

Prairie Partner Update

FALL 2017

A publication for and about Blackland Prairie Texas Master Naturalists

A Word from the President...



I was perusing the Texas Parks and Wildlife website recently. What a treasure of information to access and make your own for presentations or for your smart quotient trivia bank! I am amazed at the extraordinary dedication they have. So few do so much with so little.

As I was closing, something caught my eye. “Becoming an Outdoors - Woman – B.O.W.”. Say whaaat?

So, driven by a curiosity to explore this provocative title I found that BOW provides workshops with multiple classes that cover:

- shooting sports (shotgun, rifle, handgun, muzzle-loader, archery)
- fishing (rod-and-reel, flyfishing) and water (boating, kayaking, sailing)
- nature and other outdoor activities (birdwatching, astronomy, plant identification, camping, backpacking, survival, etc.)

Depending upon the workshop location – which varies about quarterly—they can also offer additional classes like horseback riding, boat handling, geocaching, mountain biking, land navigation, trapping, and fly tying, just to name a few. Workshops span a weekend, usually beginning on Friday around noon and lasting through Sunday noon. The weekend is divided into four sessions, and you pick the classes in which you'd like to participate. Typically, 6-8 classes per session are offered.

Usually, workshops are held at summer camps and outdoor learning facilities. The atmosphere is "outdoorsy" but comfortable. Participants are housed in bunkhouses, cabins or dormitory-like rooms with modern conveniences like AC, toilets and hot showers.

The bummer is that the closest one is Granbury in April of 2018. Well, that wasn't encouraging, but then I noticed: Looking for an opportunity closer to home? Consider joining our affiliate program the Texas Outdoors-Woman Network (TOWN). There are several groups in various metropolitan areas of Texas. I clicked and sure enough there is an affiliate in Dallas and Ft. Worth.

Seems that those women wanting to practice the outdoor skills they'd learned or have and want to share their enthusiasm for the outdoors, decided to form TOWN groups in their cities for women to meet who share their interests in outdoor recreation. These groups have a diverse membership of skills and experience.

Local TOWN groups hold monthly meetings and coordinate field trips in a variety of outdoor activities for members. Their mission is to provide all women the opportunity to experience outdoor activities in a safe, non-threatening, and supportive environment.

Now here is the bottom line. Listed below are contacts. Hopefully there is someone reading this that will go “YeeHaw” and will follow up on the particulars and let us know. Any takers?

Dallas: Sharon Fahlberg, sfahlberg@aol.com
(214) 616-TOWN

Fort Worth: Sharon Richman
ftworth.town@hotmail.com

**TEXAS
PARKS &
WILDLIFE**

*Just some TPWD website content to get you more interested in going to TPWD.org and their Education Area.
[www.http://tpwd.texas.gov/education/](http://tpwd.texas.gov/education/)*

Classroom Resources: Field Investigations and Tools, Aquatic Science, Guides for Parents and Teachers, Activities and Lesson Plans

*Texas Buffalo Soldiers
Texas Children in Nature*

Chapter Bullets

Who You Gonna Call? Control click to follow links to email. These people are here to serve.

[President: Deborah Canterbury](#)

[Vice President: Patti Tuck](#)

[Secretary: Beverly Carpenter](#)

[Treasurer: Elly Tittle](#)

Chapter Committee Chairs

[Education: Greg Hayden](#)

[Membership: Joyce Wilson](#)

[Outreach Education and Community: Donna Cole](#)

[Volunteer Hours/Advanced Training: Yvette Justice](#)

[Communications: Jodi Hodak](#)

[State Program Rep: Dave Powell](#)

[Class Representative: Paul Hodges](#)

[Nominations Committee: Clyde Camp](#)

[Immed. Past President: Clyde Camp](#)

Other Contacts

[Facebook Editor](#)

Photo Editor

[Newsletter Editor](#)

[Librarian](#)

[Webteam](#)

Texas Master Naturalist Annual Meeting

This year's event will mark the Texas Master Naturalist Program's 18th Annual Meeting and will be the 19th year of the program. This year's meeting will be held at the Omni Corpus Christi the weekend of October 20th through 22nd, 2017. Registration begins in August. We are pleased to extend an invitation to ALL Texas Master Naturalist Program volunteers, along with all other program affiliates. This includes those certified volunteers, those still in training, program administrators and advisors of local chapters, and your local chapter partners, sponsors, or special guests. This year's gathering has several chapter enhancement and Advanced Training topics to choose from. Our social times, chapter project fair showcase and round table

discussions will offer great opportunities to meet your fellow Texas Master Naturalist peers from our 48 Chapters across the state and share new ideas from the past year. TEXAS MASTER NATURALIST 18TH ANNUAL MEETING<https://txmn.org/2017-annual-meeting/?utm_campaign=govdelivery-email&utm_medium=email&utm_source=govdelivery>

We Need Help!

The Chapter needs a few good members to agree to be considered for president and for treasurer. You will be part of an excellent board comprised of people dedicated to working together and providing the best of all opportunities for the chapter... and board members too for that fact. Contact Clyde Camp with questions at pastpresident@bptmn.org. Project and chair positions may come available after November elections.

Your webteam is desperate for some people to post on Forum and keep up with the website content accuracy and appearance. This doesn't take programming skills or any design experience. Contact president@bptmn.org.

We need greeters at meetings to make visitors welcome and point them to the person who can help them with questions you cannot answer. Contact communications@bptmn.org.

In other words, ya'll are doing a fabulous job of volunteering your skills learned but we need your skills from careers, hobbies and experiences to help with shepherding the chapter.

Class of 2017 Graduates are Making a Difference in Their Local Communities

by Jodi Hodak

Graduates from the BPTMN Class of 2017 have been busy. From restoring prairie land to trail guiding, animal care and more, individuals from this 32-member class have hit the ground running as committed volunteers who are making a difference in their local communities.



Class of 2017 graduates on graduation night at The Heard Museum in May.

“I am very proud what this class has accomplished so soon after graduation,” said Lu Anne Ray, who recently stepped down as Education Chair after completing her three-year term. “As an Education Committee, we made the decision to reduce the class size from 40 students to 32 in 2017 so we could offer more support to each student, and it seems to have been a successful approach.”

Seven students from the Class of 2017 have already earned BPTMN certification. Two of these graduates are now double certified, meaning they have reached their second 40 volunteer/8 advanced training hour milestone.

Committed volunteers

2017 graduate Laurie Shepard volunteers in several ways at Hagerman National

Wildlife Refuge in Sherman, TX. With a focus on public outreach and education, Laurie is a butterfly docent who conducts tours of the garden and a tram driver who takes visitors on guided tours of the refuge.

“During the tour I tell people about the history of the refuge, the purpose and goals of wildlife management, and some information about every bird, mammal or insect we happen to see on the hour and a half tour,” Laurie said. “For some, it is their first exposure to the wildlife available there.”

Classmate Paul Hodges, who serves on the BPTMN Board of Directors as the 2017 Class Representative, is also a member of the BPTMN Education Committee.

Rich Hodak has been an animal care volunteer at The Heard Museum for about a year. Two days a week he provides support for the outdoor animals, which includes preparing food, cleaning cages and making sure the animals are doing well in their respective environments.

“I really enjoy working with all of the animals and people at The Heard,” Rich said.

“Volunteering has given me an opportunity to learn about the animals, plus I’ve met a lot of great people and have made several friends along the way.”

Class of 2018 coming soon

Registration for the BPTMN Class of 2018 will begin on November 1, 2017 and run through January 12, 2018. Applicants are accepted first come, first serve based on a completed VMS registration and submission of application packet. Details will be available on the BPTMN website.

MEMBER PROFILES

by Greg Tonian

Meet two BPTMN members who contribute to our group and community.



Fran Woodfin grew up San Antonio; Stuttgart, Germany and Killeen, TX, but has spent most of her life in Dallas and Collin Counties.

Childhood hero? Hop Along Cassidy and his horse Topper

Naturalist mentor/hero? Locally, George Diggs. Historically, Charles Darwin. Very locally, Lou Ann, Sally, and Deborah, also Carol, Melanie, Tony, Greg (s), Gailon, Rodney, and many more master naturalists.

What is/Was your vocation? Botanist, Morgan horse breeder and trainer, and medical office manager.

Who/What led you to the love of nature and when? I think it's genetic. Since childhood.

Why did you become a master naturalist? Sounded like fun.

Preferred volunteering activities? Education committee member. I bring native plants to classes. Classes are always interesting, and I still take notes. Thanks go to Sally and Lou Ann who have honed our list of speakers to an impressive group.

Family: husband, Bill Woodfin, 2 sons and 2 grandkids.

Family naturalists? Bill, definitely, and my younger sister. I'm working on the grandkids.

Any other hobbies? Competitive carriage driving and for fun, riding. Cooking.

Musical style preference? Latino, especially bachata, rock and roll and hip-hop (in small doses), almost anything by Willie Nelson, bluegrass and more.

Favorite song and would you be more likely to sing it in shower, karaoke, or perform it or just listen to it? "Stay" by Maurice Williams and the Zodiacs but never in public. No one would want to hear my "falsetto" imitation.

Favorite work of literature? Impossible to pick but I will: 1. *A Prayer for Owen Meany* by John Irving just for fun 2. *The Voyage of the Beagle* by Charles Darwin – fascinating story about Darwin's five year voyage around the world. Darwin was the consummate observer. 3. *Horton Hears a Who* by Dr. Seuss—so much we miss in the world around us.

What book is on your nightstand now? *Another Year Finds Me in Texas*, a young woman's civil war diary by V. R. Tongate.

Go to Naturalist reference(s)? Of course.... *Shiners and Mahler's Illustrated Flora of North Central Texas* by George Diggs et al.

Naturalist gear of choice? hat

Favorite foods. Vietnamese and authentic Mexican, not so much Tex-Mex, but I do like margaritas!

What words of wisdom do you live by? "It takes considerable knowledge just to realize the extent of your own ignorance."

If you could live in an ecological region other than the Blackland Prairie for the remainder of your life, where would it be and why? On the beach somewhere.

Naturalist experience highlight? Transferring about 60 or so monarch caterpillars that had been stranded on one completely decimated butterfly bush and put in three buckets, to milkweed plants on our farm.

A top Environmental concern to you? Education about nature and natural resources is the key to enabling people to make good decisions regarding personal choices and local and national policy.

Any crazy thing that you have done that you are most proud of or that we should know! Got married after a rather short engagement....but I got lucky, and marching in Washington D.C.

MEMBER PROFILES

by Greg Tonian



Mike Roome

was born in Longview, Texas, and spent his pre-teen and teenage years in an area of Dallas known as Pleasant Grove – “much different today than it was 60 years ago,” he says. “I spent 20 years in military which involved a lot of travel! I was in private business for five years and spent

the last half of life in Plano and was a high school teacher in Plano for 23 years.”

Childhood hero? Have to say my father, but regrettably, did not realize it until much later in life.

Naturalist mentor/hero? Two people stand out: Sally Evans, my inspiration for becoming a master naturalist and Dave Powell from whom I have learned so many things.

Who/What led you to the love of nature and when? I grew up at a time when kids played outdoors all the time. For many years, I lived next to a large wooded area which gave me a wonderland in which to play and explore.

Why did you become a master naturalist? An article in the *Plano Profile Magazine* about Sally Evans peaked my interest in the organization. Being retired, I thought this might be just the thing I would enjoy—and I have.

Volunteer preferences as a Master Naturalist? Working with the Heard museum as an Assistant Animal Curator and my work as a trail guide with the Heard, the Blackland Prairie Raptor Center, and Plano Parks and Recreation.

Family: I’m a widower and I have a son, but, regrettably, no grandkids.

Any other hobbies? Master naturalist interests take most of my time now, but I have spent some time in

the past collecting Native American art, pottery, and other items. Also collect and play Native American flutes.

Musical style preference? I really enjoy 80s and 90s country as well as some of today’s new stars. Can’t pick a favorite song, depends on my mood.

Favorite work of literature? What I have probably read the most number of times are the works of J.R.R. Tolkien—Lord of the Rings, the Hobbit, etc.

What book is on your nightstand now? Don’t read while in bed., but I currently have three books I’m working on—*The Sixth Extinction* by Elizabeth Kolbert, *The Big Picture* by Sean Carroll, and *Astrophysics for People in a Hurry* by Neil De Grasse Tyson. My go to when I need a break from intellectual stuff is *Uncle John’s Bathroom Reader*.

Naturalist gear of choice? A good pair of boots.

Favorite foods: Mexican

What words of wisdom do you live by? I try to remember two things: 1). In this grand universe, I’m less than an insignificant dot—hopefully this keeps me humble. 2). A saying of the Lakota people, “Mitakuye Oyasin,” which means “All my relation” or “All my relatives,” and reflects a world view of interconnectedness between all things living and non-living.

If you were to live in another ecological region other than the Blackland Prairie for the remainder of your life, where would it be and why? In Texas, probably the Piney Woods of East Texas. In US, the mesa country of New Mexico.

Naturalist experience highlight? They are all great.

What Environmental concern do you feel most strongly about sharing with others? The impact of our species upon the planet.

Any crazy thing that you have done that you are most proud of or that we should know! I’m waiting on the second half of my life to do crazy.

Recertifications for 2017

Baume, Alfred
Brehm, Gailon
Camp, Clyde
Canterbury, Deborah
Carpenter, Beverly
Clark, Carol
Curfman, Carolyn
Curfman, Larry

Cushion, Nancy
Evans, Sally
Goria, Janice
Hayden, Greg
Heath, William (Tom)
Justice, Yvette
Manasseri, Tony
Metcalf, Maureen

Mione, Bob
Opheim, Kathy
Powell, David
Ray, LuAnne
Roome, Mike
Schuchart, Lonnie
Schuchart, Melanie
Simpson, Laura

Smith, Susan
Stack, Sharla
Stierlen, Lorelei
Thomas, Gwen
Tittle, Elly
Tuck, Patricia
Wilson, Joyce
Woodfin, Frances

Double-certifications from Class of 2017

Hartman, Deborah

Hupf, Gregory

250 hour pins

Curfman, Carolyn
Edwards, Lisa
Goria, Janice
Levenson, Robin
Opheim, Kathy
Robinson, Randy
Stokely, Ernest
Wilson, Joyce

500 hour pins

Baume, Alfred
Dulian, James
McDonald, Mittie
Powers, Cynthia
Tuck, Patricia
Woodfin, Frances

1,000 hour pin

Brown, Mary

5,000 hour pin

Mitchell, Karen

Snakes of Collin County, Part One: Venomous Snakes, Identification and Safety

by David Mead

Snakes, some of the most misunderstood and maligned creatures that we share the earth with, are often viewed with terror and loathing. The vast majority of our society have been taught to fear and despise these animals, with very little based on fact. In reality, snakes are truly incredible animals with undeniable beauty, and are extremely important to the health of all ecosystems in which they occur. They also play a huge role in the control of rodent pests that cause damage to crops, personal property, and could carry potentially life-threatening diseases. For this their economic value is immense.

Of the 113 species and subspecies of snakes that make their home in Texas, 19 can potentially be found in Collin County, only two of which are venomous.

Since most lay folk (those not nuts like I am about snakes) are primarily concerned with the medically significant ser-



Southern Copperhead

pents, I will start by discussing my favorite of our local snakes, and the most likely encountered venomous snake, the **Copperhead**. This snake is easily distinguished from other natives by its unique pattern and coloration, as well as its body shape, and eyes. Copperheads are the only local snake with alternating, almost wavy bands of light tan and darker brown, with a (you guessed it) copper-tinted head. The head is distinctly wider than the neck, reminiscent of an arrowhead, a feature characteristic of vipers. The body is fairly robust, almost stocky. Unlike our non-venomous snakes, the pupils of the copperhead are elliptical, like a cat, rather than round, like ours.

Primarily a terrestrial snake, Copperheads inhabit forested areas, preferring to hide under fallen logs, bark, leaf litter, or debris on the ground. They can be common in disturbed habitat, where human activity borders the woodlands. They will even seek shelter in human trash, lumber piles, flat boards and tin lying on the ground. Very rarely do they climb low vegetation, but it does happen.

They eat mostly rodents, but juveniles will readily eat small frogs and lizards, which they lure into striking distance by wriggling their yellow-green tipped tail (the tail color is lost as the snake matures). Baby Copperheads will also feast on cicadas.

Copperhead venom, while cer-

tainly painful, is not likely to be life-threatening. They only bite when provoked, restrained, or stepped on. They would much rather sit still and motionless, relying on camouflage to go undetected, than to try and bite a potential threat. Only when they



Cottonmouth

feel seriously threatened do they try and retreat, before resorting to a bite as a last line of defense.

The best ways to avoid a bite from a Copperhead include wearing appropriate clothing and footwear when outdoors, especially in wooded areas, and to wear heavy gloves when working with lumber piles or moving debris near wooded areas. Obviously, don't pick them up either. To prevent them from hanging around your house, simply eliminate possible shelter for them and their preferred rodent prey. Keep the vegetation around the home trimmed, keep wood piles at a safe distance and the area around them clean, and avoid leaving any debris around the yard. If you have areas with rodent activity, Copperheads could try and move in for a feast.

(contd., pg. 7)

Snakes of Collin County, Part One, (contd.) by David Mead

The other venomous snake possibly found in Collin County (but this is extremely unlikely) is the **Cottonmouth, aka Water Moccasin**.

These snakes are easily confused with harmless water snakes, all of which live in similar habitat—lakes, ponds, creeks, swamps, and look very much alike to the untrained eye. All are robust snakes, dark colored on the back, from almost black to a dark olive green/brown. Sometimes there may be a faint pattern discernible, but not always.

Cottonmouths are vipers and have a classic arrow shaped head, but Water Snakes will flatten their head when threatened to appear like a venomous snake, often confusing the scary humans they are trying to scare off.

There are a few features that can help distinguish a venomous Water Moccasin from Water Snakes. The most classic of these is the Cottonmouths' ten-

at their perceived threat, displaying their namesake bright white mouth. Cottonmouths also have a "mask" that is absent on all Water Snakes, consisting of a dark stripe bordered by a thin white that runs across the eye from the nose to the cheek. Our local Water Snakes all have small, vertical, thin lines on their labial scales, and often have yellow around the throat, none of which is seen on the Cottonmouth.

I have actually never encountered a Cottonmouth here in all my years actively seeking them out in Collin County. All of the reports and photos that I've seen of "Cottonmouths" found in the area turn out to be their harmless imposters. Chances are that if you encounter a snake near the water in Collin County it is most likely a harmless Water Snake. I have heard of them in the wetlands at the Heard Nature Center, but have yet to spot one myself. The habitat is good, so it is possible, but there is a very healthy population of Water Snakes competing for the same resources.

Contrary to the multitude of myths surrounding these snakes, they do not chase people, or any would-be threat. They do not jump in boats to attack. They do not make nests, and they don't seek revenge if they

are disturbed or if one of their kin is attacked. They are shy, solitary animals that avoid confrontation, but will defend themselves if they feel cornered. Most often they try to flee from a threat. It must be remembered that their perspective is very different from ours, and they may see a good place for shelter just



Western Diamondback Rattlesnake

behind your boot. They are not chasing you, but trying to find a safe place to hide. Like the Copperhead, they will only bite if physically restrained or manipulated. I have met several in the wild elsewhere in Texas, and none have ever made an aggressive move towards me. If you exercise caution when in their habitat and leave them alone no harm will befall you from snakes.

Unfortunately (for me, the snake nut) there exist no rattlesnakes or coral snakes in Collin County. Rattlesnakes can be immediately recognized by their distinctive rattle on the end of their tail, consisting of a series of chitinous segments that create a buzzing sound when shaken.

(contd., pg. 8)



Coral Snake

dency, upon discovery, to widely gape open their mouth

Snakes of Collin County, Part One *(contd.)*

The majestic, and endangered Timber Rattlesnake can be found in a few isolated populations north of us in Grayson County, alongside the diminutive Pygmy Rattlesnake. The iconic **Western Diamondback Rattlesnake** lives further south and west, with a population just outside Dallas in the Cedar Hill area, along with the beautiful and elusive **Texas Coral Snake**. The Coral Snake bears a series of colorful bands of red, yellow, and black that completely encircle their slender body. The red bands are always bordered by yellow bands, which set them apart from harmless Milk Snakes that wear the same colors, but their red bands are bordered by black bands. A famous rhyme will help with their identification- "Red touch black, venom lack (or friend of Jack), Red touch yellow, kills a fellow". There are other species of rattlesnake in Texas, but they occur primarily in the far western and southwestern regions of the state in and around Big Bend and the Fort Davis Mountains. These include the Rock Rattlesnakes, Black-tailed Rattlesnake, and the very dangerous Mojave Rattlesnake.

In the event of a venomous snake bite, the only safe course of action is to calmly, but immediately get to a hospital. Do not try and kill or capture the snake, as it will most likely result in more stress and bites, neither of which will help in your current predicament. There are no first aid measures proven to be safe for a venomous bite other than to remain calm, leave it alone and remove any tight fitting

clothing and jewelry. All other methods once popular (cutting the bite site, sucking out the venom, electrotherapy, or putting ice or heat on the bite) have been shown to be of no actual benefit, and in most cases serve to do only more harm. Most hospitals stock a polyvalent antivenin that is effective for all of our native vipers, and that is the only currently recognized effective treatment for venomous snake bite.

Despite their apparent dangers, venomous snakes fill an important niche in our ecosystems. It is possible to coexist with these wonderful and mysterious creatures without the need for harming them, and with reasonable precautions have no harm inflicted upon ourselves.

All photos by David Mead

Volunteers at Arbor Hills Nature Preserve



Greg Tonian, Ernie Stokley, Rick Joosten, Dub Spenser, Louise Frost are joined by Rachael Bennett of Plano Parks and Recreation and a birder at the Arbor Hills Nature Preserve. Rick is moving to California, but his knowledgeable fellow Naturalists are dedicated to continuing the monthly trail walks.



Daniel P. Johnson

*Of special interest is a crayfish discovered by Dr. Kenneth Steigman the director of LLELA. *Procambrus Girardiella) steigmani* Hobbs, 1991 Parkhill Prairie Crayfish*

Crayfish, also known as crawfish, crawdads, freshwater lobsters, mountain lobsters, mudbugs or yabbies, are freshwater crustaceans resembling small lobsters, to which they are related; taxonomically, they are members of the superfamilies Astacoidea and Parastacoidea. They breathe through feather-like gills. Some species are found in brooks and streams where there is running fresh water, while others thrive in swamps, ditches, and rice paddies. Most crayfish cannot tolerate polluted water, although some species such as *Procambarus clarkii* are hardier. Crayfish feed on living and dead animals and plants.

*Scientific name: Astacoidea

*Biological classification: Superfamily

*Consists of: Astacidae

*Belongs to: Astacidea

The crayfish body is divided into a cephalothorax (head and midsection) and the abdomen (segmented rear). The entire body is covered by a hard outer shell called the carapace. Crayfish have four pairs of walking legs, two claws, two pairs of antennae and a head with a sharp snout. Five pairs of swimmerets are located under the abdomen. Their eyes are on movable appendages and they have a fanned tail. While an external skeleton provides armor-like protection, it limits maneuverability and growth. Since growth is especially rapid early in the crustacean's life, molting must occur six to ten times during the first year of life. Molting frequency is less often in later years. Immediately following molting, a crayfish is protected only by a soft, temporary covering. This increases the crustacean's vulnerability to predators. Crayfish are nocturnal—they hide under rocks or in tunnels during the day and feed at night. They use their antennae to feel for food and will eat almost anything, including dead plants, insects, snails and algae.

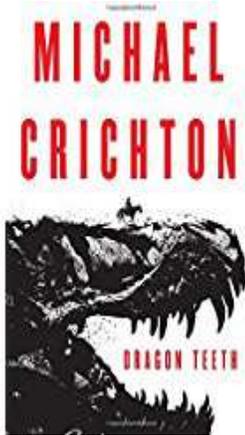
Mating takes place in the fall, but fertilization and hatching occurs when the female releases her eggs, and is a springtime event. Eggs resemble black berries and are attached to the female's abdomen. The female will fan the young with her tail for cleaning and aeration. There may be anywhere from 20 to 700 eggs. Once hatched, the young remain by the female until they have molted twice. Typically crayfish live for about two years, however some individuals have been known to live as long as 20 years.

There are 540 species of crayfish worldwide—about 400 of these are found in North America—43 species in Texas!

http://iz.carnegiemn.org/crayfish/country_pages/state_pages/texas.htm

Crawfish themselves are extremely healthy for you. Like most seafood and shellfish, they are relatively low in saturated fats (compared to other meat and dairy products) and they contain fatty acids that are potent antioxidants. All of them play a significant role in the environment, keeping it clean and serving as a food source for birds and other aquatic animals. http://mdc.mo.gov/sites/default/files/resources/2010/05/4887_2840.pdf

Crawfish are threatened by habitat loss, water pollution, sedimentation, being trapped for human consumption, and the introduction of non-native, invasive species. Because crayfish are sensitive to any form of pollution, they are good indicators of water quality. Dozens of species of crayfish are endangered or in need of protection. Occasionally, as is the case with the Rusty Crayfish, a variety of crayfish may be out of its appropriate habitat, even becoming an ecological nuisance. The Rusty Crayfish grows too fast to serve as food for some species and depletes the eggs of other, important aquatic life.

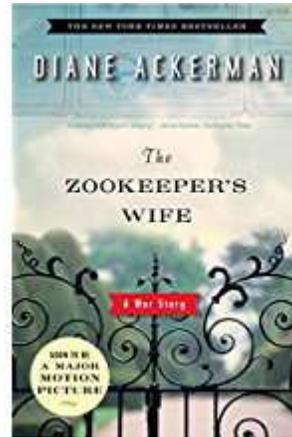


This issue's book review is a double header: a book you've got to read, and a book you should read. There is a difference. Both will enrich your experience as a master naturalist!

A rip-roaring good time can be had by reading *Dragon Teeth*, by the

late Michael Crichton, author of such notable books as *The Andromeda Strain* and *Jurassic Park*. I was drawn to it by the cover art – a miniscule silhouette of a lone cowboy on horseback on top of an immense skull of a savage dinosaur. From there, the fly pages feature an antique map featuring the route of the main character, William Johnson, who traveled via railroad, stagecoach, and horseback from Philadelphia to Deadwood in the Dakota Territory in 1876. Needless to say, my curiosity was piqued!

Mr. Crichton hooks the reader through his introduction by describing two photos of Mr. Johnson. The first photograph, dated "New Haven, 1875," shows a handsome young man with a crooked grin and "slouching indifference." Mr. Johnson had just left home to begin his undergraduate studies at Yale College. The later photo, marked "Cheyenne, Wyoming, 1876" shows the changes in Mr. Johnson. He has become more muscular and confident, with an unusual scar on his upper lip. The novel aims to explain how those differences in Mr. Johnson came about, but as a master naturalist, you will get much more than a good story. You will receive an education in the wild, early days of paleontology thanks to Mr. Crichton's passion for research. The driving conflict in the novel is based on the real-life animosity between Professors Othniel Marsh and Edward Cope. I don't know what I enjoyed more – the story surrounding Mr. Johnson, or all that I learned about these passionate scientists and their discoveries. You NEED to read this book; it's a page turner!



Another book you SHOULD read is Diane Ackerman's *The Zookeeper's Wife*. In my opinion, it is not a page turner, and I dare say some will not finish this book (like my mother!). But am I glad I read it? You bet! Some may say it is another

novel about the horrific struggles and bravery of those enduring World War II, and they would be right. The author paints a picture of the horrifying life of those trapped in the Warsaw Ghetto under the control of the Nazis.

In the midst of the brutality, Jan and Antonina Zabinski, owners of the Warsaw Zoo, courageously implement plans to free over 300 people by hiding them in all kinds of places, including the abandoned animal cages at the zoo. Describing these adventures is compelling and would have been enough for any book. But Ms. Ackerman also weaves in the ideology of the Nazis with regard to the world's ecosystems. Through engaging descriptions of the primordial forests, animals, and plants, the reader realizes the "Nazis intend to extinguish the native plants and animals of some countries, while at the same time going to great lengths to protect other endangered animals and habitats, and even to resurrect extinct species." For this reason, you, as a master naturalist, SHOULD read *The Zookeeper's Wife*. It will enrich what you know about the war. It will bring questions to your mind. It is chilling.

Naturalists Helping the Community



Our **Junior Naturalist** work at Wilson Middle School in Plano was highlighted in the July issue of Texas Coop Power Magazine. Judy Rowe and Beverly Carpenter, pictured with students, are two of the Master Naturalists involved. See the article at www.TexasCoopPower.com.



David Mead and Logan Plunkett found some places during the **Erwin Park BioBlitz** to search for reptiles and amphibians that looks like an exotic location.



The **Heritage Farmstead** plots are glorious as are the workers who were there this month: Dub Spencer, Bryan Beck, Paul Napper, Cindy Napper, Angela Lewallen, Karen Wright, Logan Plunkett, Lu Anne Ray and Deb Canterbury.

The Moth Bug Has Bitten

by *Melanie Schuchart*

I'm not sure that this title makes any sense, but that is what SamBiology (aka Sam Keischnick on inaturalist) said when giving his Moth Presentation at the Heard Museum in June. Of course it means that he got very focused and interested in moths, and with the purchase of my first moth light, I can say that I now feel the same way (Note: Moth is not a bug and they do not bite).

I purchased a moth light from BioQuip.com and got the [2804 AC/DC](#) for just over a \$100 which has an AC and DC



White lined Sphinx Moth or Hummingbird Moth

option. You can actually get one for \$50-\$60 if you just need one of the options. While I easily have access to electricity at home, I'm envisioning being able to take this on the road like the others do on the bioblitz's around the state. Currently, I am recycling PVC pipe from my grown kid's soccer goals, an old fitted bed sheet for the platform and using a hanging plant pole for the UV light. I set it up in the backyard against the fence and waited for nightfall.



Me and my dog, Roo, mothing with my headgear and camera.

At first I got LBBs. (that is what I call the little black bugs and little brown bugs that I see that all look the same)... I learned this term at [Gailon Brehm's](#) ([aka gailonbrehm](#)) talk on LBB (little brown



birds) and how to ID sparrows at a Master Naturalist

Antlion (You may know their larva that build sand traps to catch their prey)

meeting last year, and I liked it.

It started out slow, but as the night grew darker more things showed up. I was surprised to see the wolf spiders at first but then thought maybe they were there to catch an easy meal. Then I saw several lady bugs that I didn't realize

flew at night. Some of favorite non-moth finds that first night were the Antlion & Ichneumon wasps and all types of Rove Beetles that we are still trying to determine the actual species. Finally the moths started showing up. While most landed on the sheet, I had remembered



Garden Tortrix (or the garden clown)

from a fellow moth hunter to also check near the sheet on the fence, light pole and even grass. I was surprised how many I found this way. Some cool moths I found were the Garden Totrix that has been described as a scary clown, the Genista Broom Moth because now I know what the mother of the caterpillars that eat my mountain laurel blooms looks like



Diacme Moth

and paler Diacme Moth which is a beautiful yellow color.

(contd. pg. 13)

The Moth Bug Has Bitten (contd.) by Melanie Schuchart



Ichneumon Wasp (female with ovipositor (egg layer)

The largest I saw is still yet unidentified, so I'm spending time trying to figure them out with the online guides in iNat and also the moth photo group which can be intimidating at first glance. I also saw many tiny, tiny, tiny moths that I did not photograph yet as I have to pace myself. I managed to get about 50 sightings on my first night (of course not all moths). Here is the link to my inaturalist where I post them. https://www.inaturalist.org/observations/butterflies4fun?utf8=%E2%9C%93&q=&search_on=&quality_grade=any&reviewed=&geoprivacy=&identifications=any&captivate=&place_id=&swlat=&swlng=&nelat=&nelng=&taxon_name=&taxon_id=&day=22&month=6&year=2017&order_by=observations.id&order=desc&rank=&hrank=&lrank=&taxon_ids=&d1=&d2=&created_on=&site=&tdate=&list_id=&filters_open=true&view=table

After several more nights of mothing, I was able to get additional moths such as the white lined sphinx moth which is one of the largest moths I've seen in

my backyard so far. I've found that it is fairly hard to ID moths, but with practice I will get better.

I look forward for many more outings with my light and since it has the ability to be portable to take it to new places...although I have not shelled out the \$'s yet for a battery other than my car. I would like to set it up at a master naturalist meeting in the future for those that might not have ever experienced. However, I think waiting till



Genista Broom Moth

fall when it starts getting dark earlier will provide a better chance of seeing a variety. Moths are active at different times of the night and so far I've only made it to 1 a.m. or four hours past sundown. In the fall/winter, it gets dark earlier, and thus I hope to see more variety since it will only by 10 or 11 p.m. at four hours past sundown.

For those who want to give this a try, I'm happy to share what I know. It is pretty simple to set up and really a fun and interesting activity. But then again, I'm hooked.

Happy Mothing to all and to all a Good Night!

[butterflies4fun](#) (This is my username on inaturalist).



Moth set-up with PVC pipe, old fitted bedsheet and garden hanger.



TPWD Bat-Watching Sites of Texas Website - Now Live!

The website, created in collaboration with Bat Conservation International, covers general bat biology, provides a list of the bat species that occur in Texas, briefly discusses white-nose syndrome (WNS) and bat-watching etiquette, and highlights twelve bat-watching sites of various ownership/management across the state, including four TPWD properties. <https://tpwd.texas.gov/huntwild/wild/species/bats/bat-watching-sites/>

News from Hagerman National Wildlife Refuge

by Laurie Sheppard

As with many state and federal recreational and wildlife management facilities, Hagerman National Wildlife Refuge (NWR) has an active volunteer Friends organization. Friends of Hagerman NWR (FOH)



Scarab

members provide information to the general public and promote interest and activities in nature through regular emails,

social media postings, blogs, a monthly newsletter, visitor handouts, and news releases. FOH volunteers conduct citizen science through a weekly bird census, monitoring a number of bluebird nest boxes during spring and summer, and also identifying and tracking butterfly species. In addition, FOH organizes and manages monthly nature programs for adults and children and conducts public walking and electric tram tours designed to introduce visitors to the history and wildlife of the refuge.

Last fall, Courtney Anderson joined the U.S. Fish and Wildlife Service (USFWS) as a Wildlife Biologist and Youth Program Specialist. She is stationed at Hagerman to support and expand the educational programs and field trips already being conducted by FOH. Her goals include creating diverse outdoor programs designed to inspire interest in nature and to reach as many young residents of Sherman and Denison as possible through school visits and outings. Such a mission cannot be achieved alone. Ms. Anderson welcomes volunteers from FOH, as well as Texas Master Naturalists from the local Bluestem TMN Chapter and other north Texas chapters.

The USFWS programs are continually evaluated and improved in order to build on what works and to develop sustainable programs. Hagerman NWR's natural features and wildlife diversity are becoming an integral part of the science curriculum in local schools, similar to the Holifield Science and Learning

Center programs in Plano. One very successful program this spring involved high school students who are exploring future careers in the natural sciences. The agenda featured a hands-on exploration of wildlife, including modules on fish and birds. Texas Parks and Wildlife partnered with USFWS for a morning of "electro-fishing". The students helped to capture, identify, and learn about a wide variety of fish before releasing them unharmed. The group later walked trails, locating birds and other wildlife, and learned about using field guides to assist in identification.

Ms. Anderson is also creating unique resource material for use in public education, including a vast photo-document that eventually will include examples of all wildlife and plants on the refuge. The work in progress can be viewed [here](#). Photos of additional types of wildlife and plants are needed to complete the collection. Anyone may contribute but photos must have been taken at the refuge and must clearly demonstrate the subject. Ms. Anderson is also leading a group of volunteers to create a collection of dried and mounted insects for use in educational programs. This, too, is a continuing project with opportunities to volunteer and learn insect identification and mounting techniques.

Fall is a busy time for public outreach at the refuge as many visitors spend hours in the Butterfly Garden at Hagerman NWR. FOH will hold an all day butterfly-focused event on the second Saturday in October. This coincides with the height of Monarch migration and is the best time to see northward-straying butterflies like Southern Dogface and Laviana Whiteskipper. Activities and presentations, including basic butterfly identification techniques and a demonstra-



tion of Monarch tagging will take place, and experts will be on hand all day to help find and identify many different butterfly species in the garden and on the refuge.

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Past issues can be found on our website at:
http://bptmn.org/_BOARD_FTP/newsletter/

Other BPTMN communications are at:

Smugmug - <http://bptmn.smugmug.com/>
Facebook - <https://www.facebook.com/bptmnforum.bptmn.org>

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.

The Texas Master Naturalist program is a partnership between the Texas AgriLife Extension Service, Texas Parks & Wildlife and other local partners.



Postal Mailing Address
(address to specific officer/person)
BPTMN
P.O. Box 863175
Plano, TX 75086-3175

Upcoming BPTMN Meetings
2nd Tuesday, 7 p.m.,
Heard Museum Science Center

- **August 8: "The Geology of Texas" – Dr. Angela Osen; University of Texas Arlington, Tarrant County College**

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/>

Insects in the City - <http://citybugs.tamu.edu/>

Ladybird Johnson Wildlife Center

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

Prairie Partner Update past issues

http://bptmn.org/_BOARD_FTP/newsletter/

Texas Aggie 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/>

Texas Tree Planting

<http://texastreeplanting.tamu.edu/>