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Bald Eagles —Hagerman Refuge:

Nature Takes Toll on Nests

by Laurie Sheppard— Class of 2017



“Where can I see the eagles?” That has become one of the most frequent questions volunteers in Hagerman NWR’s Visitor Center are asked. Eagle sightings are frequent and social media is filled with photos of bald eagles taken at the refuge.

Most people are familiar with the recovery of the American Bald Eagle from a low point in the 1960’s when the use of DDT result-

ed in many nesting failures. Concerted efforts to reintroduce the bird in several areas were supported by the U.S. Fish and Wildlife Service, but the species’ long life span and successful breeding habits were the true bases for increased populations throughout their range. Since the early 2000’s that has been evident on Lake Texoma, where there now are many nesting pairs, one of which makes its home at Hagerman NWR.

Bald eagles are large raptors, reaching 35 to 37 inches in size with wingspans of six feet or more. Females are slightly larger than males, which is more apparent when a pair is seen together.

Ricky and Lucy make their home at Hagerman.

er. Once paired, bald eagles remain together for life, returning to the same nest each year. These massive structures are built

See Eagles Pg. 2

Newsletter Highlight:

By Fran Woodfin—Class of 2007

Notes from Chalk Hill Farm March 2019

Chalk Hill Farm is 110 acres of land in Collin County, about ten miles northeast of the McKinney Square. The farm’s terrain varies from relatively flat areas consisting of black clay to rolling fields and chalky outcrops. The eastern border is formed by Stiff Creek and is bottomland forest. Other than the wild creatures, my husband Bill and I live here with three pregnant Charolais cows, three horses, one dog, and one barn cat.

We bought the land in 2000, dismayed our horse farm-owning friends who knew how much work would be involved in making inroads in this ne-

glected piece of agricultural land, but delighting our suburban friends whose idea of outdoor work was mostly calling the yard maintenance company. For years the property had been used as a dumping ground for a local dairy, and there were hundreds of mounds of dairy yard refuse dotting the open spaces. We enlisted friends, our sons, our sons’ girlfriends and college buddies, and two wonderful tractor-savvy farmers from Mexico, and set to work pulling out yards and yards of baling twine,



milking machine parts, and tires. Weeds of all sorts that came in with the dairy manure, especially nodding thistles, were mowed or sprayed. Honey locust trees had invaded all the fields. They had to be cut down, burned, and the stumps sprayed. I forgot to mention that we had to get electricity, dig a well, put in fences, and build a house and barn. Were we crazy? Probably.

Yet another complication presented itself which, initially, we thought was a minus in our overall plan to rehabilitate the property. On a hill on the eastern side of the property, there rests a two-acre cemetery. The problem was that the road leading to the cemetery had been used to haul household trash to be dumped in a low spot near the burial ground. The cemetery itself has been

protected from grazing and

See Chalk Hill Pg. 3

Eagles

high in tall trees near rivers, lakes, or along the coast. Nest building is part of the bonding activity of the pair as both sexes bring sticks to fabricate the nest's dense construction. On average, a bald eagle's nest will be four to five feet in diameter and two to four feet deep. The mated pair will add to their nest every year. As a result, some nests have grown to over eight feet in diameter and many more in depth.



A female bald eagle may lay one to three eggs each year. Both sexes share responsibility for keeping

the eggs warm and both will develop a brood patch (a bare spot on their belly) to better facilitate heat transfer to the eggs. The eggs hatch after about 35 days. The parents continue to care for the eaglets until they fledge at about 10-12 weeks. A completed nest can weigh a ton or more. Bald eagles may live for thirty years in the

wild. For the first four to five years, they are not sexually mature and live a nomadic lifestyle, often traveling great distances. Eagles can fly to an altitude of 10,000 feet and reach speeds of 30-35 mph. Juvenile bald eagles don't have the characteristic white head and tail of their parents. Their feathers are a variable mix of brown and white while they go through five distinct annual color morphs.

Experts can tell the age of juvenile eagles by the pattern of their plumage. Once bald eagles are fully mature, their plumage never changes. At that point, they may return to the area where they fledged to find a mate and claim a territory.

The primary food of bald eagles is fish, but they also prey on waterfowl and small mammals. Their hunting territory may range from 1,700 to over 10,000 acres, depending on the accessibility of food. I suspect that it varies from year to year at Hagerman NWR, since past years have seen both flooding and drought, impacting the availability of various prey. Bald eagles are opportunistic predators and will sometimes steal food from other birds or animals and will also scavenge carrion.

The bald eagle pair nesting at Hagerman NWR have been affectionately named



"Lucy" and "Ricky" by frequent visitors to the refuge. Lucy is more tolerant of people than Ricky and she is more frequently photographed. Earlier this month it was confirmed that the pair was incubating on the nest they built seven years ago and from which they fledged three offspring last year. Unfortunately, high winds on February 23rd claimed the nest before Lucy and Ricky's eggs had hatched. Recurrent flooding since 2015 killed the tree and it was only a matter of time until the nest was lost. When a successful nest is lost, often the pair will build a new nest in the same territory. Hopefully, Lucy and Ricky will recover from this setback and continue to return to the refuge for another twenty years.



What's New For Meetings!

April marks the Inaugural Presentation of "Deep Dive"

This will be as an occasional new opportunity prior to meetings to learn from the experts in a 30 minute presentation. This is being provided in response from members at goal setting meeting to provide additional educational opportunities. Great idea!

April 9 Deep Dive – 6:30-7 p.m. in Heard Museum SRC (same location for regular meetings)

Brandon Belcher (Manager of the Clymer Meadow Preserve) will conduct a class on how to identify key native Prairie grasses, by season. Brandon will provide an identification guide and samples to study, for this special education session. This class will be in the SRC building, and attendees will earn an additional 30 min AT.

Chalk Hill

plowing since 1847, so it had become a two-acre snapshot of what the Blackland prairie looked like before most Anglo

settlers arrived in Texas. Stiff Chapel Cemetery became a model of what we envisioned for the natural areas of the farm and turned out to be one of the most botanically interesting parts of the property. It seemed possible that we could collect seeds from the cemetery, plant them around the property, and restore agricultural lands back to prairie. We had no idea how difficult, or often impossible that would be.

We are now nineteen years into our project. I counted the number of Mexican plums blooming today that we planted . . . at least fifteen. They brighten up the fence rows and provide an early nectar

and pollen source for foraging bees. This time of year, the trees hum with bee activity. Also blooming profusely are the many elbow bushes, also called spring herald. We have hundreds of them growing at the edges of the woods and along fence lines. These pollinator favorites require no maintenance. In fact, we have to keep many of them cut back to keep the trails open. The male plants outnumber the female plants by at least ten to one for some reason unknown to me. Perhaps the highly successful vegetative reproduction by the looping, vine-like branches that readily root is so successful that seed production pales in comparison. Elbow bush also provides shelter for numerous birds, especially the Harris, white-throated, and field sparrows.

In spite of all the progress we have made, we will never take this land back to what

it was like in 1847. We can't "restore" it. Too much has happened. The top soil has been washed away, invasive species have replaced natives, and the climate is changing. Rather than a restoration, our DIY efforts at Chalk Hill Farm might more accurately be described as a renewal.

To that end, we discovered early on that planting native shrubs and trees is far less difficult than reintroducing native grasses and forbs. There are no tricks necessary to adding woody species. The trick comes with adding grasses and forbs.

More about that next time.



Poetry

by Greg Tonian — Class of 2017

Caravan,
a moving entourage of living souls,
Individuals loosely bound,
woven together, an undulating carpet,
seeking to fulfill selfish purposes, beholden to the flock.
Shifting destinations, timeframes, agendas
Seeking shelter, food, companionship
Safety in numbers no guarantee of survival
Perils abound
Sleet a frozen knife,
Wind a lashing whip, entangling, stinging the flesh
Provisions are picked clean and hunger gnaws the belly
Stealthy marauders swoop in, attrition can be fatal.
I hear a caravan of gypsy waxwings on

my walk,
(the dogs are more interested in cottontails).
Faint whistles, like prayer bells in the breeze alert me to their presence,
There they are, fuzzy ornaments swaying on an oak's winter skeleton
Whispering amongst themselves,
in a foreign tongue.
Masked in black, cloaked in oriental hues of tan, yellow, olive.
The soft glow of dawn strikes a match to these feathery candles.
The group appears united, confident, yet I sense some hesitation in their passage, another migration is imminent.
They share their fill of buds and berries as they travel in unfamiliar lands and press on to their final destination.
When their brief, perilous journey has ended and they part ways, they will be alone.
Will I see any of these restless, yearning, vagabonds again?

This morning's caravan is somehow a reflection of all living souls desire to seek a better place for themselves and their children and to fulfill their dreams.

It reminds me of other caravans...



See Page 4 for additional poetry —

"I Looked Out the Window"

by Sally Evans

Update — Blackland Prairie

Raptor Center:

Large Flight Cage Complete; X-ray Machine, Mews Extension to Come

by Erich Nupert

In 2018 BPRC completed the construction of its largest project, flight cages we call the Large Flight and Eagle cages. These cages were built based on U.S. Fish and Wildlife regulations for housing our biggest patients including Red-tailed hawks, Great Horned Owls, vultures, Peregrine falcons and eventually eagles. It includes three different sizes. Smaller cages called limited activity (10' x 12') so that a patient can be put outside to acclimate to the weather and begin to get conditioning without overdoing it. Say it had a broken wing, we don't want it trying to fly right away so this cage lets it hop around and do little test flights. Large flights (20' x 50') for actual flight training and conditioning as well as live prey testing (mouse school), and the eagle flight (20'W x 20' H x 100'L).

These cages were made entirely out of wood and used more than 32,000 screws – no nails as they can back out and injure a bird. This was the first project at the center that the volunteers did not construct and that was due to its size. Trying to put a 500 pound beam 24' up at the top of the structure needed professionals!

Except for the eagle flight cage

Though BPRC is a relatively small and newer center, only 15 years old, it is already matching programming and patient load of large centers around the country that have been around 40 plus years.

which is almost completed, these cages are in use helping patients prepare for a second chance. It will help handle the more than 600 patients we average every year making BPRC one of the larger centers in the country. Because of the extensive cage system, BPRC will be able to expand its capability to receive patients and eventually handle up to 1,000 patients each year.

Plans are under way to purchase an x-ray machine as well as fund-raise for an anesthesia machine. This will save hundreds of hours and thousands of dollars every year for the center by doing work in-house instead of travelling to veterinarians. BPRC is also beginning design work for an extension to our education mews (cages) so we can increase the number of education ambassadors as we ex-

expand our programming.

Though BPRC is a relatively small and newer cen-

ter, only 15 years old, it is already matching programming and patient load of large centers around the country that have been around 40 plus years. A testimonial to the need of a raptor center in north Texas. BPRC is always looking for volunteers to help with the many aspects of its work including fundraising, construction, learning rehabilitation and assist with education.

Poetry

I looked Out the Window on a Dreary Day

And wondered if inside I should stay.
I would be warm and the room was serene.
I could read a book or do nothing but dream;
Clean out a drawer, or write a letter;
Work on the computer or something better!
But the outside was pulling me there.

I grabbed a coat and left my chair.
A jay screamed at me as I opened the door
And a breeze touched my face and there was more!
The clouds were low, racing across the sky;
A wren sang loudly in a tree nearby;
A tiny flower on a nearby bush
Was giving itself a last little push
As it opened up to receive a bee
Which wasn't there as it was too cold for she.

There were daffodil leaves pushing up from the ground;
Unseen movement was all around.
I am glad I came outside to view my world
Instead of inside in a blanket curled.
I would not have seen this 'life' in motion,
Nor experienced the quiet emotion
Of peace and order in my own backyard.
I just received Nature's greeting card!

Written by Sally Evans on a cold January day in 2019– Founder and Member Emeritus of Blackland Prairie Chapter

Journaling:

Wildlife Encounters

by Paul Napper— Class of 2015

While hunting over the last fifty years, I've spent hundreds of hours sitting or sneaking quietly through the woods. Today I'm remembering some encounters I've had with woodland alligators.

These encounters occurred in Wood County south of Lake Fork in hardwood bottoms that are flooded seasonally if there is sufficient rain.

One encounter was in late September during one of our drought years. My son and I were walking and checking for deer tracks and deer sign. Circling the edges of several ponds that were nearly dry is a good way to check if deer are coming through the area to water or browsing around the edges of these low spots. As we approached one of the larger ponds I spotted about a 10 foot alligator out on a dried patch of the pond. That was pretty cool in itself. As we approached to about fifty yards, it slowly backed into a beaver drag trail that went back into the pond bank. We walked out to where the alligator had been and heard some

strange little peeping sounds. About 10 feet away in a small puddle were about a half dozen little baby alligators about a foot long. They were well camouflaged in the weeds growing in the puddle. Once I realized they were baby alligators, I told my son not to get any closer. The mother alligator could not be seen but I knew she was only about 25 yards away. We took a few pictures of the little alligators and quietly backed out the way we came in.

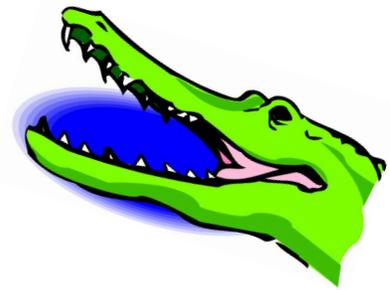
Another encounter during a drought year while scouting for deer tracks occurred on the bank of a nearly dry creek. The creek with banks about six

*He splashed into the pond belly first and was gone!
Pretty Cool!*

feet steep was around 80 percent dried up with puddles at different locations. I approached an area that deer often travel to cross the creek. I stopped at the edge of the creek bank and was standing there looking down when all of a sudden the bushes to my right came alive. I jumped about the same time that a three foot alligator shot past me and ran down the creek bank and jumped into a puddle that

went under a large stump. In about 5 seconds it was all over and he was gone! My last encounter was during a normal to wet year. All the ponds were full. I was hunting and walking a good trail heading back for lunch. Walking quietly as I approached two small ponds, I slowed to check for wildlife. At that exact moment I noticed a six foot alligator on the far bank of one pond. He saw me at the same time I saw him. His tail was on the edge of the pond with his head towards the forest. He was not waiting to see what I was about. He jumped up in the air and used his tail on the ground to pivot and spin around.

He splashed into the pond belly first and was gone! Pretty Cool!



Photos: Big Bend Bluebonnets , L.;
Torrey Yucca, R. Big Bend NP 3/3/2019
-Greg Tonian



Trees Talk to Each Other in a Language We Can Learn

Sara Burrows post on Return to Now Web site and sent by

Shari Navarette Class 2018

Like humans, trees are extremely social creatures, utterly dependent on each other for their survival. And, as it is with us, communication is key. After scientists discovered pine tree roots could transfer carbon to other pine tree roots in a lab, ecology professor Suzanne Simard set out to figure out how they did it.

What she discovered was a vast tangled web of hair-like mushroom roots — an information super highway allowing trees to communicate important messages to other members of their species and related species, such that the forest behaves as “a single organism.” The idea that trees could share information underground was controversial. Some of Simard’s colleagues thought she was crazy.

Having trouble finding research funding, she eventually set out to conduct the experiments herself, planting 240 birch, fir and cedar trees in a Canadian forest. She covered the seedlings with plastic bags and filled them with various types of carbon gas. An hour later she took the bags off, ran her Geiger counter over their leaves and heard “the most beautiful sound,” she says in the Ted Talk below:

“Crrrrr... It was the sound of Birch talking to Fir, she said. “Birch was saying, ‘hey, can I help you?’ “And Fir was saying yeah, can you send me some of your carbon? Somebody threw a shade cloth over me.”

She also scanned the cedar’s leaves, and as she suspected — silence. The

cedar was in its own world. It was not connected into the fungal web linking birches and firs. The birch and fir were in a “lively two-way conversation,” Simard says when the fir was shaded by the birch in summer, the birch sent more carbon to it. When the birch was leafless in the winter, the fir sent more carbon to it. The two trees were totally interdependent, Simard discovered, “like yin and yang.”

That’s when Simard knew she was onto something big... In the past, we assumed trees were competing with each other for carbon, sunlight, water and nutrients. But Simard’s work

“Crrrrr... It was the sound of Birch talking to Fir,” she said.

showed us trees were also cooperators. They communicate by sending mysterious chemical and hormonal signals to each other via the mycelium, to determine which trees need more carbon, nitrogen, phosphorus and carbon, and which trees have some to spare, sending the elements back and forth to each other until the entire forest is balanced.

“The web is so dense there can be hundreds of kilometers of mycelium under a single foot step,” Simard says.

The mycelium web connects mother trees with baby trees, allowing them to feed their young. A single mother tree can provide nourishment for hundreds of smaller trees in the under-story of her branches, she says. Mother trees even recognize their kin, sending them more mycelium and carbon and reducing their own root size to make room for their babies. This new understanding of tree

communication had Simard worried about the implications of clear-cutting. When mother trees are injured or dying, they send their wisdom onto the next generation. They can’t do this if they are all wiped out at once.

“You can take out one or two hub trees, but there comes a tipping point, if you take out one too many, the whole system collapses,” she says.

Often clear-cut forests are replanted with only one or two species. These simplified forests lack complexity making them vulnerable to infection and bugs. To ensure the survival of the planet’s lungs at a time when they are most crucial, Simard suggests four simple solutions to end the damage caused by clear cutting:

1. Get out in the forest more — this in and of itself will remind us how interdependent we are on this ecosystem.
2. Save old growth forests as repositories of genes, mother trees and mycelium networks.
3. Where we do cut, save the “legacy” trees so they can pass on important information to the next generation.
4. Regenerate cut patches with diverse native species



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The Mission of the Texas Master Naturalist program is to develop a corps of well-informed volunteers to provide education, outreach and service dedicated to the beneficial management of natural resources and natural areas within their communities for the State of Texas.

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Upcoming BPTMN Meetings

April 9 Deep Dive Pre-meeting: Brandon Belcher (Manager of the Clymer Meadow Preserve) - Identifying major prairie grasses

April 9: Making an Impression: Tales and Tips from 50 Years Teaching about Nature – Sally Evans

May 14: “How iNaturalist Influences Land Management and Guides Public Policy” – Sam Kieschnick

June 11: “Management of Roadside Vegetation and Wildflowers” – Jacob Eickstead, TxDOT

Websites of Interest...

All About Birds:

<https://academy.allaboutbirds.org/features/birdanatomy/>

Blackland Prairie Texas Master Naturalist Calendar <http://bptmn.org/calendar/>

Cornell Lab of Ornithology –

<http://www.birds.cornell.edu/Page.aspx?pid=1478>

Earthkind Landscaping

<http://aggie-horticulture.tamu.edu/earthkind/>

Green Source DFW

<http://www.greensourcedfw.org/>

Ladybird Johnson Wildlife Center

<https://www.wildflower.org/>

Texas Aggi Horticulture

<http://aggie-horticulture.tamu.edu/>

Texas Parks & Wildlife Updates

<https://tpwd.texas.gov/>

Texas Smartscape <http://www.txsmartscape.com/>

Texas Superstar Plants <http://www.texassuperstar.com/plants/>