



MISSION

The Texas Master Naturalist program is a natural resource-based volunteer training and development program sponsored statewide by Texas A&M AgriLife Extension and the Texas Parks and Wildlife Department.

The mission of the program is to develop a corps of well-informed volunteers who provide education, outreach, and service dedicated to the beneficial management of natural resources and natural areas within their communities for the state of Texas

OFFICERS

President
Melissa Duckworth
lissaduckworth@gmail.com
(512) 922-1518

Cathy Hill
cmhill1957@yahoo.com
(512) 793-5588

Secretary
Karen Lundquist
jzion@austin.rr.com
(512) 288-2374

Treasurer
Susan Downey
shdowney@gmail.com
(830) 693-9291

MESSAGE FROM MELISSA

by Melissa Duckworth

CIVIL WAR
MEDICINAL SUBSTITUTES

More than 600,000 lives were lost during the Civil War; the number one killer not being battle wound deaths but dysentery, followed closely by typhoid, scarlet fever, pneumonia, tuberculosis and smallpox.

The book I am reading is written by Frances Pyre Porcher, M.D., Chief Regimental Field Doctor during the Civil War. The book was written in 1869, therefore it is a successful documentation and guide as to what could have been done on the battlefields to "easily procure medicinal plants to be collected by soldiers while in Service in any part of the Southern States." Dr. Porcher realized logistically and cost wise how difficult it was to obtain medicines that were standardized in the medical field during Civil War times. The title of the book is *Resources of the Southern Fields and Forests, Medical, Economical and Agricultural, Being also a Medical Botany of the Southern States; with Practical Information on the Useful Properties of the Trees, Plants and Shrubs*. Long title. Long Read. However, it is probably one of the most comprehensive documentations written to date on the value of plants. He also writes of useful ways for farmers to treat illness, grow tobacco and make home brew from apple and pear trees, as well as how to make a gunpowder substitute from plants. No part of any native plant should be under-utilized is the take away lesson from his writings.

These young Civil War soldiers had very little immunity to some of these killer diseases chiefly because it was the first time they were forced to live in such close group settings. Poor water quality or lack thereof was also a big factor of disease spread as well as exposure to extreme heat and cold. I will mention a few out of the hundreds of plants that could have been used to treat ill soldiers on the battlefield. No doubt some of them were used when traditional medicines were scarce.

All doses in the book are written in fluid (dram) form, extract or dried. *Eupatorium perfoliatum* (Boneset) was used to lower fevers, treat typhoid and pneumonia. *Rubus villosus* (Blackberry) was used to moderate dysentery. *Gentian Luten* (Gentian) would rid the body of worms. *Coptis trifolia* (Goldthread) was used as a gargle to treat ulcerations of the mouth.

Common ragweed was a source for treatment of malaria. All crops have another reason for existing other than food. Watermelon, mistletoe, dogwood and squash all fulfill another need. "Negro medicine" is praised throughout. Slaves were credited with the discovery of the Wafer Ashe to treat rattlesnake bite.

My grandfather was born in 1876 and commenced practicing medicine in 1907. His research into treatments for syphilis and smallpox, which were both rampant in that era, was impressive. However, he used many plant based remedies. In the

(Continued on page 2)

INSIDE THIS ISSUE:

Message from Melissa—Civil War Medicine	1
Melissa Duckworth	
September Program	2
Cathy Hill	
August Program	2
Cathy Hill	
Get Well!	2
August Awards	3
Photos by Becky Breazeale	
Angry Birds	6
Becky Breazeale	
Late Summer Delicious: Texas Persimmon	7
Elizabeth Bouchard	
Dove Banding	8
Cathy Hill	
Doves in Texas	10
Cathy Hill	
Gallery	12

Please submit pictures, articles, reports, stories, announcements, etc. to

chili865@gmail.com.

Photos should have captions and appropriate credits. The deadline for submissions to each month's newsletter is the 10th of the month and publication will be by the 15th.

GET WELL!

Prayers and/or Get Well Wishes:

- George Brugnoli
- Deb McClintock
- Penny Nichols
- Helen Smith
- Dan Nutter
- Margie Dearmont's husband, Dean
- Judy Parker
- Judy Parker's husband, Bob
- Bob Glover
- Wade Hibler's wife, Ellen

AUGUST PROGRAM

by Cathy Hill

Brianna Arnold, 14, will be an 8th grader at Marble Falls Middle School. She was our sponsored camper at the Ranch Youth Brigade Camp near Santa Anna, Texas. She gave an excellent presentation on



SEPTEMBER PROGRAM

by Cathy Hill

Our September 7 speaker for HLMN will be Leslie L. Bush, PhD. Her specialty as a paleoethnobotanist is identifying bits of ancient plants preserved in archeological sites, usually in charcoal. She has done work in seventeen states including Texas. Her presentation title is "Useful Plants of Ancient Texas."

MESSAGE FROM MELISSA

(Continued from page 1)

1950's, every childhood visit to him began with sassafras tea. He boiled the root and made me drink it as a "tonic". No doubt he knew of the other virtues of the plant such as a treatment for fevers and a treatment for pneumonia. I do believe he made a beer from it. Big secret.

The future of medicine could very well be a blending of new research such as gene manipulation, uses of venom from insects and vipers, new vaccines to treat cancers and other diseases, combined with long forgotten discoveries made by our medical ancestors and documented "negro medicine". The question is... how do we keep these valuable plants alive when increasingly their dormant and destroyed seeds are covered in concrete or pavement??

Buy the book or borrow it.

AUGUST AWARDS

CONGRATULATIONS JERRY STACY ON ATTAINING 5000 HOURS!



2500 HOURS

L to R: Terry Bartoli, Linda O'nan
Not pictured:
Marvin Bloomquist, Mike Childers
and Ann Cook



AUGUST AWARDS

1000 HOURS



L to R: Melanie Huff, Pat Campbell, Sharon Drake, Cathy Hill
Not Pictured: David Payton

500 HOURS



L to R: Dennis Ellison, M.J. Hansen, Maggie Booth, Jane Brunclik, Marilyn Lageman, Jean Schar
Not Pictured: Sheryl Smith Rodgers, Jan Warren, Fred Zagst & Kay Zagst.
Lori Greco, John McClintock, Hollis Neier,

AUGUST AWARDS

250 HOURS



L to R: Wayne Holly, Judy Haralson, Linda Brown, Morgan Beck
 Not Pictured: Joy Ellen Collins, Helen Dillon, Harris Greenwood, Kay Herring, Eva Hobbs, Marilyn McClain, Deb McClintock, Beth Mortenson, Mary Musselman, Dan Nutter, Gretchen Pachlhofer, Cindy Sterling, Ellis Winkler & Alan Wolfe.

RECERTIFICATION



Bartoli, Terry; Beck, Morgan; Belz, Jan; Bixler, Sherry; Booth, Maggie; Bouchard, Betsy; Breazeale, Becky; Brugnoli, George; Brunclik, Jane; Buchanan; Ray; Campbell Pat; Childers, Mike; Childers, Sammye; Cook, Ann; Cruikshank, Betty; Davis, Lyn; Dearmont, Marjorie; D'Orsogna, Paula; Downey, Susan; Drago, Hanna; Duckworth, Melissa; Eaton, Minnie; Escamilla, Celia; Faught, Cris; Fischer, Joanne; Fox, Sondra; Franki, Fredi; Greco, Lori; Hansen, M.J.; Haralson, Judy; Herter, Ralph; Hill, Cathy; Hobbs, Eva; Holly, Anne; Holly, Wayne; Hutson, Billy; Jernigan, Suze; Kersey, Sue; McClain, Marilyn; Mikels, Bonnie; Morgan, Susan; Moroney, Debora; Musselman, Mary; O'Nan, Linda; Pachlhofer, Gretchen; Parker, Karyn; Payton, David; Rheaume, Alice; Schar, Jean; Stacy, Jerry; Whaley, Terri; Winslow, Shirley; Wolfe, Alan; Wolheim, Lynn; Wyde, Philip; Zagst, Fred; Zagst, Kay; Zender, Ray

ANGRY BIRDS

by Becky Breazeale

I was watching TV and thinking about what I needed to do to get ready to leave town the next morning, when I heard three rhythmic taps on the back window by my patio. I got up to see what it was and I saw what looked like a blue bird fly off. I sat back down and after a while I heard the same noise again. This time I was more careful so I could get a better look – IT WAS A MALE PAINTED BUNTING. I rigged up a little device in front of the window to keep the bird from accidentally flying into the window and the tapping sound ended for the night.

After returning from our trip, my husband and I were reading the newspaper and drinking coffee when we heard that sound again – three taps, like a large insect hitting the window and bouncing off. This time we had time to observe. There wasn't just one Male Painted Bunting, but at least two and they weren't accidentally flying into the window. They were sitting on a patio chair, flying to peck at the window, and then back to the chair.

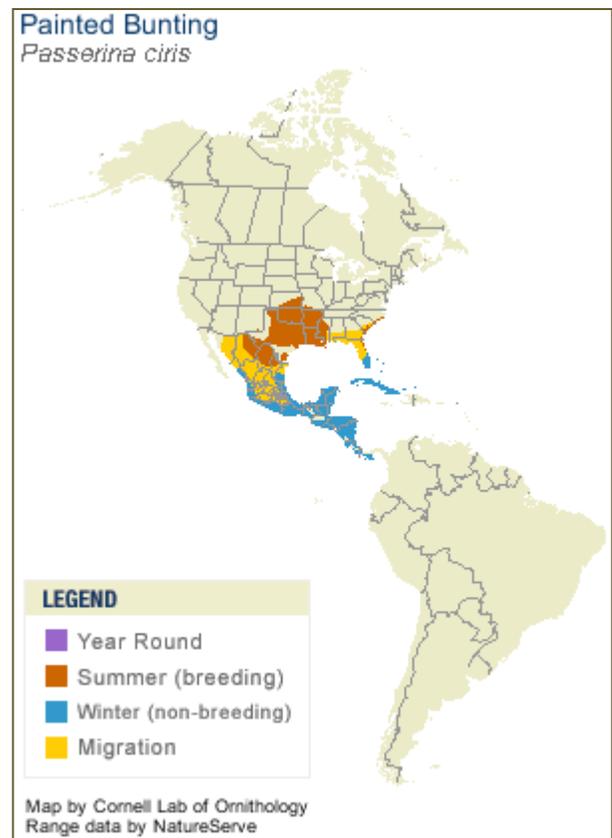
Why were these birds exhibiting such angry behavior. Was this instinctive or learned behavior "gone wild"? After thinking about it and discussing it with our neighbors (who were having the same experiences), we realized the birds were seeing their reflection in the window, thinking it was an intruder, and attacking the reflective image in the window as an intruder.

Here are some other things I learned. Male Painted Buntings stake out territories of up to three acres through song and displays on the breeding grounds. The male will fight and defend its territory aggressively by pecking, grappling, and striking menacing males with their wings. These fights can end in loss of eyes, feathers, wings and sometimes death. Painted Bunting's numbers are Near Threatened because they are trapped and sold illegally in Mexico. It is easy to trap the colorful male because they trick them into attacking decoys. This explains a lot of about their Angry Bird behavior of pecking at the window.

I have rearranged the patio furniture so if the birds land they cannot see their reflection in the windows. The pecking on the windows has stopped along with the accompanying noise. Now I can enjoy the Painted Buntings in what I consider to be normal wildlife viewing – watching them scoop up the seeds on the fence, on the feeder, or along the dense brush.



Photo by Stephen Pollard



Painted Buntings Migrate at night

https://www.allaboutbirds.org/guide/Painted_Bunting/lifehistory
<https://abcbirds.org/bird/painted-bunting/>

LATE SUMMER DELICIOUS: TEXAS PERSIMMON

by Elizabeth Bouchard

The Texas Persimmon (*diospyros texana*) is one of our hardiest shrubs in the southern part of the Edward Plateau, and this quality makes it a mixed blessing. In an oak savannah grassland, it can form thickets along with Ashe juniper on south and west-facing slopes. In the searing and dry heat of August, however, the persimmon redeems itself by providing a sweet and abundant fruit for wildlife. Jan Wrede, in *Trees, Shrub and Vines of the Texas Hill Country*, writes that turkey, coyotes, raccoon and deer browse the fruit. Ditto for birds, wasps, and people.

My house is shaded on three sides by small groves of persimmons. Their smooth, gray bark and dark green leaves make beautiful garden shade, and I trim up the ones at the entry to form an allee. Now, in August, their branches hang heavy with fruit, much of it still green balls, but with enough ripe, black ones to drive robins crazy trying to get to them. The pulp is dark and blandly sweet when ripe, with a slight tannic after-taste. The black pulp is also used for dyeing animal hides in Mexico, so have a paper towel handy when you go tasting.

There is not a lot of information on the web about recipes using the Texas persimmons for anything but jelly, but I did find and use one for making Bourbon Persimmon Bread, and is it delicious! The two-thirds cup of bourbon sparks up the flavor considerably. The author intended her recipe to use the large orange Japanese persimmons that ripen in the late fall, but it does just fine with our native fruit. I have two heavy loaves of dark, dense bread, one we are about to finish and the other in the freezer. The fastest way to see the recipe: Google "persimmon bread recipes" and scroll down to backtoherroots.com.

However, you will need to know how to make the juice, and for that I recommend KLRU's program *Central Texas Gardener on the web* at www.klrutexas.org/ctg/resource/texas-persimmon-jam/. If you are not going to make the jam, processing the juice is easy. It takes about 10 minutes to boil, a few more for mashing and cooling the pulp and then putting it through a strainer. If you have a t-shirt you hate, you can use it to wring out the last trickle of juice.

These persimmon trees have just about saved August for me.



From NPIN - Photo by Wasowski, Sally and Andy



From NPIN - Photo by Marcus, Joseph A



From NPIN - Photo by Mathews, Ray

DOVE BANDING

by Cathy Hill

This summer I tried a new type of volunteer service involving field work. When I learned that Jerry Stacy and Terry Bartoli assisted our May speaker, TPWD employee Dale Schmidt, with not only turkey studies, but also dove banding I was immediately interested. When I further learned that Jerry primarily focused on White-winged Doves which he trapped near Linda O'Nan's backyard pond and that Terry was after Mourning Doves on his Llano county ranch land, I decided to ask Terry if I could tag along since I don't see many Mourning Doves where I live. I was a little dismayed when I learned that the trapping and banding took place from July 1 – August 15 before the hunting season which begins in September. Furthermore it is done in the afternoon. “Uh, isn't it kind of hot then?” I asked. “Not to worry,” I was told. The usual procedure I learned was to bait the area with chicken scratch, a mixture of cracked corn, wheat, millet, and milo, in the areas where the traps would be placed in order to attract the doves to that area. After several days of baiting Terry invited me out to his property for the trapping and banding. So at about 4 pm we drove to his sites which are not far from his home and set out the traps. The traps are simple bottomless cages, 24”x24”x8” with two funnel like entrances that the doves can enter but not escape from. These are placed on the bare ground and more feed is poured in piles inside them. Terry places them in two sets of three at each site for a total of 12 traps. Then came the easy part. We drove back to his home and sat around visiting in air conditioned comfort.

After about an hour it was time to go check the traps. In that heat you don't want them to be in the traps too long. The traps were empty on our first check but on subsequent hourly checks we got lucky. (Terry told me sometimes he doesn't catch any) We had a mix of doves, so Terry removed them one by one through a hinged door on the top of the trap and then placed them in a mesh bag that I was holding. Then back to the air conditioned cab of his truck. Not only was this nicer for us but the cooler temperature tends to calm the birds, and most importantly if the birds get loose while they are being handled, they are confined within the truck





more like 50%. Those little guys are slippery and at least one slipped out of the bag before its time! And every time one got loose feathers would fly everywhere as I tried to catch them. I believe they must deliberately jettison feathers as a defense mechanism. By the end of that first day's work, the inside of Terry's truck was quite "feathery!" At this time I should point out that Terry didn't really need my "help" as he normally does just fine by himself. I think he just brought me along for company and comic relief! But rest assured, I did get better, and all doves captured flew away unharmed when released. On that first day for me we banded 11 MODO and 4 WWDO. I went once more but we only got 4 MODO then.

and can't escape. So one by one I would pull a bird out of the bag. Holding it in one hand I extend its right leg so Terry could attach a numbered small metal band. There are separate bands for MODO and WWDO (the code names for Mourning Doves and White-winged Doves). The band number is recorded on a log sheet, with the date, sex (if MODO), relative age (HY for hatching year, AHY for after hatching year) detected by a color differentiation on its primary covert feathers, and its molt status, detected by checking its primary feathers. This same procedure was repeated every hour until it got dark and then the traps were flipped over.

Now I would like to say that I was 100% successful in holding on to each bird I pulled out of the bag but that would not be true. Actually my success rate was

As you may have wondered, sometimes doves caught in the traps may already have a band.

These are called simply "recaptures" and are also recorded. Terry had not had any yet this season, but when I asked Jerry, he reported that so far, (banding season not being over yet so he's probably had more) from a total of 155 doves, mostly WWDO, he had 28 recaptures, with 9 from 2014, and 3 from 2015. Between Dale, Jerry, and Terry, quotas for both species had already been met for Llano county, but it is okay to keep on banding until the deadline.

I considered it a really fun and educational experience. I was also inspired to do more research on these two dove species and write a further article for the Steward.

Stewardship

An ethic that embodies cooperative planning and management of environmental resources with organizations, communities and others to actively engage in the prevention of loss of habitat and facilitate its recovery in the interest of long-term sustainability.

DOVES IN TEXAS

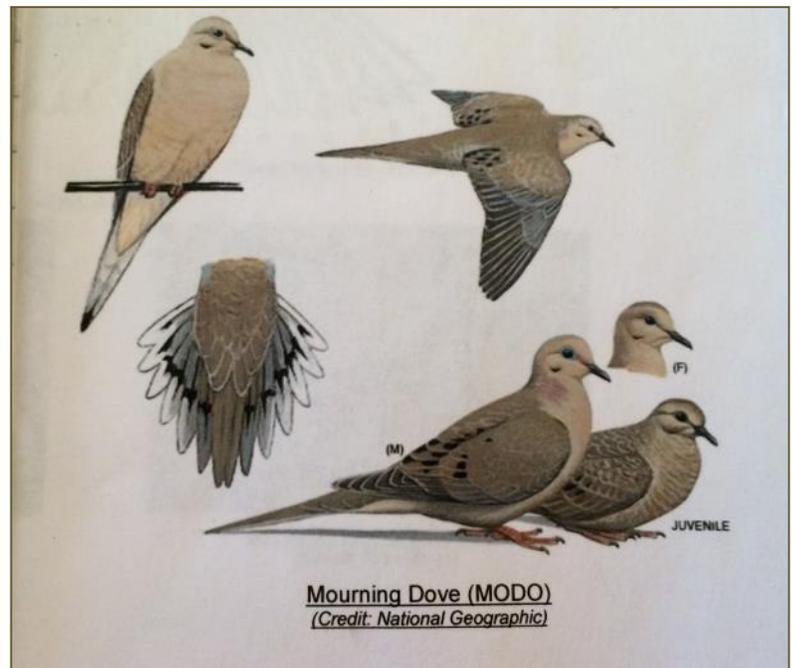
by Cathy Hill

The two types of doves which are banded and hunted in most of Texas, including our area, are the Mourning Dove and the White-winged Dove. The White-tipped Dove in far South Texas is also banded and hunted in limited amounts in that area. The nonnative Eurasian Collared Dove can also be hunted, with no restrictions, other than the need for a hunting license. The smaller Inca Dove and Ground Doves are not considered game species and thus can not be legally hunted. Banding data is reported to both TPWD and the USFWS. The USFWS issues every state Mourning Dove quotas. In Texas, according to Shaun Oldenburger, the Migratory Shore and Upland Game Bird Program Manager for TPWD, we attempt to band 2267 Mourning Doves (75 in Llano County) on an annual basis. For White-winged Doves, the quotas are set by TPWD. Currently the number is 3010 (125 in Llano County). The primary purpose of banding is for population studies which in turn are used for hunting guidelines. Hunters are encouraged to report on any banded birds that they harvest. Hunting doves and quail was first regulated when Texas passed its first statewide general game laws in 1879.

The Mourning Dove, *Zenaida macroura*, is the most widespread and abundant dove in North America. Its range includes all of the contiguous United States and extends north into Canada and south into Mexico, Central America and the Caribbean Islands. Population data from 2014 estimated that there were 270 million Mourning Doves in the United States and a breeding population in Texas alone of 31.3 million. Mourning doves are also the most frequently hunted game bird in North America with more than 5 million harvested annually.

The Mourning Dove gets its name from the its soft drawn out calls which sound like a lament.

When taking off in flight, its wings make a distinctive whistling sound. Mourning Doves are a delicate brown to buff tan color overall with black spots on their wings and black-bordered white tips on its tail feathers. They have black eyes with a blue eye ring. Adult males have a patch of iridescent pink feathers



on their neck. However the most distinguishing characteristic evident both in flight and when perching is its long narrow pointed tail.

Mourning Doves live in a wide variety of habitats including fields, deserts, and even urban areas, but are rarely found in heavily forested areas. They are seed eaters which feed on the ground and in the open. They peck or push aside ground litter but don't scratch. They may ingest grit to help with digestion. I have seen them doing this around the harvester ant mounds in my yard. I had thought they were eating the ants, but now I know better.

In the spring a breeding pair will preen each other with gentle nibbles around the neck as a pair-bonding ritual. (How sweetly romantic!) Eventually they will progress to grasping beaks and bobbing their heads in unison. After mating both the male and female will build their somewhat flimsy, unlined nest of twigs and grass, about 8 inches across, and located amid dense tree foliage on a tree branch. Two eggs are laid and the pair takes turns incubating them for 14 days, the male during the day, and the female at night. The hatchlings grow quickly, first on a rich diet of "pigeon milk" and then regurgitated seeds which both parents provide. They fledge at 12-14 days old. The female

may begin nesting again almost immediately and over the course of the spring and summer may have up to six broods especially in warmer climates. However it is estimated that only 40% of the hatchlings in a given year survive until the next breeding season.

Banding studies confirm that most Mourning Doves are migratory. Large numbers of them that nest in the Central United States and Canada winter in Texas while others only pass through on their way to Mexico and Central America. Interestingly though, Mourning Doves which nest in Texas generally winter in Texas too. (State pride or a matter of what happens in Texas stays in Texas??)

The other common dove in Texas is the White-winged Dove, *Zenaida asiatica*. Although once found only in South Texas and into Mexico, its range as we all know is expanding and can now be found throughout Texas, into Oklahoma, and in many of the Southwestern and some Southern Gulf Coast states.. In 2014 breeding populations were estimated at 9.8 million White-winged Doves in Texas. During hunting season nearly 1.8 million are harvested.

Slightly larger than a Mourning Dove, White-winged Doves are grayish brown with a slight dark line on their cheek. As their name indicates, their most distinguishing characteristic is the white stripe at the edge of their wings, always visible, but when they take flight can be seen as a bright flash in the middle of a dark wing. The tail is tipped in white and set off with black stripes, but unlike the Mourning Dove, it is shorter with a blunt squared off end. Their eyes are red with a blue eye ring. Males and females look alike. The call of the White-winged Dove is the familiar "Who cooks for you?" refrain.

White-winged doves also live in a wide variety of habitats, including increasingly in urban and suburban areas. As many of us know they are a frequent visitor at backyard birdbaths and feeders. Primarily seed and fruit eaters, White-winged doves will feed on both the ground and in trees, shrubs, and platform feeders.

Male White-winged Doves perform courtship



White-winged Dove (WWDO)
 (Credit: National Geographic)

flights, spiraling up into the sky and then returning to the same branch in a stiff winged glide. They may also bow, puff up their necks, or fan their tail to attract a female. This is a performance I have seen with city pigeons, or rock doves. Once mated the White-winged Dove pair is monogamous and stay together for at least one breeding season. The male brings nesting material to the female and she builds their 4 inch nest on a tree branch or crotch under heavy shade. 1-2 eggs are laid and incubated by both parents for 14-20 days. The chicks fledge in 13-18 days. White-winged Doves usually have only 1-2 broods per season.

White-winged Doves are mostly either just resident or short distant migrants. Most stay put in winter, but some make movements following the breeding season, not just south, but east, west, and even north.

GALLERY

Photos by Sue Kersey



Male Golden-fronted woodpecker eating suet



Female Golden-fronted woodpecker eating suet



Great Blue Heron resting



Great Horned Owl baby



Eurasian Collared Dove