



# Gideon Lincecum Chapter Texas Master Naturalist™ *NEWS*



## *December 2015 Newsletter*

### *From the President:*

Even with all the rain the Texas Master Naturalist 16<sup>th</sup> Annual Meeting was a huge success. From the accommodations, the class materials, topics and food, everything was organized and timed beautifully. There were over 400 attendees, 9 of them were from our Chapter. I would like to thank everyone who attended, Ron and MaryAnn Peach, Allen and Karen Ginnard, Dave Redden, Carol Paulson, Donna Mueller and Karen Woods. It was a pleasure spending time with you. I highly recommend attending at least one Annual Meeting, it's worth it.

While there our Chapter was recognized for having its 10<sup>th</sup> Anniversary, and several members were given service pins on stage, myself and Donna Mueller for 250 hours and Carol Paulson for 500 hours.

Some interesting facts about our Texas Master Naturalist Program's accomplishments state wide; as of the end of Dec 2014, there are 44 recognized chapters and trained 9,676 volunteers. Program volunteers have impacted or conducted projects on areas of land that involve roughly 12,450 new acres in 2014 and 218,750 acres of habitat to date. Members developed and/or maintained 80.5 new miles of trail in 2014 and to date we've impacted more than 1,946 miles of interpretive trail.

A big thank you to the members that donated items for the silent auction, it was the largest silent auction they have had. I came home with wonderful items. My prize item was this heavy rock that had been etched into an owl. It took a luggage dolly to move it but, it looks fantastic on my porch.



It's time to elect new officers. Each position requires a two year obligation. The positions open for 2016 are President, Vice President and Secretary. There was one nomination at the Christmas Party for Vice President upon discussing the person that made the nomination recalled it. The Board remains the same in 2016 as it is in 2015.

The Chapter's Christmas Party was on 5 Dec 2015 at VP Karen Wood's home again this year. Meat and wine was provided by the Chapter and the side dishes were provided by the members. It was a beautiful evening in a beautiful setting. I cannot thank Karen and Glen Woods enough for opening their home to us again this year.

We have picked up two new BIG projects for 2016, the Brenham Butterfly Garden at the old High School (Carol Paulson and Dave Redden are leads), and another long term garden project at Washington on the Brazos (Karen and Allen Ginnard leads). Shine up your shovels, axes, and garden tools we will need many worker bees.

The chapter had a great year we have been involved in so many things. I want to thank each and every one of you for making this chapter a success. I love that I can send a short fused request for assistance and you always answer. It is appreciated. Have a wonderful holiday season, I hope to see out in nature.

**Cindy Hobbs**

### *Feeding the Birds*

Contributed by Cindy Rodibaugh

Attwater Prairie-Chicken NWF has been actively involved in developing a recovery plan that outlines various tasks to help save the prairie chickens from extinction. One aspect of that plan that I was privileged to be a part of this past September was the management of birds in captive breeding pens and reintroduction efforts.

Chicks are hatched at captive breeding programs, such as the Houston Zoo, and once the chicks become capable of independent survival they leave the breeding facility for release sites on the refuge and elsewhere. For the next two weeks the birds live in acclimation pens on the site where they adjust to the prairie their ancestors knew intimately.

After the initial two weeks in the pens, protected from large predators, the birds are allowed to venture out from the pens onto the prairie. The biologists at Attwater have concocted a feed as a supplement for the birds that I helped place around the outside of the pens to supplement their diet of insects, leaves, flowers, and seeds of prairie plants they would be foraging for on the prairie.



They are difficult to see in the grass, but look closely.

*This bird was ready to eat!*

Many birds came to investigate our activity but they didn't get too close and wouldn't stay for long!



One morning as we headed out to the pens, there were some clouds on the horizon far away to the south. "Not to worry," we told each other. "We'll be finished by the time they get close." We were soon surrounded by clouds that had become very dark and unfriendly looking.

It was awesome to be so close to them.

There are so many things to learn from on the prairie and I look forward to my next visit.



## [Washington-on-the-Brazos](#)

Contributed by Karen and Allen Ginnard

The Washington on the Brazos TMN project is gearing up for a busy 2016! Continuing the excellent work accomplished so far by Bill and Judy Deaton and a core of GLC TMN volunteers, Allen and Karen Ginnard have agreed to take over coordination of the site project at Judy's request. We have plans to continue to remove invasive plant species, plant a monarch waystation / butterfly garden, research the possibility of creating a bird observation structure, increase the nesting habitat for native and/or migratory ducks, and hold informational and field walk sessions for native flowers, birds, butterflies, snakes (or other topics of interest).

We are very fortunate to find that a water primrose in the Washington on the Brazos pond, which was originally thought to be an invasive species, is not. Catherine Nolte, Park Superintendent and GLC Texas Master Naturalist, had an expert check the pond and they determined that the water primrose is a native, and not the invasive type. This was excellent news for all concerned!

The project plans have been issued in draft for the butterfly garden project, and are awaiting approval by Catherine Nolte. Once approved, there will be many opportunities for volunteers here, mainly in the areas of working the flower beds to prepare for fall and spring planting, propagating native Texas seeds that we are planning to use in both this butterfly garden and the one planned for the old Brenham High School, plot design utilizing the native plant species selected, harvesting of milkweed native to this area, to name a few.

An updated project plan has been prepared, and as of November 30<sup>th</sup> is being reviewed by Catherine Nolte for approval. Upon approval by Catherine and the GLC TMN Board, volunteer opportunities will be posted on the GLC TMN website.

## [Observing Sandhill Cranes in Socorro, New Mexico](#)

Contributed by Bette and Jerry Gips

Everyone living in our chapter's five county area has had the opportunity to hear sandhill cranes (*Grus canadensis*) flying over their house. Their sound is a "chortle" or loud, rolling, trumpeting call with a rolled "r" said to be the only bird call a human cannot duplicate. The call originates along the crane's long windpipe and can be heard at great distance. As they fly over, sometime two miles high, the birds are on their way south to the coastal plains along the Texas Gulf Coast where they will spend the winter. However, quite a few of the 600,000+ cranes that migrate south every year stop north of the Texas state line.



One overwintering area with a large concentration of sandhills is along the Rio Grande River near Socorro, New Mexico. Up to 10,000 birds will spend the winter in the wetlands bordering the river. One special place is Bosque del Apache National Wildlife Refuge, 13,000 acres of managed wetlands and irrigated farmlands along the Rio Grande River, bordered by an additional protected 44,000 acres of upland grasslands and mountain foothills. Jerry and I recently attended the "Festival of the Cranes", an annual celebration of these birds held the third week in November, put on by the volunteer group, "[Friends for Bosque del Apache Refuge](#)". There are over 160 workshops and seminars on various aspects of the cranes,

other birds, the refuge and wildlife photography during the week-long festival

The special, and maybe unique, aspect of this area for birders is the overall apparent obliviousness of the cranes to visitors. Tens of birders and photographers can stand completely out in the open and the cranes will fly in and over within twenty or thirty yards. This is different from other crane viewing areas and makes for fabulous opportunities for observing the cranes.

There are two subspecies of cranes that make the migration together in this flyway. The “lesser” sandhill crane travels to the Gulf Coast from their breeding grounds on the north slope of Alaska, a distance of over 3,500 miles and the “greater” sandhill cranes fly from their breeding grounds in northern Canada. The two subspecies can interbreed but because they breed in different geographic areas there is not great opportunity for the two subspecies to do so.

In our Sandhill Crane Behavior workshop, we learned that sandhill cranes mate for life and may raise two young each year. The family migrates together – a family of four, two adults and two juveniles or a family of three, two adults and one juvenile. The family will roost overnight with other families in groups that number several hundred individuals. The birds roost in water several inches deep so that they can hear predators approaching through the shallow water. Each family will leave and return to the roost as a family unit.

The birds are large. Adults may stand up to four feet tall with a wingspan of up to four feet. The adults have red foreheads and white cheeks; the dark bill is long and pointed. The body is an overall gray color. The wings are gray with black tips. Juveniles are brownish on their backs. The preening of feathers discolors the feathers of the adults and gives the birds a brownish tinge, so discerning juveniles by color alone is not straightforward.

The Bosque del Apache National Wildlife Refuge provides winter sustenance for thousands of cranes and thousands of geese, ducks, coots and other migrating waterfowl. There is always something unusual to see. This November there was a report of a leucistic (a condition in which there is partial loss of pigmentation in the bird resulting in white, pale, or patchy coloration of the feathers).



The sandhills begin their return to their breeding grounds in in March. The Spring migration is noted for the large numbers of cranes, 600,000+, that stop along the Platte River in Nebraska. It is quite a sight. To view the cranes along the Platte, one must be in a blind or the birds will flush upon approach. The blinds are owned by individuals or organizations such as The Audubon Society. The sight and sound of thousands of these birds is very popular and reservations for these blinds must be made in January. This makes Bosque del Apache refuge even more appealing for the ease of visiting and viewing the sandhill cranes.

## *Native American Seed - History of the Prairie*

From an Article in <http://www.seedsource.com/medicine/history.asp>

Contributed by Cindy Hobbs

### **Part 1: The Pre-Settlement Prairie An "Ocean of Grass"**

When the first European explorers crossed the middle of the North American continent they were met with an awesome expanse of grassland. They didn't even have a word for it - the French, in a characteristically dismissive vein, described it as a meadow. The English were apparently more awed; they adopted the romance of the French language, if not its literal meaning, and called it a "prairie." Later, one of the early settlers wrote, in 1841, that "for miles the prairie gently sloped, hardly presenting a bush to relieve the eye. In the distance, the green skirting of woods, which fringed either border of a large stream, softened down the view. Occasionally a deer would jump suddenly from his noonday rest, and scamper off..."

Before the arrival of the Europeans, this sea of grass is estimated to have contained approximately one person per 5000 acres. The native peoples lived off the land, as hunters of vast herds of bison and the pronghorn antelope, deer and elk that roamed the prairies. They used hides for their clothing and shelter, and supplemented their diets with native plants; some built homes using the abundant prairie grasses.

Their relationship to the land was a spiritual one; they said that the trees spoke to them, and that the animals were their brothers and sisters. The sky was their father, and the earth was their mother. It was a relationship that lasted perhaps 10,000 years before the white man came.

Before 1850, the great mid-continental grasslands stretched from southern Wisconsin to western Montana, from central Texas to Canada. In wet periods the tall grasses of the eastern edge of the prairie might advance deeper into the midgrass territory. In years of drought the hardier short grasses, which extended all the way to the foot of the Rocky Mountains, might expand their range to the east.

These grasslands had existed, in one form or another, for millions of years, as a result of the innumerable interactions of sea and wind and earth which formed the world as we know it today. Fossil evidence indicates that most plants of the modern prairie were present during the Pleistocene time, about a million years ago. At the time the United States was being settled, however, few of the settlers had any botanical training, and most descriptions from journals of the time are written by people who described the grasses in layman's language. Those who did know plants were not very much better off - these New World species were for the most part unfamiliar to them. Whatever we know today about the composition of these prairies must be inferred from the few relicts which have survived the grazing, agricultural and urban uses of the past hundred and fifty years.



Because of the geographic position of Texas, and its complex biotic history, it contains a great diversity of both plant and animal species. The state is located at the crossroads of the eastern deciduous forest, the coastal plain, the grasslands, and the Sonoran desert and Tamaulipan biogeographic provinces. Over 5000 vascular plant species occur within Texas, and over 500 species of grasses. More species of animals occur in Texas than any other of the continental states.

The natural landscape of Texas is, in fact, rarely the unbroken stretch of grassland which characterized much of the native tallgrass prairies to the north. Because of the heterogeneity of soil and climate conditions and the presence of many river systems, the Texas grasslands, except some portions of the High Plains, have always been part of a mosaic which includes riparian areas, bottomland woods, and intermittent streams, making them unique in all the prairie regions of the country.

**Part 2: The 1800s**  
**The Rise of "King Cotton"**  
**The End of the Red Man's Civilization**

The European settlement of the prairie marked the end of the civilization that had sustained it and been sustained by it for thousands of years. The settlers were pioneers in the truest sense - with a determination to survive and thrive under the harshest of conditions, and to use the bounty of the earth to enrich not only their own lives but the lives of others on this continent and around the world. But the end of the red man's civilization was a violent and bloody one. During the process the land also changed dramatically, and in an incredibly short time.

Before the Civil War, between twenty and sixty million bison roamed the North American plains. By 1900, less than a thousand were still alive. As Black Elk, the famous Sioux Indian chief recalled, "I can remember when the bison were so many that they could not be counted, but more and more Wasichus (white men) came to kill them until there were only heaps of bones scattered where they used to be. The Wasichus did not kill them to eat; they killed them for the metal that makes them crazy, and they took only the hides to sell. Sometimes they did not even take the hides, only the tongues; and I have heard that fire-boats came down the Missouri River loaded with dried bison tongues. You can see that the men who did this were crazy..." The activity of the white man in slaughtering the buffalo was as incomprehensible to the natives of the plains as was their own "primitive" lifestyle and nomadic behavior to the European settlers.

An old holy woman of the Wintu tribe, reflecting on the strange ways of the settlers, said, "The white people never cared for land or deer or bear. When we Indians kill meat, we eat it all up. When we dig roots we make little holes. When we build houses, we make little holes. When we burn grass for grasshoppers, we don't ruin things. We shake down acorns and pinenuts, we don't chop down the trees. But the white people plow up the ground, pull down trees, kill everything... How can the spirit of the earth like the white man? Everywhere the white man has touched it, it is sore."



It was only a matter of a few years before the European settlers, with their belief in man's "dominion over the earth," and their ingenuity in finding ways to conquer and exploit nature and its resources, had fundamentally changed the character of man's relationship to the land, and with it, the character of the prairies themselves.

#### Cattle Country

The first Caucasian occupants of the Texas Blackland Prairie were not farmers; the thick sod and heavy, droughty black clay soils - later to be called the "dinner bell" soils, too wet to plow before dinner and too dry after dinner - were almost impossible to cultivate with the wooden mold-board plow in use at the time. So those who wanted to take up farming when the Spanish first opened Texas to colonization in the early 1800s settled in the southeastern part of the state near the Gulf Coast, where the soils were more amenable to cultivation with wooden implements.

Early land grants in the Blacklands were mostly taken by cattlemen, where the tall grasses - "high enough to hide cattle and long enough to tie in a knot around a horse's back" - made excellent forage. The grazing patterns of the cattle differed from those of the buffalo, and this introduction of domestic livestock was the first major disruption of the grasslands. While the buffalo grazed the land intensively, they soon moved on, giving the grasses time to recover. Under human management, cattle grazing was concentrated in smaller areas, over longer periods of time. The natural species competition and succession of the flora was disturbed, favoring weedy annuals, the shorter, more grazing-tolerant species of grass and species unpalatable to cattle.

Barbed wire was introduced in 1874, and within 15 years most of the state was fenced, which concentrated livestock and resulted in even more overgrazing of the grasslands. In 1885 the combined influences of overgrazing and drought were so severe that hundreds of thousands of cattle starved to death in Texas. By 1890 the grazing capacity of many grasslands was reduced by one-half or more, and the pre-settlement vegetation was permanently altered.

### The Sodbusters

It was not until the 1870s and 80s that farmers became interested in cultivating the Blacklands, when the development of the steel plow and other implements had made it possible to cut through the thick prairie sod. The roots were so dense - up to five miles or more of roots might be found in one square meter of grasses - that the prairie literally rang, or twanged, when the steel plows turned over its dense underlayer - "a storm of wild music" was the poetic description given by one wheat farmer's daughter several decades later.

By 1900 most of the Blackland Prairie was under cultivation and was recognized as one of the foremost cotton producing regions of the world. Ellis County in Texas was at the center of this extraordinary accomplishment, and many grand old Victorian homes in the cities of Waxahachie and Ennis still exist, as reminders of the fortunes that were made in those times.

Cultivation was also, however, a catastrophic disruption of the prairie ecosystem. It was a common farmers' joke to tell the story of an old Indian who, having seen a plowed field for the first time, said to the farmer, "Wrong side up." The story was taken to be an illustration of the Indian's ignorance, but in fact when the native grasses are turned under and the soil aerated, the organic matter decomposes faster. This creates a flush of nutrients available to cultivated crops, but when the crops are harvested the nutrients are removed with the harvest, and the soil continues to be depleted year after year. Today's dependence on chemical fertilizers is evidence that perhaps there was more wisdom in that old Indian's statement than was recognized at the time.

Certainly in terms of recovering the lost prairie, his statement was true. Once the roots of the prairie are broken, and its recovery cycle interrupted by conventional agriculture, the grasslands never heal unaided. The prairie ecosystem is so vulnerable to manmade disturbances that the wheel ruts left by the migrations of the mid-nineteenth century are still visible, more than 140 years after the covered wagons carried pioneers on their westward journeys. Similar traces can be seen in prairie remnants of the Chisolm Trail in Texas, including one site near Waco where signs of the wagons which accompanied the great cattle drives can be seen.

## **Part 3: The Prairie in the 20th Century A Vanishing Ecosystem**

Although overgrazing and cultivation were the most dramatic disruptions of the natural prairie ecosystem, there have been a number of simultaneously occurring phenomena which have contributed to the destruction of all but a few isolated prairie relicts, and to the degeneration of many of these surviving remnants.

In the early days of cultivation of the Blackland Prairie, mules were the source of power. Many farms maintained a hay meadow where the native grasses were cut for hay or used for pasture. As late as 1930 the practice of maintaining these hay meadows was still common. And although the mowing and grazing altered the species composition of these small "prairies," their root systems and seed banks still contained a living map of the complex prairie ecosystem that had once spanned the continent from north to south, and covered more than 13 million hectares in Texas alone. However, with the advent of tractors most of these meadows

and pastures were plowed.

Another very significant early disturbance was the settlers' natural desire to eliminate fires. Periodic prairie fires had for centuries kept woody species to a minimum and had cleared the ground of dead vegetation, enabling the tall grasses to thrive and creating new opportunities for secondary and tertiary grasses and forbs to establish themselves. Once the fires were eliminated, a rapid invasion of woody plants followed.

Most of the prairie remnants found today are those in out-of-the-way places, difficult to cultivate. These too are often invaded by woody species, along with exotic non-native plants which have been cultivated or allowed to spread on nearby land, and then introduced by wildlife or carried on the winds to these otherwise native areas. The Kachina Prairie in Ennis is a typical example of these surviving remnants, and is in the process of being managed back to health through controlled burning and selective weed control in the hope that it can serve as a seed source for prairie restoration efforts on land acquired for the Superconducting Super Collider Laboratory.

#### The Texas Blackland Prairie: Situation Critical

Before the European settlers arrived, the moist eastern prairies of Texas were dominated by the tall grasses such as big bluestem, Indian grass, little bluestem, eastern gamagrass and switch grass. The short grasses such as buffalograss, blue grama and common curly mesquite were dominant in the drier western regions. And in between, mid-grasses such as sideoats grama, little bluestem, silver bluestem and Texas cupgrass were abundant. Running through these belts of grasslands were the Post Oak Belt to the East, and the East and West Cross Timbers to the west of the Blackland Prairie. Throughout the Blacklands, as well, could be found rivers, streams, and bottomland hardwoods.

Today, more than 90% of the area of the main belt of the Blackland Prairie of Texas has been plowed. Many areas, because of exhaustion of the soil or soil erosion, have been returned to permanent grass. But in most cases these lands have been planted to exotic pasture species such as African bermuda grass and lovegrass, Eurasian "King Ranch bluestem," and Mediterranean Johnson grass.

In 1970, a survey was conducted by graduate students of Texas A&M University, across the main belt of the Blackland Prairie. Approximately 100 ungrazed, excellent condition prairie relicts were located, totaling nearly 5000 acres in all. Most of the sites were small, but a few were as large as 700 acres.



In 1980 the area was resurveyed. The number of sites had decreased from 100 to 35, and the area from 5000 to 2000 acres.

The Blackland and associated prairies and woodlands in Texas contain four out of the ten most threatened or endangered plant community series in the United States, as recognized by the Natural Heritage Commission. The total area of fair or better condition plant communities is lowest for the Blackland Prairie, at 0.004% of the area originally covered by this complex ecosystem.

## *Monarchs, Milkweed and Migration*

Contributed by Cheryl Karr



The beautiful Monarch butterfly only has an adult lifespan of 4 to 5 weeks, unless they are the “lucky” 4<sup>th</sup> or 5<sup>th</sup> fall generation that migrates to Mexico. That generation may live up to 9 months.

It all begins on the lowly Milkweed plant. The adult lays her eggs on the underside of a milkweed leaf. The eggs are the size of a pinhead and only 1 to 2 percent of these will survive into adulthood. After 3 to 5 days the larva hatch, and their first meal consists of their own eggshell. Then they begin to devour the Milkweed. The larvae spend 8 to 13 days eating. (Temperature is the determining factor.) They will go through 5 instars (growth stages) increasing in size by a hundred fold before they form their chrysalis. They remain in the chrysalis for 8 to 13 days before emerging as an adult Monarch butterfly.

Monarchs are found all over the world, how they got here is open to speculation, but most feel that during the mid 1800s the larvae and or adults hitched rides on ships. How did their host plant, the Milkweed find its way around the world? Well, at that time, the fluffy white Milkweed seed was used as filling for life vests, pillows and mattresses, all easily transported by ship.

Milkweed is the only plant a Monarch will eat. There are 4 types of Milkweed: Antelope Horn, Tropical, Zizotes and Green Antelope Horn (the kind that grows around this part of Texas). Milkweed gets its name from its irritating white, milky sap. The sap contains cardiac glycosides, which are toxic to vertebrates. In large doses it can also be toxic to humans. Whatever you do, do not get it in your eyes or mouth!! It is extremely painful and can cause damage to your eyes. These cardiac glycosides in the sap cause the caterpillars and adults to taste bad, thereby giving them protection from predators. However approximately 40 different species of ants, spiders, wasps and dragonflies can tolerate the level of toxicity present in the eggs and larva and two birds, the Black-Backed Oriole and Black-headed Grosbeak, are not affected by the toxin and predate on the adult. Two other butterflies also take advantage of the milkweed, the Queen and the Soldier.

Fluctuations in temperature, milkweed quality, and decreasing daylight signal the time to head south on migration. By this time we have reached the 4<sup>th</sup> or 5<sup>th</sup> generation of butterflies. This last “fall” generation is born with reproductive diapause and cannot reproduce. These are the monarchs that migrate to Mexico and overwinter. They basically follow the same route as the hummers and travel 3000 miles to the mountains in Mexico. They are usually gone by the end of October. While overwintering, they don’t each much, just hang out in the trees. But, towards mid-March, when the days start to get warmer they have a mating frenzy and then head north to Texas. Here they lay their eggs and die. This next new generation, moves farther north, lay their eggs and dies, and so it continues.

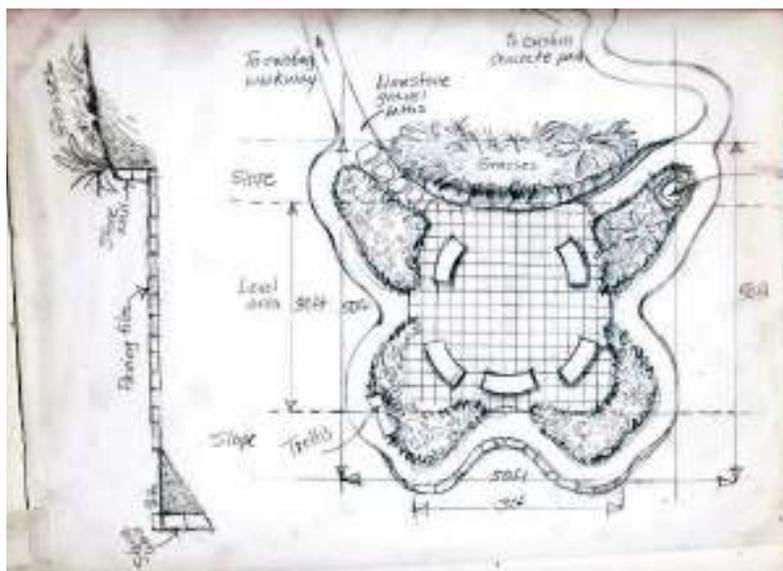
Unfortunately Monarch populations are decreasing. There are two basic reasons: Habitat loss in Mexico at their overwintering site due to deforestation, illegal logging, unorganized tourism, forest fires and lack of cooperation among authorities; Loss of the host Milkweed plant in their breeding areas due to pesticides, roadside mowing, and use of systemic herbicides (Roundup).

What can we do to help? Collect and plant milkweed seeds, reduce use of herbicides by using more natural methods of insect and weed control, reduce mowing along roadsides, parks, pastures and native areas. You can also visit the websites listed below for more information on what you can do to help our beautiful State Insect of Texas:

- Journey North- A Citizen Science Project that tracks all types of migrations
- MonarchWatch.org (Monarch Way Stations, Milkweed Market, and Monarch Tagging)
- Monarch Larvae Monitoring Project (Monitors eggs and all stages of larva)
- Monarch Joint Venture
- iNaturalist.org
- Pollinators Partnership (All pollinators)
- Marine Monarchs (Monitor Monarchs that stop and rest on oil platforms in the Gulf of Mexico during their fall migration)

### *A New BISD Project – a Monarch Waystation*

Contributed by Carol Paulson



As many of you have already heard, the GLC TMNs have approved a new project – the building of a Monarch Butterfly Waystation on the grounds of the Community Education Building on Market Street in downtown Brenham. We have already made some headway with our plans (see sketch by Jan Redden) and are now waiting for help from a Landscape Planning service in Brenham to give us some idea of material quantities and suppliers. Tom Scanio is also working closely with Jeremy Johnston, the BISD Community Education Specialist to also come up with an accurate supply list and dimensions. Dave Redden has been active in all phases from documenting our project to

making such perfect suggestions that you wonder why you didn't think of that! We had some wonderful input from organic native gardener Ann Thames for getting rid of the existing grass, to plant issues to building a little stone wall on the slope so that garden friendly critters could take up residence. We should be ready to "break ground", literally, sometime in the first few weeks of January if the weather is good to us. We are a really diverse and knowledgeable group and this project should be a huge success not only for the children of BISD who will learn from the garden, but also for the adults that we intend to educate and involve in the building and on-going maintenance of the garden. Maybe we'll even get a few more Master Naturalists!

## *Banding the Hummingbirds of Texas*

Contributed by Cheryl Karr



During the 27<sup>th</sup> Annual HummerBird Celebration this past September in Rockport, Texas I attended a Hummingbird banding demonstration by Mr. Kelly Bryan from Ft. Davis Texas. Mr. Bryan is retired from Texas Parks and Wildlife and is a certified bird bander. He has banded over 18,000 hummingbirds and 30,000 songbirds. He has banded 15 of the 18 species of Hummingbirds found in the state of Texas. He has officially documented all 18 species of hummers in Texas, mostly in the mountains in west Texas. There are 339 species of hummingbirds in the world, and they are only found in North, Central and South America. Of the 339 species 18 are found in the state of Texas.

The 18 species of Hummingbirds found in Texas are:

Green Violet-Ear

Green-Breasted Mango

Magnificent (Largest in Texas)

Blue-Throated

Lucifer

Ruby-Throated

Black-Chinned

Anna's

Costa's

Broad-Tailed

Rufous

Allen's

Calliope (Smallest in Texas)

Broad-Billed

Berylline (Rarest)

Buff-Bellied

Violet-Crowned

White-Eared

And #19, spotted 1 mile from the Texas border in New Mexico, a Cinnamon Hummingbird. (Surely, if he was only 1 mile away he must live in Texas and was only visiting New Mexico!!)

Only 7 of these species breed in Texas:

Blue-Throated, Magnificent, Lucifer, Ruby-Throat, Black-Chinned, Broad-Tailed and Buff-Bellied.

Mr. Bryan makes all the bands he uses for bird banding. The hummingbird bands are by far the smallest. They range in size from 5.2 mm (Males) and 5.6 mm (Females). The female's leg is somewhat stouter than her male counterpart requiring the larger band. Each band contains 1 letter and 5 numbers. Each letter stands for 4 numbers. Basically giving each bird his or her own "social security" number. He uses a specially designed crimper to attach the band. This tool assures that no harm will come to the bird's leg. The bands are applied to the bird's right leg and are loose enough to rotate but snug enough to prevent debris from getting in between the band and their leg. Detailed records are kept of each bird banded, i.e. number on band, location where banded, species, sex, weight, age, length of tail and wing feathers and overall health of the bird.



Banding helps to seek the truth of migration, site fidelity, movement, longevity, population status, population dynamics, reproductive success, health, age (time between captures) and detailed data on the various species. Banding data has shown that the Ruby-Throated hummers follow the Gulf Coast during the fall migration to Mexico. But, in the spring they gather on the

Yucatan Peninsula and fly across the Gulf to Texas. It takes them 18 to 24 hours to accomplish this flight. After arriving in Texas they move north at around 18 miles per day to their breeding grounds.

So, next time you rescue a trapped hummer from your garage or find a dead one, please check the bird for a band and go online to report your finding. Band numbers can even be seen from your feeders. Mr. Bryan related a story he heard from a woman who noticed a band on a bird visiting one of her feeders. One hundred digital photos later, she was able to capture the 5 numbers and letter on the band. She was quite determined to read that band!! Ah, the amazing capabilities of today's digital cameras

For more detailed information on bird banding or to report a banded hummingbird number go to West Texas Avian Research (WTAR) at [www.westtexasavianresearch.com](http://www.westtexasavianresearch.com).

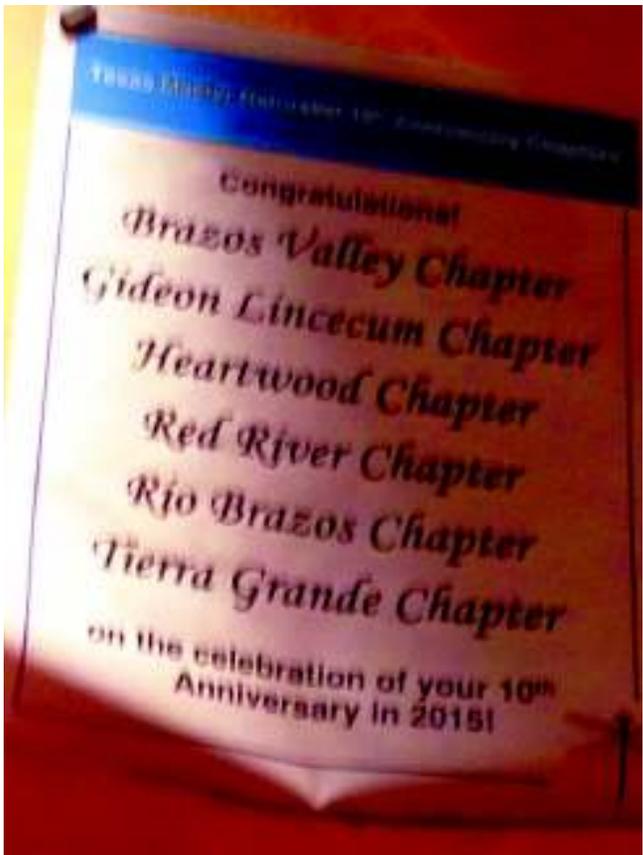
Some interesting hummingbird facts from Mr. Bryan:

- Hummingbirds weigh between 2 grams (Bee hummingbird) and 24 grams (The Giant hummingbird who is the size of a Northern Cardinal)
- Body Temperature: 105 to 108 degrees F
- Wing Beat: 40-80 per second depending on activity
- Respiration: 250 per minute
- Heart Rate: 250 rising to 1200 beats per minute while feeding
- Flight: 30 to 50 mph
- Eyes: Have binocular vision and can spot a feeder  $\frac{3}{4}$  of a mile away
- Hummers cannot convert sugar water or nectar into tissue they need protein for that process. They get all their protein from eating small insects. When not at your feeders they are out eating baby spiders, gnats etc. They use nectar and sugar water for energy and metabolism.

[More pictures from this fall:](#)

*Sandhill Cranes returning to roost*





*At the Annual Meeting*





*The Annual Christmas Party*



*Lots of people, lots of food!*

