Texas Master Naturalist
Lindheimer Chapter

Summer 2013

A publication of the Lindheimer Chapter of the Texas Master Naturalist Program through Texas AgriLife Extension in Comal County, 325 Resource Drive, New Braunfels, TX 78132

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Greetings from Henry

WOW! What a start in 2013. Thanks to our dedicated and knowledgeable members this year has really started out with a bang.

Our chapter meetings have featured two of our own members; John Siemssen presenting *Natives Instead of Common Exotics (NICE!)*, and Al McGraw with *Archeology of The Camino Real*. Both programs were well attended as were the other three presentations for this year. Jeff Vasgaard, another TMN member at the Hays Chapter presented *Jacob's Well* and *Blue Hole*. Then on the following Saturday we met in Wimberley for a field trip to both featured locations.

At our May meeting Craig Hensley, Park Interpreter with TPWD at Guadalupe River State Park presented *Dragons, Damsels, and the Scale-winged Wonders of the Hill Country*. Then on the following Sunday Craig took us on our second field trip to see the beautiful creatures he showed us in his PowerPoint presentation.

More field trips are planned later this year to get out and about to see the actual sites described in meeting presentations. Our February meeting was a little different inasmuch as it was a look at the internal structure of our organization and introduced the Board of Directors via PowerPoint presentation. Members got a chance to see how the organization is operated behind the scenes .

Other chapter meetings planned include Molly Keck with *Good Bugs, Bad Bugs,* Cindy Luongo with *Save The Night,* Dan Potter with *Native Americans of Central Texas,* Matt Gonzalez with *Going Green on a Budget,* Ann and Charles Tubbs with *Native Grasses.*

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Can you identify these plants? Everyone I asked said asparagus. See page 5 page for answer.

Hope to see everyone at these meetings and remember all are eligible for one hour of advanced training. Just attend eight chapter meetings and you can meet requirements for advanced training toward recertification.

Several of our annual events have been held and were very successful. Folk Fest held in April is a two day event in which our chapter gets an opportunity to show the public what we do. From skins and skulls to corn shuck dolls this is a really neat turn of the century folk life festival.

Next was our chapter's signature event Earth Day 2013. This year we partnered with Tye Preston Memorial Library, which was also the site of our 2012 celebration. TPML proved to again be an excellent venue and the start of a great new partnership. Nearly thirty exhibits entertained and educated over two hundred visitors.

Following Earth Day our chapter participated in New Braunfels Wein & Sangerfest celebration. This event provided yet another opportunity to share our endeavors with the public and over the years has proved to be an excellent venue for signing up new members. The family and children's section of this celebration is well attended and we are usually one of the most visited exhibits.

But, there is still much to do in the remainder of the year. Stay tuned to your Out & About notices and don't forget to go to our website for a calendar of current events. While you are surfing the web, check in to see how our new Facebook page is coming along.

Mark your calendar for October 24 – 27 when our annual Texas Master Naturalist state meeting will be held again at T-Bar-M in New Braunfels. This is an excellent chance to volunteer and learn without leaving town. If you have not attended a state meeting this is a great opportunity to do so.

Finally, I would like to thank you all for your continued support and dedication to our mission. And please continue to submit your volunteer hours so that our program can continue to grow on a local as well as statewide basis. Participation and the reporting of that participation are imperative to the continued success of the Texas Master Naturalist Program.

Thanks and happy summer!

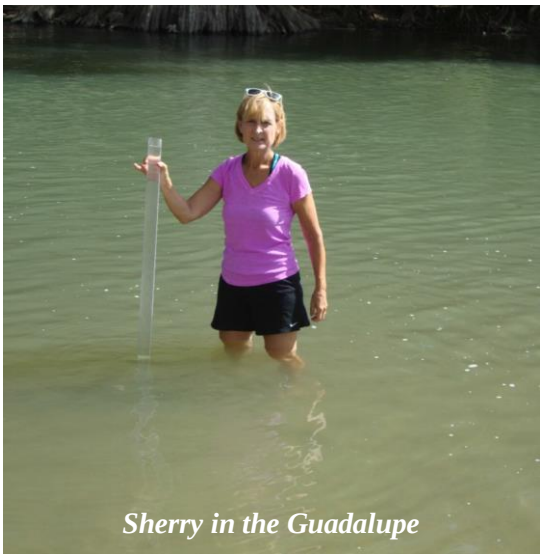
Henry

River Testing by Bicycle

By Sherry Reel

Every third Friday David and Sherry Reel test the water quality of both the Guadalupe and Comal Rivers. At 10:00 a.m. they load their bicycles into the back of their truck and head towards Fire Station #1 in Canyon Lake to pick up water testing equipment.

The Guadalupe River is their first location to test. They park at Bubba's Big Deck by the Gruene Bridge and set to work on the tasks at hand. David walks to the river to fill his bucket with water, while Sherry takes the air temperature and prepares for the testing. Two samples are taken from the water bucket and tests are done for Dissolved Oxygen. Tests for pH, conductivity and clarity are also done. Two samples of river water are taken home where E.coli is cultured in an incubator for 28 hours. All the data is recorded and sent to Texas Stream Team at Texas State University in San Marcos, Texas.



Sherry in the Guadalupe

David in Landa Lake at Gazebo

After finishing the testing of the Guadalupe River, Sherry and David take a lunch break at their favorite Mexican restaurant, Adobe Verde. Now it is time to head into New Braunfels for water testing on the Comal River. They park by the Land Park Office and Sherry walks inside to retrieve the water testing kit, while David unloads the bicycles. The water testing kit is secured in the bicycle basket and they are off to their first site. There are five sites on the Comal River to be tested: one at the Gazebo in Landa Park, one at Hinman Island Park, another at the Schlitterbahn employees' parking lot, the fourth off Union Street and Edgewater and the fifth is at the last exit for tubers. At each site CO2 content and pH are recorded. Photos and descriptive information are taken and recorded. All this data is recorded in a notebook and later sent to BIO WEST, a company that collects data for the Edwards Aquifer Authority.

David Testing

Sherry riding along the Comal River

One thing that Sherry and David look forward to is jumping in the Comal River at the last site and cooling off before riding back to the Landa Park Office. Once back to their truck the bicycles are loaded in the back and the water testing kit is stored away for the next volunteer.

WINDMILLS – A SHORT HISTORY

Ray Laxson – Rocking L Ranch

Some historians claim that revolvers, barbed wire, windmills and railroads helped tame the West. Our Lunch and Learn program at TPML addressed the revolver with the "Activity on the Texas Plains" program, and a Short History of Barbed Wire was included in the Spring/Summer 2010 issue of our newsletter. Here is a brief history of windmills in the desert southwest.

In southeastern New Mexico and West Texas, with the exception of the Pecos river, surface water is almost nonexistent. Before the use of barbed wire starting in the late 1870's, livestock was restricted by water needs to stay within perhaps 5 miles of a water source. Barbed wire could be used to hold livestock in far away pastures, PROVIDED that a water supply was available. Windmills came to the rescue.

Windmills in the desert southwest are a cheerful sight. There is nothing quite like going to a pumping windmill and splashing cool water on your face to wash off some of that New Mexico dust. Most remote ranch houses have at least one windmill. In West Texas between the town of Pecos and the New Mexico stateline, about 50 miles, there are 8 windmills that can be seen from the highway. The nearest surface water, the Pecos river, is from 10 to 30 miles away, too far for livestock to use. Electrical power is scarce in this area so windmills are used to meet livestock water needs. Many of the wells are drilled into the Rustler aquifer, that has poor water quality and is not suitable for human consumption. However, livestock do not have a choice since it's that or nothing.

Starting as early as the mid 1850's, windmills had been used in the eastern part of the US. With improvements in the cable tool drilling rigs and the development of barbed wire, there was much demand in the desert southwest for wells and windmills to meet water needs. Many windmill manufacturers were in the windmill business, including a company called Aermotor which started in 1888. Aermotor is one of the few windmill manufacturing companies that is still in business today.

While Aermotor produced only 45 windmills in 1888, by 1892 production had increased to over 60,000 units. Aermotor used improved manufacturing facilities to keep costs low, had a well engineered product, and became one of the most common and reliable windmills in use.

Aermotor continued to make improvements during the 1900's and the company was sold in 1958. In 1969 the manufacturing facilities were moved to Argentina until it was returned to the US in 1980. In 1986 the Aermotor company was purchased by a group of investors and the manufacturing facilities were moved to San Angelo, Texas where it remains today. Here in the US, as well as in many countries abroad, thousands of Aermotors remain in service providing water to this very day.

In early 1980 I began looking in earnest for a windmill for our place. A farmer near Pleasanton had one for a good price and I bought it. Long story short, this farmer had purchased the windmill new about 10 years previously, but had never taken it out of the large wooden boxes for assembly. The windmill had been manufactured in Argentina. Once I took it home and pried open several of the wooden crates I was surprised at the large number of nuts, bolts, fittings, strange looking parts and angle irons. To make matters worse, a mouse had chewed a hole in the box and had shredded the installation instructions. After a couple weeks of trial and error the windmill was finally completed (toughest jig-saw puzzle I ever worked on) and was set up over a hand-dug well not far from our house. We could not have been more pleased when the windmill started pumping water from our hand-dug well. The 6' Aermotor is still there today and is a reminder of my New Mexico roots.

There is a lot of engineering that goes into the successful design of a windmill. For one thing, the mill is set at a slight angle to the tail so that high winds will not over speed the mill. At very high

winds the mill automatically turns so as to NOT face directly into the wind. When wind speeds diminish, the mill will again face back directly into the wind. You may have seen one of the old Eclipse Windmills that was made out of wood. These are real collectors items and often are on museum grounds. These mills faced toward the heavens to a degree to better catch the wind. The saying at the time was the Eclipse mill looks up to the heavens, and hopes to heaven that it doesn't get blown away. Eclipse windmills were often damaged by high winds.

This picture was taken at Spring Branch Water Service here in Spring Branch. The large mill (the wheel with the blades) is a 20' wide Aermotor and right beside it is a 6' wide Aermotor. The 20' Aermotor was made from 1929 until 1966 and is huge – it weighs 4900 pounds and dwarfs even the 6' mill standing beside it in the photo. There are several other Aermotors laying on the ground in their yard, along with an old Baker mill that has many more blades than the Aermotors. Looking at design specs, the 6' mill should be able to pump from a 120' well. My ranch well with electric pump is completed in the Cow Creek at a depth of over 400'. A 12' mill would be recommended for this depth.

As a matter of interest, a new 6' mill with a 21' tower will cost somewhere around $5,500. Used ones can be purchased for around half that amount. A new 16' mill and tower will cost somewhere around $20,000. I did not find any 20' mills or used 16' mills for sale. BTW, if you buy one in a box***, make sure you get the installation instructions!***

Mystery Plants Revealed…

The strange looking plants pictured on the front page were growing under a live oak tree on my property and when I sent the early photos around everyone seemed to think that it was asparagus, but no one could figure out why they were light brown instead of green.

Later, as flowers began to open up my research revealed that they are wild orchids, namely Crested Coral Root Orchids.

Although they are widespread in Texas they are uncommon. They bloom April-August and are most frequently found on wooded limestone hillsides and canyon slopes in juniper-oak woodlands of the Edwards Plateau. Mine have finished blooming and gone to seed. I hold high hopes that they will return again.

Carol Landry

New Braunfels Folk Fest 2013

The annual spring Folkfest was a great success for Master Naturalists! The volunteers on Saturday and Sunday were kept busy with the many attendees who asked questions and participated in interactive exhibits. Tables included archeology collections and artifact replicas, wildlife management concepts, native plants and a rainwater catchment display plus several of the trunks from the Traveling Trunk Show that TMN-LC owns.

A new interactive activity was introduced this year with native plants. The children and adults enjoyed making Native American/ Pioneer dolls from cornhusks. We often forget about corn being one of the original "native edible plants" in Texas. The project was so popular that it was included again in Earth Day activities.

Other interactive children's activities included fossil digging, bird walks and animal and bird puppets. The families always have lots of questions about the skins and skulls exhibit and are delighted when they can match a pelt with its skull.

We are always indebted to our courageous volunteers and Skip for all the signage, laying displays out and putting them away for the next outreach opportunity. A big "Thank You" goes out to all who were able to participate this year! Enjoy our pictures.