place. It took time for them to learn to fly in a V… and that adds one final surprise to the mix.

"It was always assumed that V-formation flight was learned from the adult birds," says Portugal. "But these guys are all the same age and they learned to fly from a human in a micro-light. They learned V-formation flying from each other. It's almost self-taught."

Primary source: National Geographic article "Birds That Fly in a V Formation Use An Amazing Trick" by Ed Yong,

Wildflowers of "The Big Lump"

by Genie Lindburg

I had an "aha" moment a few weeks ago. It was on an afternoon safari ride in the Maasai Mara National Reserve in Eastern Kenya. At that particular moment there were few animals to observe. So, I found myself looking at the plants growing alongside the road. To my amazement I saw a plant that looked similar to one that grows abundantly at The Big Lump. A plant that most ranchers don't like. I asked my guide the name of the plant. He immediately responded, "That is Datura Stramonium. It is an exotic invasive plant that the government of Kenya would like to eradicate."

He called it a noxious weed and went on to tell us that it is one of the world's most widespread weeds and has been recorded found in over 100 countries. In Kenya they call it Jimsonweed as we do in Texas. There are several species of the Datura genus, including D. wrightii, commonly referred to as the Southwestern Thorn Apple. D. stramonium is usually called Jimson Weed; D. metaloides is colloquially named Sacred Datura; and D. inoxia is usually referred to as Toloache. The smaller annual, D. discolor, is often called Moon Flower. It grows only 18 inches high and has a purple throat not found in other species.

I have always thought the Datura growing at the Big Lump was D. stramonium but it seems taller and the leaves look slightly different from the Datura I saw in Kenya. A little more research needs to be done to solve this question.

Datura stramonium is considered to be native to North America, but spread to the Old World early. The seed is thought to be carried by birds and spread in their droppings. Datura seeds can lie dormant underground for years and germinate when the soil is disturbed. Today, it grows wild in all the world's warm and moderate regions, where it is found along roadsides and at dung-rich livestock enclosures or as in Kenya on the grazing grounds of elephants, giraffes, wildebeests, cape buffalo and numerous other large and small animals.

It turned out that our guide, Evanson, was both very interested in exotic invasive plants and very informed. As he spoke about this type of plant I felt that I was listening to a plant expert from the United States. The Kenya government is addressing the problem of exotic invasive plans and invasive animal species. They have basically the same reasons for removing these species as does the United States Department of Agriculture. A few examples are: since they have no predators they multiply rapidly which may overwhelm native plants; they can be problems for fish and livestock; they may consume too much water or become fire hazards and they may add harmful nutrients to the soil.

Several of the plants that Kenya is trying to illuminate are the same troublesome plants we have here in Texas.

- Nightshade family especially one known as Tobacco weed.
- Water Hyacinth
- Prickly Pear
- Mesquite
- Giant Salvinia
- Mexican Poppy
- Morning Glory

Another interesting tid bit from Evanson is the Cajun crawfish from Louisana. It has found its way to Kenya. Probably it was imported as a possible food source. Now it is out of control since it has no known predators to keep it in check and is rapidly becoming a major concern as it eats the native fish, fish eggs, crustaceans, mollusks and aquatic plant life.

My aha moment was the realization that Texas and the United States are not alone in the battle against invading exotic species. The problem is world-wide. Ecologists everywhere consider invasive species to be the second biggest threat to the remaining biodiversity on our planet. Only outright habitat destruction due to urbanization poses a greater threat to the health of our ecosystems.

Doodlebug Wallow

by Katherine Bedrich

[A big welcome to Katherine's periodic new Blog on "how she feels or sees things."]

The Passenger Pigeon

September 1, 1914 --- newsflash--- the last passenger pigeon died today, in captivity, at the Cincinnati Zoo. Martha was 28 years old. She had never know the freedom of flying with a flock of her own kind. Her companion for many years, George, passed away 4 years earlier. Today, we bid goodbye forever. The Passenger Pigeon is extinct.

One hundred years later, we remember Martha. We can see Martha and other pigeons in Museums and wildlife collections; they are not alive though. We will never see a Passenger Pigeon alive. They are extinct.

In the 18th and 19th centuries, there were six million Passenger Pigeons in Canada and the United States. They would darken the skies when they flew over the land, looking for food and nesting sites. Limbs and trees broke from their sheer weight. White guano would cover soil and structures. The noise they created was deafening. They ate and ate and flew and flew, and this place would never be without them.

With the arrival of Europeans, the demise of the pigeon was inevitable. Europeans saw this land as the opportunity to take and take and take, until it was either controlled or removed. The pigeon was removed.

Tens of thousands of pigeons would be slaughtered daily to feed the growing cities of the east. So many of these birds would rot due to unsanitary conditions and means to keep them edible for human consumption. Greed and waste, another byproduct of our human ability.

Within a 30 year span, 6,000,000,000 passenger pigeons were made extinct by one species. Consumption, habitat loss, and the inability to recognize the fact of want by any means, was the demise of this bird.

This is my story for the Passenger Pigeon. A beautiful bird which enlightened many in its day. A part of creation, giving its all… forever…. Gone.

Several projects about the Passenger Pigeon and extinction:

- The Passenger Pigeon Project--- http://passengerpigeon.org/casestatement.html
- Fold the Flock --- www.foldtheflock.org
- The Lost Bird Project --- www.lostbirdproject.org

John A. Ruthven's mural masterpiece "Martha, The Last Passenger Pigeon". 6500 square feet. 103 days. With help from Cincinnati Artworks.

Baby Roadrunners

by Cindy Bell

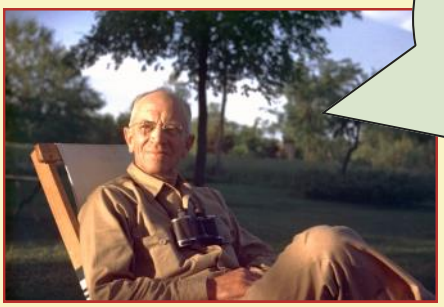
[One of the neat things about our chapter and web site is that we sometimes attract the attention of other nature lovers who want to share their experiences. On August 24, Cindy Bell sent in a couple photos, and I asked her for some more information and permission to print in our newsletter. Thank you Cindy.]

My name is Cindy Bell, married to Eddie Bell. We live in the Sand Grove community outside of Milano Tx. I have lived here most of my life. I have always loved animals and being outside. As a child I would drag home turtles, rabbits, a hurt owl, a baby possum, and even raised a baby skunk on a bottle once after my parents shot the mother who was killing our chickens. Grew up seeing Roadrunners my whole life but this year I seem to be seeing more of them than other years. A pair of Roadrunners had been hanging around our yard every day this summer so I figured they had a nest somewhere.

I searched Wikipedia who said they nest 3-4 ft off the ground in a cactus or small shrub. I had searched for weeks and found no sign of a nest. One day we were at the kitchen window and saw one fly onto the yard fence and up into a tree, and guess what, there was the nest. About 8 feet off the ground in a tree. We got a ladder and took a picture of the nest with 2 eggs in it at the time.

A few days later we saw them taking lizards and grasshoppers into the tree so I knew they had hatched. We took a picture with three babies in the nest already getting their pin feathers. The last picture of the 3 babies was a week later, and probably the last. One has left the nest already since this picture was taken. The other two were still there [as of Sept 1] but won't be for long.

Aldo Leopold Says:



"Harmony with land is like harmony with a friend; you cannot cherish his right hand and chop off his left. That is to say, you cannot love game and hate predators; you cannot conserve the waters and waste the ranges; you cannot build the forest and mine the farm. The land is one organism. Its parts, like our own parts, compete with each other and co-operate with each other."

Sweet's Nature Shenanigans

by Sheri Sweet

[In our Summer Issue, Sheri wrote about Black Headed Vultures that gave birth to two youngsters in their barn. Here are 3 photos from that issue, followed by her update below.]

July 22 – Yesterday, the Black-headed vultures had the babies out in the field. One was spreading its wings although still on the ground. They would run awkwardly across the grass.

July 23 - Today, we saw one walking around near the tank. However, when we went down to the old barn and hunted for them, they were nowhere to be found or seen. So sometime in the last 24 hours, we assume that they fledged and took flight. It's been an interesting experience – now Wes is talking about pressure washing all the equipment in the old barn and cleaning it up as best he can!

It occurred to me that I should have identified "my critters" by scientific names. The Black-headed Vulture is Coragyps atratus. I looked up some additional information on this interesting bird family. According to the Cornell Lab of Ornithology, The Black-headed Vulture is highly social with fierce family loyalty. They share food with relatives and feed their young for months after fledging. They have no voice box, so communicate with hisses and grunts. There are more Turkey Vultures than Black-headed ones. In central TX, where we are located, this is on the NW edge of their range, which crosses the country northeast to Pennsylvania. Their range also includes most of Mexico, all of Central America, and most of South America except for the southern tip. Their carrion diet includes feral hogs, poultry, cattle, donkeys, raccoons, coyotes, opossums, striped skunks, and armadillos; also floating carrion. They will sometimes kill skunks, opossums, night-herons, leatherback turtle hatchlings, young pigs, lambs, and calves. They also check out dumpsters and landfills for human discards. And finally, a pair will reuse successful sites for many years – oh, dear! NOT what Wes wants to hear!

July 24 – Well, they're back! I guess the parents took them for a night out! Anyway, they are back at the barn, inside and outside and around the yard area down there. So I'm guessing that since our old barn was a "successful site", they'll be hanging around there for quite a while!

July 25 – August 3 – The babies are still around. Most of the fluffy feathers are gone and they look like an adult Black-headed Vulture. The parents keep an eye on them. They spend time out on the ground between the tank and the hedgerow next to the ranch road. They also spend a lot of time up in our huge, old pecan tree. I see them out and about several times each day.

August 3, I saw something going on that was hysterically funny! One of the babies was out under the pecan tree. Suddenly, it leaped into the air, flapped its wings and went backwards and down onto the ground. What on earth was going on? It walked around a little and poked at something, leaped into the air again and jumped backwards! I could see a critter down there and thought it might be a bunny. I ran for my binoculars and zeroed in on the baby. Up into the air it went again and the critter ran towards it. Then it chased the critter. I finally figured out there was a SQUIRREL down there and the baby Black-headed Vulture and the squirrel were playing! The squirrel would run at the baby; baby goes up in the air and back down. Then the baby would run after the squirrel! I don't know how long I watched them playing, but it was really funny. The second baby appeared and everything calmed down. I don't know where the squirrel went.

August 20 – We haven't seen the babies in a week or more. However, a feral hog was killed down by the Catholic Church and there were 16 - 20 black-headed vultures there just stuffing themselves with pig. And then sometime today a deer was hit and killed on RR 696. There were 8 – 10 of the black-headed vultures eating on it. I'm sure the babies were part of those groups. Bye-bye babies!

TEXAS JACKRABBITS

Since I have a number of really good jackrabbit pictures, I've decided, this quarter, to study and write about the

(Continued on page 11)

Jackrabbits that are all over our place – we had 7 or 8 last year and have seen 2 or three this year, so far!

The Texas Jackrabbit – (Lepus californicus merriamai) is the third largest North American hare. They can be 2 feet in length and 3 to 6 pounds in weight. Their gestation period is 41 – 47 days. The female is larger than the male. She doesn't fix an elaborate nest. They give birth in a shallow excavation called a Form that is no more than a few Cm deep. Some females may line the form with hair before giving birth; others do not. The young are born fully furred with eyes open and are mobile within minutes of birth. Females don't protect or stay with young except to nurse. They do not migrate or hibernate during winter.

They use the same habitat year-round. They will range 2 – 10 miles from shrub cover during the day to open foraging areas at night. Their diet is shrubs, small trees, grasses and forbs. During the year, they will feed on most, if not all, important plant species in a community.

The Jackrabbit is important prey for raptors and carnivorous mammals. Jackrabbits are hosts to many ectoparasites – fleas, ticks, lice, and mites, and endoparasites such as trematodes, cestodes, nematodes, and botfly. They are affected by tularemia, which kills quickly, equine encephalitis, brucellosis, Q fever and Rocky Mountain Spotted Fever. Many hunters will not collect jackrabbits they shoot and those who do should wear gloves when handling them. If they are going to eat these rabbits, hunters should cook the meat thoroughly to avoid contracting tularemia. I found this information on Wikipedia.

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Los Caminos is a quarterly publication of the "El Camino Real Chapter of Texas Master Naturalists", a 501(c)(3) nonprofit volunteer educational organization.

Certifications, Etc. By Dorothy Mayer

New since the Summer 2014 newsletter are in this color.

New Member 2014 Certifications: Darlene Anglen, Sheri Sweet, Wesley Sweet, Nancy Adcock and Clyde Adcock.

Our 2014 Re-Certification pin is the Armadillo. Those earning their 2014 pins to date include: Don Travis, Debbi Harris, Katherine Bedrich, Linda Jo Conn, Sandra Dworaczyk, Dorothy Mayer, Donna Lewis, John Pruett, Ann Collins, Darlene Anglen, Sheri Sweet, Wesley Sweet, Cindy Travis, Sue Taylor, Kim Summers, Lucy Coward, Kathy Lester and Phyllis Shuffield.

Lifetime to date Milestone Achievement Levels earned include:

250 Hours—Paul Unger, Ann Collins, Katherine Bedrich, Cindy Bolch, Paula Engelhardt, Don Travis, Debbi Harris, Joy Graham, Lucile Estell, Shawn Walton, Anne Barr, Ed Burleson, Connie Roddy, Dorothy Mayer, Lucy Coward, Donna Lewis, Sue Taylor, Phyllis Shuffield, Sandra O'Donnell, Jim O'Donnell, Vivian Dixon, Sandra Dworaczyk, Cindy McDaniels, Sandra Dworaczyk, Janice Johnson, Gary McDaniels, Kim Summers, Rusty Thomas, Cindy Travis, Sherry Collie, Linda Jo Conn, Rusty Thomas, Kathy Lester and Sherry Colley.

500 Hours—Paul Unger, Ann Collins, Katherine Bedrich, Cindy Bolch, Paula Engelhardt, Don Travis, Anne Barr, Donna Lewis, Phyllis Shuffield, Lucy Coward, Debbi Harris, Dorothy Mayer, Sue Taylor and Connie Roddy

1000 Hours—Paul Unger, Ann Collins, Katherine Bedrich, Cindy Bolch, Don Travis, Paula Engelhardt, Debbi Harris, Donna Lewis, Connie Roddy, Sue Taylor, Lucy Coward, Dorothy Mayer and Phyllis Shuffield.

2500 Hours—Paul Unger, Katherine Bedrich, Cindy Bolch, Don Travis, Ann Collins and Donna Lewis

4000 Hour Presidential Award—Katherine Bedrich.

Our Year-to-Date and Total Accumulated hours for Advanced Training are: 585 and 5,580 respectively. Our Year-to-Date and Total Accumulated hours for Volunteer Events are: 5477 and 43,539 respectively.

Congratul ations to All

Did You Know? What insect can turn its head 360°?

The Praying Mantis is unique among insects in their ability to turn their heads a full 360 degrees, 180 in each direction. They have a flexible joint between the head and prothorax that enables them to swivel their heads. The praying mantis is so named because when waiting for prey, it holds its front legs in an upright position, as if they are folded in prayer. If a bee or fly happens to land within its reach, the praying mantis will extend its arms with lightning quick speed, and grab the hapless insect. Praying mantids consume both good and bad bugs, just as likely to eat a native bee as it is a caterpillar pest. The female praying mantis deposits her eggs on a twig or stem in the fall, and then protects them with a Styrofoam-like substance she secretes from her body. This forms a protective egg case, or ootheca, in which her offspring will develop over the winter. Mantid egg cases are easy to spot in the winter, when leaves have fallen from shrubs and trees. Female praying mantids do sometimes cannibalize their sex partners even beheading the poor chap before they've consummated their relationship. Mantids have two large, compound eyes that work together to help it decipher visual cues but just a single ear, located on the underside of its belly, just forward of its hind legs. It detects ultrasound, like from bats, which helps them evade them by doing a stop, drop, and roll in midair, dive bombing away from the hungry predator. [Extracted from http://insects.about.com/]