



INDIAN TRAIL MARKER

Oct./Nov. 2016

News, events & calendar of the Indian Trail Chapter, Texas Master Naturalists...Serving Ellis and Navarro Counties

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From the Desk of the **PRESIDENT**

Charlie Grindstaff, President, Indian Trail Chapter

Change...to make or become different.

It's time for another season of the same old changes; the weather cools down some, nights get longer, some trees turn color and lose their leaves, school activities kick into high gear, stores start displaying holiday items, the fall blooming wildflowers remind us that summer heat was necessary, migrations begin and Master Naturalist volunteers (and every other organization it seems) fill up their weekends. We've seen it all before, but each fall we anticipate the changes.

Challenge...a call to take part in any contest, special effort, etc.; or difficulty in an undertaking that is stimulating to one engaged in it.

Indian Trail Chapter has some changes coming up to anticipate and cheer. We have added 17 new members and our demographics are changing. Our elections will be held at our November meeting, and though we will only elect a President and Treasurer, this is a good time to think about how we're serving our Chapter and the naturalist community. Maybe it is time to **CHALLENGE** ourselves by volunteering

on a new committee or project. I am pretty sure the changes can be stimulating challenges for us.



Migrating Roseate Spoonbill©JimWest

Meeting 4th Monday (*usually*) of each month at 6 p.m., program at 7 p.m. at the First United Methodist Church, Waxahachie

Events, Projects, Meetings & Volunteer Opportunities

OCTOBER

6 L.A.N.D.S. Field Investigation Day (9:30am-1:30pm), Panther Island Pavilion
6 Plant Family Study Group: Rosaceae (6:30 pm), Waxahachie
8 Waxahachie Farmers Market, Kids Activity Day (8am-1pm)
8 Inventory of Indian Trail Chapter supplies in storage (9am-12pm), AgriLife Office
8 Indian Trail Chapter 2016 Training: Field Trip, Dogwood Canyon Audubon Center
8 Bioblitz led by Brett Johnson, Harry Moss Park
10 Columbus Day
11 L.A.N.D.S. Field Investigation Day (9:30am-1:30pm), Panther Island Pavilion
11 Indian Trail Chapter 2016 Training (6-9pm): Archaeology, Geology
13 L.A.N.D.S. Field Investigation Day (9:30am-1:30pm), TBD
14 L.A.N.D.S. Field Investigation Day (9:30am-1:30pm), TBD
15 Kayak Eco-Tour (10am-12pm), sponsored by Dogwood Canyon Audubon Center
15 Bunker's Pond Trail Walk (10am), John Bunker Sands Wetlands Center
15 "Monarchs on the Move" (10am-12pm) John Bunker Sands Wetland Center
15 Rio Brazos Chapter Monarch Tagging Event, Acton Nature Center (9am-12pm)
17 Indian Trail Chapter Board Meeting (6pm), Ryan's
18 L.A.N.D.S. Field Investigation Day (9:30am-1:30pm), Cedar Hill State Park
18 Indian Trail Chapter 2016 Training (6-9pm): Volunteers as Teachers, Rangeland Management
19 L.A.N.D.S. Field Investigation Day (9:30am-1:30pm), Bear Creek Ranch
20 L.A.N.D.S. Field Investigation Day (9:30am-1:30pm), Cedar Hill State Park
20 CoCoRaHS Webinar: "The COMET Program" (12pm)
21 Kachina Prairie Work Day (9am-12pm)
21-23 Texas Master Naturalist 17th Annual Meeting, La Torretta Lakeside Resort, Montgomery TX
22-23 Owl Adoption Party Weekend, Dogwood Canyon Audubon Center
24 Indian Trail Chapter Monthly Meeting (6pm); Program (7pm): "The Origins of Modern Astronomy," Don Hellstern
25 L.A.N.D.S. Field Investigation Day (9:30am-1:30pm), Cedar Hill State Park
25 Indian Trail Chapter 2016 Training (6-9pm): Texas Naturalists, Weather and Climate
27 L.A.N.D.S. Field Investigation Day (9:30am-1:30pm), Cedar Hill State Park
29 Kachina Prairie Work Day (9am-12pm)

29 Indian Trail Chapter 2016 Training: Field Trip, Tierra Verde Golf Course
29 Native Plant Workshop (8am) and Plant Sale (10am), Dogwood Canyon Audubon Center
31 Halloween

NOVEMBER

1 L.A.N.D.S. Field Investigation Day (9:30am-1:30pm), Panther Island Pavilion
1 Indian Trail Chapter 2016 Training (6-9pm): Entomology
1 Brown Bag Lecture Series: "Blue Creek and Grey Fox Archaeological Sites: A BRIT and Maya Research Program Collaboration in Belize" (12-1pm), Botanical Research Institute of Texas
3 L.A.N.D.S. Field Investigation Day (9:30am-1:30pm), Panther Island Pavilion
3 Plant Family Study Group (6:30 pm) – details will be sent to chapter
3 CoCoRaHS Webinar: "Weather, Climate and Phenology" (12pm)
5 BRIT Work Day (9am-12pm)
5 First Saturday Event (9am-12pm), Botanical Research Institute of Texas
5 Beginning & Advanced Bird Walks (9am-12pm), John Bunker Sands Wetlands Center
5 Fall Plant Sale (10am-2pm), Texas Discovery Garden
6 Daylight Savings Time ends
6 Holiday at the Arboretum opens, Dallas Arboretum (ends Jan 3)
8 L.A.N.D.S. Field Investigation Day (9:30am-1:30pm), Panther Island Pavilion
8 Election Day
10 Indian Trail Chapter 2016 Training (6-9pm): Sand County Almanac, Time Keeping
11 Veterans Day
12 Project FeederWatch begins
15 L.A.N.D.S. Field Investigation Day (9:30am-1:30pm), Bear Creek Ranch
15 Indian Trail Chapter 2016 Training (6-9pm): Review Test, Evaluation, Graduation
17 L.A.N.D.S. Field Investigation Day (9:30am-1:30pm), Bear Creek Ranch
17 Plant Family Study Group (6:30pm) – details will be sent to chapter
19 Bunker's Pond Trail Walk (10am), John Bunker Sands Wetlands Center
24 Thanksgiving Day
28 Indian Trail Chapter Monthly Meeting & Elections (6pm); Program (7pm) featuring Sam Kieschnick
29 L.A.N.D.S. Field Investigation Day (9:30am-1:30pm), Bear Creek Ranch

★ AWARDS ★

We're so proud of our chapter and their achievements in volunteer service. In August and September 2016, the following individuals were recognized:



2016 Recertification: Jack Dunaway, Don Hellstern, Jean Kastanek, and Kathleen Mack



250 hours – Linda Almes



500 hours – Lynn Wisakowsky

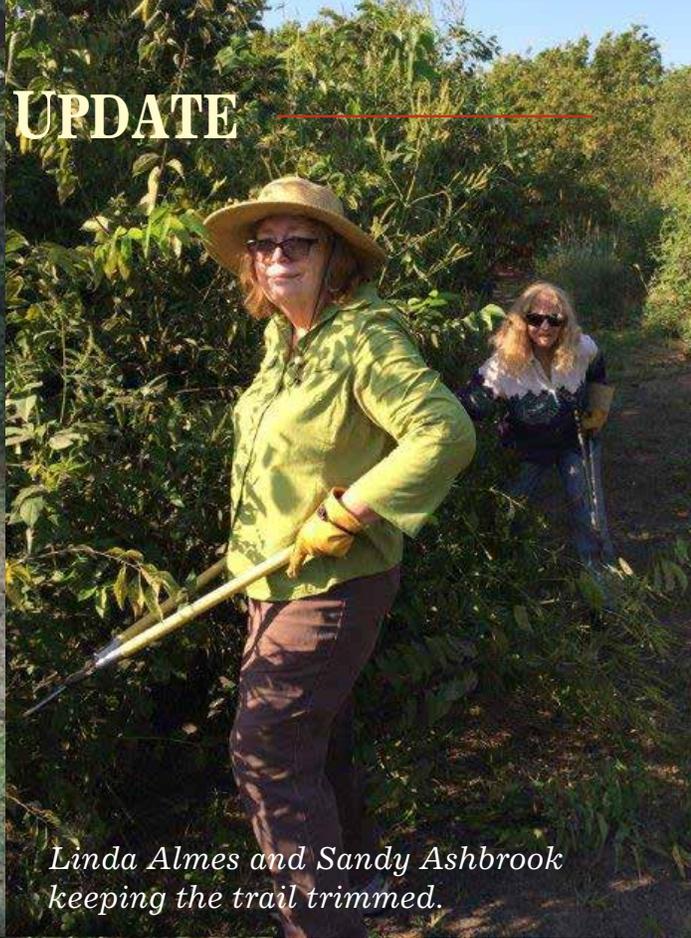
2016 Recertification: Cathey Collins and Lynn Wisakowsky



KACHINA PRAIRIE UPDATE



Jim Patak, Joan Mahony, and Michele Ostendorf touching up the signage.



Linda Almes and Sandy Ashbrook keeping the trail trimmed.



Honey Bees: Keystone Pollinator, Invasive Species, or Domesticated Livestock?



By Rebecca Schumacher

Well, how about holding THREE opposing ideas at the same time? Welcome to the wonderful, complex, mysterious, and fascinating paradox that is the honey bee!

Up until about a decade ago in the minds of most people, bees equaled honey, even though the primary agricultural value of commercial honey bees lies in

their ability to “power pollinate.” Honey bees are

pollinating machines in the same way that cats are rodent-catching machines. Humans, being observant innovators, have capitalized on these innate abilities in both cases. The European honey bee, *Apis mellifera*, is native to only two regions on earth, Europe and Africa, yet it has become the dominant pollinator species worldwide as a result of domestication by man. (Notice how all three of those ideas fit neatly together!)

The truth is that for decades honey has simply been a byproduct of commercial beekeeping; the real money is in providing pollination services to agricultural growers of primarily almonds, which account for nearly half of the pollination industry. According to a 2014 report by the United States Department of Agriculture on the U.S. Pollination-Services Market (Jennifer Bond, Kristy Plattner, Kevin Hunt), the gross revenue from pollination services in 2012 was over \$655 million! Other crops that rely on commercial pollination services include sunflowers, canola, grapes, and apples.

“The test of a first rate intelligence is the ability to hold two opposed ideas in the mind at the same time, and still retain the ability to function.” ~ F. Scott Fitzgerald

While the European honey bee has gotten a bad rap for being an invasive species, they are actually the preferred pollinator for cultivated crops because of this ability to POWER POLLINATE. For centuries, *Apis mellifera* has been selectively bred for docility, allowing ease of handling. Agricultural use of bees requires that hives be moved long distances as often as every three weeks during the growing season, and often across the

country to overwinter in the warmer south. Transporting hives,

however, doesn’t happen without cost. Hives are closed, strapped down on flatbed trucks and moved to a new location at night, not only exposing susceptible bees to new diseases and parasites, but also possibly bringing diseased bee colonies into previously uninfected areas. Yet the European honey bee continues to play an integral role in the cultivation of approximately 100 crops in the United States – crops that represent almost one-third of our nation’s diet.

Bees used for commercial pollination are livestock and managed as a commodity. Critical, yes. Domesticated, yes. Introduced, feral and able to outcompete native species, yes. However they are a key pollinator on which many important food crops depend.



BEE-FORE BEEKEEPING

12 things to bee-ware of



Story and photos by Rebecca Schumacher.

Hobby Beekeeping – or managing bees with the primary goal of producing honey – can be a wonderful hobby that not only gives the beekeeper a lot of satisfaction but has the happy byproduct of increased garden pollination as well. As a keeper, opening my hives and being surrounded by thousands of bees is always a surreal experience; if those bees are calm, the experience can be transcendent. On the other hand, if they are not, it can be hair-raising! Harvesting is sticky, rewarding work redolent of the intoxicating fragrance of fresh honey.

But beekeeping is not for the faint of heart.

Hobbyists and those new to beekeeping are often unprepared, having little knowledge of bees, the management of colonies, and their diseases. If you're considering hobby beekeeping, here are 12 things you should know.



1) Beekeeping is an expensive hobby. (Your first hive will cost about \$1,000; additional hives cost about \$150 + bees, and you

should have no fewer than 2 hives.)

2) Beekeeping is backbreaking. (A full 10 frame box can weigh 100 lbs.)

3) Beekeeping is HOT work. (The best time to work your hive is on hot sunny summer days ... in full bee suit ... and no, bee suits don't come with air conditioning!) (See fact #2.)

4) Beekeeping is painful. (Yes, you WILL be stung, multiple times.)

5) Beekeeping can be disappointing. (You will lose about 20% of even well-managed hives each year.) (See fact #1.)

6) Beekeeping is an expensive hobby. (Good honey extractor equipment starts at \$800.) (See facts #1 and #5.)

7) Beekeeping is time consuming. (Hives need to be checked every few weeks to prevent swarming and starvation.) (See facts #2, #3, and #4)

8) Did I mention that beekeeping is an expensive

hobby? (Membership in a local beekeeping group is pretty much mandatory.) (See fact #1, #6 & #10)

9) Bees need lots of flowers! (Each hive requires the equivalent of one acre of blooming plants each month year round!) (See facts #5, & #7,)

10) Keeping fewer than 100 hives is a HOBBY. (You will never make a profit selling honey. (See facts #1 through #9)

11) Beekeeping is not for everyone. (Neighbors, for instance!) (See fact #4 and #9)

12) If you've made it this far through the list and are prepared for all this, then I invite you to re-read my first paragraph. Beekeeping is an experience like no other. If you want to learn more, Trinity Valley Bee Keeping Association and Texas Honeybee Guild both meet monthly and are great sources of information and support for the "Bee-ginner" and "Bee curious".



Ready...Set...Count!

By Anne Marie Gross

Are you ready for a new season of Project FeederWatch? This winter-long citizen science project starts November 12th and ends April 7, 2017. This annual survey promoted by the Cornell Lab of



House Finch, © Maria Corcaca/Project FeederWatch

Ornithology is designed to collect data on the count and types of birds that visit feeders across the United States and Canada. The 2016 FeederWatch season marks their 30th year of collecting data submitted by more than 20,000 volunteers.

The project began in 1976 as the Ontario Bird Feeder Survey, sponsored initially by the Long Point Bird Observatory (renamed Bird Studies Canada). It didn't take long for researchers to realize that expanding their seasonal study into the United States would allow them to more accurately monitor movement of bird populations. They quickly found a willing partner with the Cornell Lab of Ornithology, and the first season of Project FeederWatch was launched in 1987. The program now includes participation in all Canadian provinces and every state except Hawaii.

Data collected by FeederWatchers helps scientists understand long-term

trends in bird distribution and abundance of more than 100 species of birds.

Researchers rely on this data to watch for any downward trends in population, analyze changes in winter ranges of feeder birds, evaluate the effect of weather and other environmental factors, and monitor spread of diseases among feeder birds.

Project FeederWatch also provides volunteers of all ages and experience levels with the benefit of improving knowledge of bird species, increasing interest and participation in protecting bird species, and of course, the satisfaction and enjoyment of being part of our feathered friends' world.



Downy Woodpecker, © Errol Taskin/Project FeederWatch

But by feeding wild birds, are we disrupting their natural habits? No, at least not according to the sources I checked, including Audubon, the Cornell Lab of Ornithology, and volunteers in the Master Birder Program. Wild birds are not dependent on feeders, and there is also no evidence that bird feeders affect migration. There is some reason to be concerned about the spread of disease among birds visiting feeders, however responsible FeederWatchers can do their part by keeping their feeders and water vessels clean (see Checklist). *Continued next page*

Dark-eyed Junco, © Bob Vuxinic/Project FeederWatch



Count continued

I want to encourage members to participate in this fun project, especially if you are new to birdwatching. As a new Master Naturalist trainee last year, I was hesitant to participate because I wasn't confident in

my bird identification skills beyond the common cardinal, blue jay, titmouse, and chickadee. Fellow chapter member Sharon Lane gave me excellent advice: the best way to build my knowledge of birds was through a program like Project

FeederWatch or Christmas Bird Count.

She was so right! Having to report my findings on the Project FeederWatch website every week was the accountability I needed. By sitting and watching my feeder area for two days each week forced me to sharpen my observation skills, read more about what I was observing (both on the website and from my field guides), and provide me with the repetition I needed to commit these birds to memory.

Project FeederWatch Checklist

Whether you're a novice or more experienced birdwatcher, here's a checklist to help you get ready for Project FeederWatch!

- 1.** Go to feederwatch.org to register as a volunteer. There is a small fee to participate, and you'll receive an instructional kit in the mail.
- 2.** Mark your calendar with the start date of November 12, 2016 and the end date of April 7, 2017. Choose 2 consecutive days each week you plan to complete your Project FeederWatch tally.
- 3.** Choose a location in your yard to place your feeders where there is a height variety of shrubs and trees that can provide protective perch for birds in between their dashes to the feeder.
- 4.** One feeder is a good start, but you'll increase your bird count (and your enjoyment) by having several

types, each filled with different seeds. Audubon cautions against using mixed bird seed; most of it is filler that birds will pick through, and during rainy weather that filler just "becomes a sludgy mixture that can make birds sick."

- 5.** Place your feeders more than 30 feet away from windows.
- 6.** Be sure to add water sources to your feeder area, either a bird bath or pan set on the ground.
- 7.** Keep feeders and birdbaths clean, scrubbing them well at least 3 times a year with a solution of 1 part non-chlorinated bleach to 9 parts water.
- 8.** Familiarize yourself with signs of House Finch Eye Disease (<http://feederwatch.org/learn/house-finch-eye-disease/>) and watch your feathered visitors carefully. If you find diseased finches visiting your feeders, Project FeederWatch recommends that you scrub your feeders, and let them dry thoroughly before re-hanging.
- 9.** Spend time reading the information on the Project FeederWatch website to make sure you understand how the count process works. The website has clear instructions, plus it's full of useful information and resources about birds.
- 10.** Have a good field guide handy to help you with identification. Binoculars are not essential, but they are immensely helpful in learning differences between species.

Don't worry about making a mistake. Once you report your weekly tally online, you can always go back and make corrections as needed. Have fun!



The Intentional Time Traveler

By Charlie Grindstaff



I have been doing a lot of time traveling lately with some very interesting people. Every fourth Saturday I volunteer at the Botanical Research Institute of Texas (BRIT) in Fort Worth.

As I am transcribing the information from the labels on plant vouchers for their project to digitize all Texas plants in their collection, I can't help but imagine that I am right there with the collector. I must admit I have a few favorites that I really enjoy spending time with.

Eula Whitehouse, botanist, artist, and Texas wildflower specialist from Cleburne, traveled extensively across Texas and the world collecting plants specimens. Her book, *Texas Flowers in Natural Colors*, is a particularly charming collection of some 200

pencil and brush watercolor drawings that I am very pleased to own. I time traveled with her to Hardin County on May 10, 1950, while she collected *Calopogon tuberosus* (grasspink). That specimen was No. 23242 for her. Each plant voucher is consecutively numbered as it is collected, so that gives you an idea of her dedication. Some collections at BRIT have only a few specimens, yet others, like the collection of Dr. Robert Kral, contain over 67,288 specimens!

Another favorite of mine to time travel with is V.L. Cory, who was a range botanist of the Texas Agricultural Experiment Station. In 1937 he and H. B. Parks compiled the first Catalogue of the Flora of Texas, and he was instrumental in the work to get Big Thicket in southeast Texas declared a National

preserve. I time traveled with him on my birthday in 1952 in Tarrant County where he collected *Packera plattensis* (prairie ragwort). This was No. 59252. I am sure we discussed the devastating flooding of the Missouri River in Iowa and being glad we weren't in Lubbock where the low temperature overnight was 37°F.

C. L. and Amelia A. Lundell are also fun time traveling companions. Between them, they discovered and identified more than 2,000 plants, many of them Texas natives. He discovered the Maya city of Calakmul, which had been hidden in the jungle for 1000

years. She was a botanical artist from Ft. Worth. *Abronia ameliae* (Amelia's sand verbena or Heart's delight) is named after her.

I time traveled with them to an area below Bachman Dam in Dallas County in June of 1937 where they collected *Silphium speciosum* (wholeleaf rosinweed). No. 7088 for them. Her handwritten labels are very pretty

Wholeleaf rosinweed,
Silphium speciosum



Grasspink,
Calopogon tuberosus



continued

Time, continued

My time travels have taken me all over the state of Texas, to counties I had never heard of before, with collectors I have never heard of and a few we all have heard of:

Ferdinand Lindheimer, Julien Reverchon, Lloyd H. Shinnars, William F. Mahler (of *Flora of North Central Texas* fame), Jeff Quayle (Texas Master Naturalist) and Geyata Ajilvsgi (*Wildflowers of Texas*).

Then there are really interesting collectors like Delzie Demaree, who didn't own a car and traveled by bus. He would spot an interesting plant in a field and have the driver stop so that he could



Prairie ragwort, *Packera plattensis*

collect, then he would hail the next bus to travel on until something new caught his eye. I haven't time traveled with him too much ... I am too afraid of being stranded out in someone's field in 1963 and not being able to get back to 2016.



Amelia's sand verbena, *Abronia ameliae*

Sweat bee on Partridge pea © Jim West



A HOME FOR SCREECH OWLS

By Nancy Quin

Now is the time for all the faithful in winged friends to build and establish nesting boxes. I want to encourage you by sharing my experience with a pair of endearing Screech Owls over the last two years.

Early on in my owl adventures, I acquired an excellent book written by Baylor University professor Frederick R. Gehlbach, *The Eastern Screech Owl: Life History, Ecology, and Behavior in the Suburbs and Countryside*.

Gehlbach chronicled years of backyard (actually, multiple yards as he enlisted friends around Waco) behavior of the Eastern Screech Owl. The book was filled with his observations, facts and wonderful photos. It was one of these facts that caught my eye. Owl chicks have an improved chance of survival and reaching maturity if provided with backyard nesting boxes. I believe this explains why they go looking – and in my case knocking – for a home to be built.

One April morning, a pair of Eastern Screech Owls appeared and began to swoop down near me as I walked in the yard. I went inside for coffee, only to find them perched on my window sill nearest my kitchen chair. This is what I call going to extreme lengths to get my attention. I imagined they were saying, “Hey, a storm is coming and we have no shelter; plus we are scouting a nesting box and would be grateful if we had a box in YOUR yard!” I am sure the new visitors to my yard also recognized me as the lady who talks to her dogs, therefore I must commune with all creatures, right? How right they were!

That was in April 2015, and by July I had convinced a boy scout to help me construct an official screech owl nesting box following specific plans found on the internet. It was set in my tree in August, and by February 2 of this year, the couple had returned! Yes, many nights I sat in my chair, watching and listening as they made their three common calls, swooping down to tell me, “hey, thanks!” I did not climb a

ladder to count, but I could tell there were enough chicks to discourage dad from sleeping indoors during the day, though security patrol might have been his true motive.

Well, they stayed for four months – long enough to improve those chicks chance of survival. My heart was heavy to see them leave, but I am hopeful they will return year after year. I can assure you the pleasure was clearly mine. This is a simple way for those of us who care about our winged friends to encourage their breeding success, and for your trouble, their number one food favorite might be a mouse or nice fat cockroach. How can this not be a win-win?



One of the pair sitting outside my front window.



A day in the life of a fencepost

By Jim West



American Bumble Bee



Eastern Tiger Swallowtail



Ceraunus Blue



Pipevine Swallowtail



Cloudless Sulphur



T-post



Dusky Blue Hairstreak



Delaware Skipper



NATURAL

Notes

Copperhead

By Katie Christman

Too often I hear the phrase, “The only good snake, is a dead snake,” especially when it comes to venomous snakes. Now there isn’t enough space in this article to dissect the specifics of that phrase, where it comes from, and what we can do about it. However one of the



biggest things I stress when learning about snakes is knowing the venomous from the non-venomous that can be found where you live. This can be a daunting task when you open a field guide and are overwhelmed with over 50

different species of snakes! If you learn to identify the few common venomous snakes that occur in our area, that will go a long ways towards easing any fears.

In the Dallas-Fort Worth area venomous snakes fall into 4 groups: copperheads (2 species), cottonmouths (1 species), rattlesnakes (2-4 species), and coral snakes (1 species). One of the most common misidentified snakes that I am questioned about is the broad-banded copperhead (*Agkistrodon contortix laticinctus*), often mistaken for the Texas rat snake (*Pantherophis obsoleta lindheimeri*) because the rat snake appears to have bands of coloration similar to the copperhead. However, once you learn to recognize the differences, you will have no trouble telling the two apart.

Unlike the Texas rat snake which can have more mottled, variable coloring and grow to 6 feet, copperheads usually reach only about 2 - 2-1/2 feet and have more distinct bands of color. Adult copperheads have wide, alternating bands of dark red and tan on its body, often with a greenish or pale-pink caudal tip (more visible in juveniles). Younger specimens have more light clay coloration, and the tip of their tail is green/yellow. Fun fact ... juvenile copperheads use the tip of their tail – which can resemble a caterpillar or other insect – to lure their prey within striking distance! This behavior is called “caudal luring.”

This species most often prefers wooded habitats



with a source of water and debris cover. This ambush predator typically feeds on rodents, lizards, birds and cicadas. Rather secretive and active when cooler temperatures are reached at night, copperheads do their best to avoid humans as well as other predators. By comparison, rat snakes are seen anywhere mice are found, and they can climb trees and structures. So if you see a snake hanging from your shed, you can be sure it’s not a copperhead.

PROFILE:

Common Names: *Broad-banded Copperhead*

Species: *Agkistrodon contortix laticinctus*

Order: *Squamata*

Family: *Viperidae* (Note: This family of venomous pit vipers includes 11 species in Texas, and more than 200 species worldwide.)

Key Identification Characteristics:

- Thick body
- 2- 2-1/2 feet in length
- Distinct, wide bands of deep brown-red and tan
- Greenish or pale-pink tip of tail (brighter in juveniles, more faded in adults)
- Elliptical pupils (similar to a cat)
- Camouflages well among leaves
- Does not climb



MEMBER SPOTLIGHT:

Don and Cathy Mitchell

By Anne Marie Gross

AMG: Tell us a little bit more about your life outside of Texas Master Naturalist. How long have you been married? How many children/grandchildren you have?

Cathy: Don and I met on a blind date 48 years ago and married two years later in 1970. We have two great sons, Vernon and Walter, two wonderful daughters-in-law, Sara and Amanda, and three precious grandchildren, Brynlee (10), Brooklyn (5) and Elijah Ray “Eli” (1). We are very fortunate that they live real close to us and we get to see them a lot. It’s so rewarding to see what great parents they have become!



AMG: How did you become interested in Texas Master Naturalist? What projects do you enjoy the most?

Cathy: I became interested in the program because of Don. I came to the meetings and worked on projects for two years before I finally said, “Okay, I can do this!” My favorite projects are the ones where you show the boys and girls about nature and how important everything is.

Don was interested because he loves the outdoors and working with his hands. He loves to build the

Bluebird houses that he and some of the other volunteers have made in the last two years. I helped last year and really enjoyed doing it. I found out I could drill with the best of them! Don and I agree that the most rewarding thing about being a Master Naturalist volunteer is helping others and also helping nature.

AMG: What other activities do you enjoy when you’re not busy with chapter programs?

Cathy: Don really likes to work on old cars, rebuilding and keeping them running. He also makes toys for the grandkids. I enjoy gardening, reading, quilting, and being with my grandkids, watching them grow up tooooooo fast!

AMG: What are some of your favorite natural places in Texas?

Cathy: We enjoy going to the hill country and enjoying the beautiful scenery there. When we were younger (a lot younger), we liked to go camping, but no I like air-conditioning and comfortable beds too much to camp! Mostly we enjoy the birds and insects around our own house. Don goes to his shop and watches the rabbits, lizards, birds, and the horses behind his shop playing with each other.

AMG: Do you have any advice for the new Master Naturalist volunteers joining our chapter?

Cathy: Pick projects that you enjoy – there are lots of them to try! There are so many wonderful people in our chapter, and we have (and still do) enjoy getting to know them better each time we work on projects with them.



Fall Color/Jim West

PLANT FAMILY STUDY GROUP



Chris Cook used smooth sumac leaves and berries to create a natural dye, using two different mordants.



Chapter members had fun observing water bead up on the superhydrophobic surface of a water lotus leaf, referred to as 'the lotus effect.'

The Plant Family Study Group tasted the citrus-like spice from smooth sumac berries.

All photos by Anne Marie Gross

Chris Cook recently led the Plant Family Study Group in a fun exploration of the Anacardiaceae and Nelumbonaceae families.



West Nile Virus: A Deadly Disease Affecting Birds and Humans

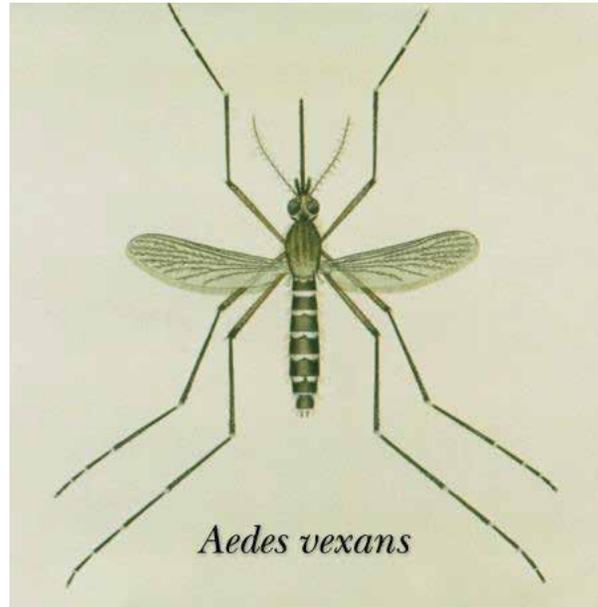
By George Lawton

A nightly occurrence in many major metropolitan areas is the spraying of mosquitoes carrying the West Nile Virus. The virus in healthy individuals is of little concern, generally causing mild sore throat/headache or mild flu-like symptoms.

However in individuals who are immunocompromised – the elderly, those undergoing chemo/radiation therapy, anyone having surgery, steroid injections, those with any underlying health problem such as diabetes, high blood pressure, kidney/liver problems, COPD – the West Nile Virus can be very serious or even life threatening.

There are many theories on how the virus got to the United States. Some theories are based on the belief that mosquitos with the virus were accidental passengers from cargo ships or commercial airlines. Other theories place blame on infected humans or exotic birds entering the United States from other countries. Yet another claims the virus is the result of the accidental release of a biological weapon from a government bioweapons lab located near Long Island, NY.

Tracking the outbreak of the West Nile virus reads much like the plot of a blockbuster movie. In the summer of 1999 in the area of Queens, NY, a number of birds were found dead in the streets and in parks. The Bronx Zoo also reported birds that had died in their cages. Soon several county, city, and state agencies – and eventually the Center for Disease Control – were investigating the many deaths of birds. No known causative agent could be identified. By mid-August, an elderly patient with headache,



confusion, and muscle weakness was admitted to a local hospital, and by the end of August, seven patients had been admitted with

similar symptoms, with one of the earlier patients dying. Meanwhile, over 400 birds had died. By the end of September, it was determined that the cause of the disease was the West Nile virus, transmitted by a bite from the Culex pipiens mosquito, active at night, and the Aedes vexans mosquito, which is active during the day.

The Center for Disease Control reports that since 1999, nearly 44,000 people from all 48 continental states have reported symptoms of the West Nile virus, including 2,000 deaths which are attributed to the disease. Clinically the infection has an asymptomatic incubation period of 2-14 days followed by mild symptoms, or none at all in 80% of infected people. The other 20% have severe headaches, backaches, muscle pain, fever, and fatigue. Of those infected, 50% have permanent disabilities.

Clearly the debilitating and even deadly effects of the West Nile Virus have commanded our attention for

the last fifteen years, but not so attention-grabbing is the effect of the virus on wild bird populations. The large-scale decline of the North American bird population correlates directly with the emergence of West Nile virus in the United States. Using 26 years of breeding bird survey data from the National Zoological Park, researchers have seen a 45 % drop in the crow population. Likewise, there have been declines in American Robin, House Wren, Eastern Bluebird, Chickadee, and Blue Jay populations. Birds with moderate or intermediate susceptibility to the virus include the Common Grackle, Northern Cardinal, and Song Sparrow. Where the mosquito-bird/mosquito-human cycle exists in cities and suburbs there is a direct correlation between mosquito and the disease. It moves with infected migratory birds as well as being seen in resident birds. It has been isolated in over 300 species of birds. Migratory bird routes can then spread the virus throughout North America, Mexico, Central and South America and the Caribbean.

West Nile virus an important disease for both humans and birds. For more information about West Nile virus, visit www.cdc.gov/westnile.

Photos courtesy of the CDC



MASTER NATURALIST PROGRAM MISSION: 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.

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The mission of this newsletter is to inform, educate and entertain Texas Master Naturalists and their circle of friends.



Monday – October 24, 2016

THE ORIGINS OF MODERN ASTRONOMY

Location: First United Methodist Church

**505 W. Marvin Ave., Waxahachie, TX
Family Life Center - Gathering Room**

Indian Trail Chapter, Texas Master Naturalist

- **6:00 PM - Business Meeting**
- **7:00 PM - Program by Don Hellstern – Geologist, Geophysicist, Professor of Geosciences and Master Naturalist**

Don Hellstern, a certified Master Naturalist in Texas and Alaska, is a professional geologist and retired college dean and professor of geosciences. He worked as an exploration geophysicist for British Petroleum and later entered academia. He has taught geology, earth science, environmental geology, meteorology, climate studies, and oceanography at the college level for over twenty years.

With an undergraduate geology degree from the University of Hawaii and a geophysics master's degree from the University of Houston, Don's span of studies ranges from volcanoes in Hawaii to researching submarine deposits in the Gulf of Mexico, as well as the field of stable isotope geochemistry involving the hydrologic cycle. He has lectured on topics ranging from Astronomy to Zoology and has spent ten summer seasons guiding back-country adventures in Alaska and Canada.

Don Hellstern will present a program on the Origins of Modern Astronomy.

Indian Trail Chapter is part of the statewide Texas Master Naturalist Volunteer Program of the Texas Parks & Wildlife Department and the Texas A&M AgriLife Extension Service.

The Mission ...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.

This program is part of a series of "no cost" "open to the public" Master Naturalist programs offered the fourth Monday (generally) of each month, 7:00 – 8:00 p.m. Please bring a friend! For more information, please call the Texas A&M AgriLife Extension at 972-825-5175 or email: information@itmnc.com