

# The Texas Star

Newsletter of the  
Texas Master Naturalist Hill Country Chapter

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Tom Schall photo

T E X A S

Master  
Naturalist™



Hill Country Master Naturalist Annual Family Picnic  
Saturday, May 18, at Joshua Springs Park & Preserve  
see page three for details

## PRESIDENT'S MESSAGE . . . Vern Crawford

What a glorious Spring the we are experiencing here in our beautiful Texas Hill Country.

How lucky Lenore and I are to live on the banks of the Guadalupe River. We watch it as it flows past Center Point, headed on down to Comfort and points beyond. Over the eons, the river blessed us and our neighbors along the way by leaving behind the gift of a rich valley of dark brown soil.

Our recent Native Plant sale at Riverside Nature Center inspired us to brighten up our flower beds with colorful natives. All of our selected forbs seemed to quickly take root and be happy in their new ground, and the butterflies and hummingbirds are already expressing their approval of our selections.

I managed to get a nice variety of tomatoes transferred out of their little plastic nursery containers and planted into the rich garden plots adjoining our little home. I first watered them in by hand, and then set up drip irrigation; those little tomato plants all developed blossoms and several have developed little tomatoes. Lenore is fond of sweet carrots, so a few days ago I planted a nice long row of tiny seeds, as well as several rows of other seeds for tasty vegetables.

Then the first of several thunderstorms rolled through the area. Living under a highly functional steel roof, the sound of hard rain and hail pounding down brought fears that all of our new plants would be stripped of their branches, and all of those tiny seeds would be floating down the Guadalupe on their way to the Gulf of Mexico!

Upon inspection the following morning, all of our new plantings managed make out okay, suffering minor natural pruning in exchange for tasty and beneficial rain water, and all of those tiny seeds managed to stay near where they were originally scattered, under a thin layer of composted soil. A week or so later, most tiny seeds sprouted into hundreds of little green tops that will need thinning over the coming weeks.

Summer salads are going to be mighty tasty; we'll be enjoying them in the midst of all of these well adapted and colorful native wildflowers, grasses, and trees!

And a big thanks to all of the wonderful volunteers that made the Native Plant Sale a success.

## This Month We Honor

### Initial Certification

Barb Herbst, Jackie Huecksteadt, Patricia Nelson, Phyllis Perata

### 2013 Recertification

Richard Adams, Anne Cassidy, Jim Clarke, Julie Clay, Cathy Downs, Eileen Gotke, Louis Gusti, Myrna Langford, Ric McCormick, Martha Miesch, Ward Miller, Phyllis Muska, Donna Oliver-Leep, Tara Randle, Tom Riordan, Floyd Trefny, Mary Frances Watson

### Milestones

Tom Riordan, Tom Sloan, Garry Speir - Bronze Dragonfly, 250+ hours

Jane Crone - Brushed Silver Dragonfly, 500+ hours

Ward Miller - Gold Dragonfly, 1000+ hours



*Congratulations to members who received awards at the April meeting:*

Front row, from left: Alexis McRoberts, Ruth McArthur, Tara Randle, Lenore Langsdorf, Vern Crawford, Kathy Ward

Back rows, from left: Jim Burgin, Cynthia Burgin, Paula Smith, Donna Oliver-Leep, Tom Collins, John Walker, Ginny de Wolf, Scott Magee, Ken Weber, Anne Dietert, Jim Clarke

photo by Paul Stafford



## Hill Country Master Naturalist Annual Family Picnic

**Saturday, May 18 from 10 am – 4 pm**

**Joshua Springs Park & Preserve – Kendall County**



Our event will be based in a covered pavilion on a hill with a pleasant breeze overlooking this scenic lake. It's **FREE!** Please bring your own picnic lunch and chairs. Soft drinks and bottled water will be provided.

### Activities in the park include:

- Walk the manicured trails with educational signage, native plant gardens, and natural vegetation.
- Active and passive recreation areas offer many opportunities to have fun and enjoy nature.
- Hiding stations are available for bird observation.
- Two chimney swift towers provide nesting sites for these beneficial aerial acrobats.
- Three bluebird trails provide 18 nest boxes to shelter migrating Eastern bluebirds and other native Texas species.
- Bring field glasses and a birding book to identify numerous species seen in the preserve.
- Karst features are visible throughout the preserve and park.
- Designated fishing areas allow anglers to test the waters. Fish in the lake from two piers (must have a Texas fishing license).
- Two age progressive play areas will keep kids entertained.
- See more info on the park at [www.kendallcountyparks.org/parks/joshua-springs-park-and-preserve-jspp](http://www.kendallcountyparks.org/parks/joshua-springs-park-and-preserve-jspp)

Questions? e-mail Priscilla Stanley at [jpbstan@ktc.com](mailto:jpbstan@ktc.com).

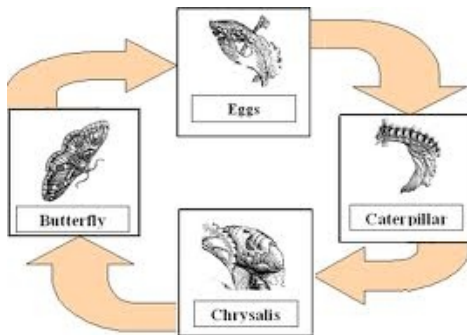
from Tom Collins

## North American Butterfly Counts

Each year during the summer butterfly enthusiasts sign up to participate in community butterfly counts sponsored by the North American Butterfly Association (NABA). These counts are referred to as the Fourth of July Counts, but can be held any time during June and July.

A butterfly count follows the same protocol as an Audubon Christmas Bird Count (CBC), which must be held between December 14 and January 5. The count is held in circle with a 7.5 mile radius. Typically this 15 mile diameter circle will be set by the leader of the count, called the compiler. The compiler will set the circle so that the habitats within the circle will produce the maximum number of the bird or butterfly species.

The participants in the count will record all the species seen and keep track of the total individual numbers in each species. During a NABA count, all life cycle phases of each species will be recorded: butterfly, egg, caterpillar, and chrysalis. However the majority of sighting is the adult phase or butterfly. Moths are not counted.



One of the nine zebra heliconians found during the Love Creek Count

This past year there were 463 NABA counts held in North America compared to 2100 CBCs. Locally there are five butterfly counts for which volunteers can sign up.

Last year the Love Creek Count (Bandera County) was the number one NABA count in Texas and was tied for 41<sup>st</sup> in North America.

Participating in a NABA count contributes to the science of understanding the impact of climate and habitat changes on these beautiful and very important insects. Gardeners and naturalists who volunteer for NABA counts will increase their own knowledge of butterflies—plus, it is a fun time.



Most counts begin around 8 a.m. and stop in early afternoon. There is a \$3 fee to participate that is used to produce an annual North American Count book.

The *Kaufman Field Guide to Butterflies of North America* is the best butterfly book to own.

Below are the local counts and dates. If you are interested in volunteering, please contact one of the compilers. Use AT code CC-09-A.

June 6 (Thursday) - Love Creek - Rebecca Flack / Tom Collins (634-3236)

June 21 (Friday) - Kerrville - Tom Collins

June 27 (Thursday) - Guadalupe River State Park - Craig Hensley / SkipKip Kiphart (336-3669)

July 2 (Tuesday) - Boerne - Cathy Downs (995-5864)

July 20 (Saturday) - Center Point - Cathy Downs / Bob Tanner

photos by Tom Collins

## How Do Trees Without Leaves Make New Leaves in the Spring?

Regular readers will not be surprised when I write about something in nature that I find “amazing” since I find most everything about nature amazing. Here is yet another “amazing” nature story.

We all know that deciduous trees (those that lose their leaves in the fall) put out new leaves in the spring. We know that plants do not get most of the materials they need to grow directly from the soil. We know that the way green plants grow is to carry out photosynthesis using energy from sunlight, water from the soil, and carbon dioxide from the air, and that it is the green material, chlorophyll, that makes it possible for the leaves to take these raw materials and convert them into new plant material.

The primary products of photosynthesis are carbohydrates, which are molecules made up of carbon, hydrogen, and oxygen. The carbon and oxygen from the carbon dioxide and the hydrogen from the water wind up as atoms in the carbohydrate molecules, and the oxygen atoms in the water become molecular oxygen, a by-product of photosynthesis.

There are several types of carbohydrate molecules. Those that are considered structural carbohydrates make up plant cell walls in tree trunks, limbs, stems, and leaves and include celluloses and lignin. Non-structural carbohydrates are smaller molecules and include sugars and starches. All carbohydrates are composed of the same basic building blocks produced in photosynthesis. Structural material (e.g., cellulose) can be made from the non-structural materials (e.g., sugars and starches) in the plant's cells.

When a tree begins to produce the first small leaves of spring, where does the material for these first leaves come from? Before there are any leaves, no photosynthesis can occur and thus no carbohydrates are being produced. So how can a tree without leaves make leaves?

The answer is that some of the smaller carbohydrate molecules such as sugars and starches were stored in the tree, mainly in the roots, during the previous summer and fall, and it is these stored non-structural carbohydrates that travel up the tree and out into the buds to become the first green leaves of spring. For species that bloom early in the spring, much of the material of the blooms also comes from this same source of stored sugars and starches.

This process is not unique to trees. Similar processes occur in all other perennial deciduous plants including grasses, forbs, and shrubs.

This also explains why droughts during the summer and fall limit the amount of sugars and starches produced (remember, water is essential for photosynthesis), but the effect may not be obvious in the plants until the following spring.

It is important to note that photosynthesis is the source of energy that makes all of our lives possible. The raw materials for photosynthesis, carbon dioxide and water, are low energy compounds that cannot be used by plants or animals to maintain life. Only when energy from the sun is captured to make high energy compounds (carbohydrates), using chlorophyll as the catalyst, do we have an energy source that can sustain plant and animal life on Earth.

*continued on next page*



It is always fascinating to think about how a plant, with no brain or nervous system, manages to carry out different activities in different seasons. In spring sugars and starches are moved from the roots to the buds to make new leaves and blooms. Then during the summer and fall, the plant manufactures excess sugars and starches, some to be used to mature seeds and some to be stored in the roots for use next year. In late fall, the chlorophyll in the leaves degrades, the fall colors show up, and later the leaves fall off.

Of course the timing of all of these different activities may be triggered by changes in temperature and/or daylight time, but the response of the plants to this trigger is programmed into the arrangement of four different nucleic acids along the DNA chain.

So everything you had for breakfast this morning either came directly from a plant via photosynthesis (the carbohydrates) or via subsequent conversion to fats and proteins either in the plant or, if you ate an animal product, in the animal that ate the plants.

And when you take a deep breath, it is only because of photosynthesis that there is oxygen in the air.

Until next time...

Jim Stanley is a Texas Master Naturalist and the author of *Hill Country Landowner's Guide*. He can be reached at [jstmn@kctc.com](mailto:jstmn@kctc.com). Previous columns can be seen at [www.hillcountrynaturalist.org](http://www.hillcountrynaturalist.org).

From Tara Bushnoe

#### UGRA Volunteer Project

Each summer, the Upper Guadalupe River Authority (UGRA) tests *E. coli* levels at water crossings and popular swimming holes throughout Kerr County. The results of this Swimability study are compared to the Texas Commission on Environmental Quality's (TCEQ) standards for contact recreation.

In 2004, UGRA began the Volunteer Summer Study Program to supplement data collected during the Swimability study and to include interested members of the community in water quality testing. The information collected by the volunteers also helps identify areas in need of further investigation.

I invite you to participate in this year's summer program. Volunteers will collect water samples on a weekly basis from a site either on the Guadalupe River or one of its tributaries in Kerr County. Samples will be brought in to UGRA for bacteria analysis (Monday – Friday 8 am - 5 pm). The program will run from the first week of June through the end of August. Volunteers can submit samples no more than once a week and you can choose how many weeks you would like to participate. UGRA will summarize the findings and present the results to the volunteers during a reception in the fall. Please see <http://www.ugra.org/vstudy.html> for more info.

Before the start of the program volunteers will need to come into UGRA to register and receive their sample containers and tips for collecting water samples. It will take less than 10 minutes and you are more than welcome to stop by anytime May 15 - 17. If you can not stop by during this time, please let me know and we will arrange another time to get you your supplies and instructions. When you stop by we will also talk about what site you would like to sample.

Some of you have told me that you are not able to start taking samples until later in the summer. This is no problem; if you can not stop by May 15 – 17 we will just arrange a time to meet before you start taking your samples. The UGRA office is located at 125 Lehmann Drive, Suite 100, just off of Sidney Baker South. Please ask for either Tara or Travis. For more information, contact Tara Bushnoe (830-896-5445; [tbushnoe@ugra.org](mailto:tbushnoe@ugra.org)).

This volunteer project is KR-11-A; the coordinator is Sandy Pena ([sandy@penasco.net](mailto:sandy@penasco.net)).

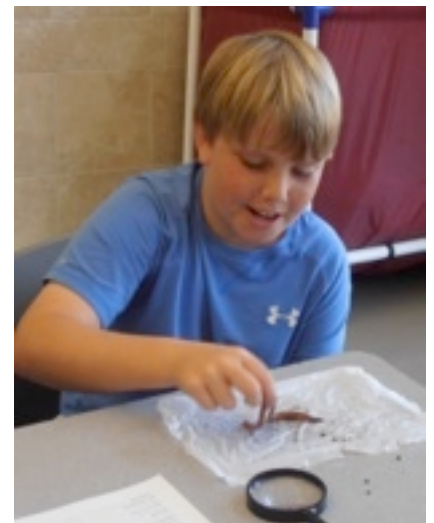
from Sarah Hilburn

## Earthworm Day at the Kroc Center

Spring is alive and crawling at the KROC Center! On April 18 Hill Country State Natural Area Park Specialist Leanne Beauxbeannes lead a lesson about earthworms. Leanne first took a “teachable moment” to tell the students about our state flower that is blooming in the Hill Country. The “Legend of the Blue Bonnet” was then read by Mary Frances Watson.

Rheda Boardman then shared some earthworm facts by having students orally respond True or False to a list of questions. Each student was given an earthworm to weigh and measure. They also learned about the different body parts and their functions. Do earthworms have legs to help them crawl? No—they move forward by tiny bristles or hairs in each segment called “paired setae.” The students got very attached to their earthworms! All of the worms were safely returned to their damp environment.

The afternoon ended with students, KROC Center staff and volunteers playing a Native American game called “Sticks.” Several parents had to wait on their students to finish their game; we were all very competitive! The KROC Center group had a blast “casting” off until next month (a little earthworm humor). Betty Clyburn, Sarah Hilburn, Martha Miesch, Pat Nelson, and John Sloan were also present for the fun!



photos by Rheda Boardman

Spend more time on the chapter website. It's more than documents. Place your cursor over **Learn**; then **Resources**. A whole world of information and education opens. Move to **Reading and Education**. Wow, this tab is filled with interesting topics! Dig in to nature-related apps for your devices and videos that entertain and educate. Missed a webinar or presentation? You'll find recordings of assorted web-based seminars and slide shows from some super presentations on our site. Love the library? We have a collection of relevant reading - books, newsletters, writings, and blogs.

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I built our site for you. Stay awhile. You'll leave more informed and more inspired.

From the Kendall County Partnership for Parks' Family Fun Day (May 4)



Cathy Downs instills a love of butterflies in these future naturalists



Jim Clarke and John Huecksteadt discover insects during Craig Hensley's Bug-R-Us



Kip Kiphart and Gracie Waggener inspire visitors to learn more about monarchs



John Walker and a fellow Master Naturalist say, "Follow the Fossils"

photos by Daneshu Clarke



## Riverside Nature Center Big Sit Results

Each year Texas Parks and Wildlife sponsor a conservation and competitive birding event called the Great Texas Birding Classic. Individual and corporate sponsored teams can compete in any of several activities from a six-day long Bird Around Texas to a single day birding at a State Park, major ecosystem such as the Upper Texas Coast or doing what is called a Big Sit.

A Big Sit requires that for a bird to be counted, a team member must see or hear the bird while the team member is in a 17 foot diameter circle. The count period is a standard day – 24 hours.

Team "Guadalupe River Kingfishers" completed 17 hours (starting around 4 a. m.) of a Big Sit at Riverside Nature Center on May 6 and counted 66 species of birds. The 66 species far exceeded team expectations of a count in the 50's. Great weather with temperatures ranging from 44 to 76 degrees, clear to cloudy skies and some light rain showers made for a fun and bird active day.

Highlights were an Eastern Screech Owl (4:20 am), Great Horned Owl (4:30am), Chuck-Will's-Widow (new RNC species - 04:55am), Common Nighthawk (5:55am), six species of Vireo including one new RNC species, and a very late in the afternoon Green Kingfisher, to keep their chosen team name from being shamed.

Big misses were Barred Owl, Lincoln Sparrow, Painted Bunting, Yellow Warbler, and Belted Kingfisher. The team maintained a count of species seen for each hour period and recorded species in all 17 hour periods. The final species of the day were a pair of Barn Swallows at 7:45 p.m.



Team in a 17 foot diameter circle.



All sorts of tricks are tried to bring in birds including this milk jug drip station.



Team Guadalupe River Kingfishers:  
Harriet Warren, Scott Magee, Tom Collins, Ron Hood



Ron Hood discusses a recent bird sighting with Harriet Warren and Scott Magee.

The Great Texas Birding Staff will announce winners in each division on June 1 in Houston and San Antonio. Winners in many of the major categories will be able to designate funds collected from the Classic registration to go toward a Conservation project of their choice that has been pre-submitted and selected by TPWD.

photos by Tom Collins

San Antonio Can Lead In Smart Water Policy  
by Andrew Sansom

Until recently, the great drought that devastated Texas from 1947 to 1957 was thought to be — and officially declared to be — as bad as a drought could get. It was bad, ultimately costing the state an estimated \$22 billion in current dollars and driving thousands of rural citizens off the land and into the cities for good.

Now, we're not so sure. The present drought is costing our economy as much as \$8.7 billion a year and as many as 115,000 jobs. Unfortunately, there is currently no end in sight.

Just as frightening, even before you consider the impact of the drought, our population in Texas is expected to double over the next 50 years or so. And yet we have already given permission for more water to be withdrawn from many of our rivers than is actually in them.

This means that if all of the existing water rights permits issued by the state were actually fully exercised, some of our most iconic rivers would be dry today.

Our state leaders have been actively debating the looming water crisis in this legislative session. One proposal — in limbo after a procedural move last week — would create a \$2 billion fund for water infrastructure loans (identified in the Texas Water Plan). Other proposed legislation would set aside a percentage of the funds for conservation strategies, create a process for setting priorities on what would be financed, and enable innovative projects to become reality.

And it will not be enough to get us out of our water dilemma. It's time for San Antonio to lead. It is a community — where water is concerned — whose time has come.

San Antonio is already leading the state in creative solutions to water shortages. The San Antonio Water System (SAWS) has established one of the largest Aquifer Storage and Recovery systems (ASR) in the country on 3,200 acres in southern Bexar County.

Experts contend that any of the proposed reservoirs in the Texas Water Plan built west of Interstate 35 would lose more in evaporation than they would gain in new water supply. Creating an underground reservoir through the establishment of an ASR makes much more sense in hot, dry South Texas.

SAWS is also proposing to tap into the estimated 400 million acre-feet of brackish groundwater in the region for desalination, producing more than 30,000 acre-feet of fresh, potable water a year at far less cost than desalination of salt water from the Gulf of Mexico. That is water that would have to be pumped uphill to San Antonio, requiring much energy and great expense.

San Antonio should become a leading force to encourage this type of cost-effective, environmentally friendly infrastructure across the state, even as it improves the water future for its citizens.

During the last couple of decades, the city of San Antonio has lowered its consumption of water by 40 percent per capita while still growing and flourishing economically. In fact, customers of the San Antonio Water System have grown by 67 percent since 1984 and overall consumption of water in the city has not increased at all.

This is an extraordinary accomplishment that must be emulated by every city in Texas where, in many cases, consumption of water per capita is actually still growing.

San Antonio is in the unique position of demonstrating to cities and towns across the state that the easiest and cheapest water we can get is the water we already have.

San Antonio has also demonstrated bold foresight on another key water issue, the protection of watersheds and recharge areas in the stewardship of private property owners.

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In recent years, San Antonio citizens have approved nearly \$150 million to protect critical private lands and to acquire important parklands, all of which contribute significantly to preserving both the quality and quantity of our water.

Across Texas, we are losing rural and agricultural land faster than any other state, and this continued fragmentation of family lands is irrevocably impairing the function of our watersheds and aquifer recharge zones while also contributing to non-point source pollution.

This insidious form of contamination caused by runoff from agricultural fields, highways, parking lots and an increasingly developed countryside is the most serious threat to water quality in Texas today. San Antonio, by moving to protect these important features of the landscape and thus our critical water supply, has once again shown the way.

The city's example can inspire communities across Texas and the state government itself to move deliberately to keep private landowners on the land through measures such as conservation easements, protecting those important parts of the state where the first raindrops fall.

Historically, some of the raindrops falling in the Hill Country have flowed through the Edwards Plateau Karst, risen from springs and ultimately made their way down our rivers and streams to the bays and estuaries along the Texas coast, where the freshwater they provide is an essential ingredient for the health of one of the most prolific coastal ecosystems in the world.

Now, that system is threatened as competing interests in Texas collide in a struggle between those who care about our coastal marshes and wetlands and those who apparently do not feel that these "environmental flows" are a priority.

This struggle has recently reached a new level of contention as a federal judge in Corpus Christi has ordered the Texas Commission on Environmental Quality (TCEQ) to issue no further permits for withdrawal from the Guadalupe or San Antonio Rivers until an acceptable habitat conservation plan is developed to provide freshwater to San Antonio Bay, which is the winter home of the endangered whooping crane.

Here again, San Antonio is uniquely positioned to lead us through this impasse — as it has successfully done in leading efforts to develop a habitat conservation plan along with the Edwards Aquifer Authority and the cities of San Marcos and New Braunfels to protect the endangered species of the Edwards Aquifer and to provide water for continued economic growth.

We in Texas face federal intervention in our surface water system in every basin in the state where endangered species are present unless we can figure out a way to come together by consensus and solve our own water problems.

It is time for San Antonio to lead.

In the 1950s, when that other drought fell upon us, most Texans lived in small towns or on farms or ranches where the effects of the catastrophe directly threatened their livelihoods. Today, we are an urban state in which, as long as the tap flows in the kitchen and the toilet flows in the bathroom, our citizens see no reason to become concerned.

Renowned Texas author J. Frank Dobie said that every Texan has two hometowns and San Antonio is one of them. It is time for the city we love so much to show the rest of us the way

Read more: <http://www.mysanantonio.com/opinion/commentary/article/San-Antonio-can-lead-in-smart-water-policy-4483726.php#ixzz2T3EGmZi7>

Andrew Sansom is executive director of The Meadows Center for Water and the Environment at Texas State University. This article was published on May 3, 2013 in, and is reprinted with permission of, the San Antonio Express-News.



## Advanced Training

### **THURSDAY, MAY 16 6PM BOERNE PUBLIC LIBRARY**

AT 13-132 BEFORE THE PRESENT

Imagine Boerne in prehistoric times, between 7,000 and 3,000 years Before the Present. UTSA professor Dr. Steve Tomka will visit the Patrick Heath Public Library to share his knowledge about the ancient peoples who lived in and traveled through this area of the Hill Country at that time. His talk stems from recent discoveries dating back to two distinct ancient time periods. The finds were near the recently completed wastewater treatment plant on old San Antonio Road. Dr. Tomka will bring some of the artifacts that were discovered.

### **SATURDAY, MAY 18 9AM-12NOON CIBOLO NATURE CENTER (CNC), AUDITORIUM**

AT 13-130 HARVESTING RAINWATER AND SOLAR ENERGY

John Kight, engineer and rainwater catchment and solar panel owner, will give technical information and practical advice. The talk includes a visit to the Kight home, which relies solely on rainwater and solar energy for all appliances except the air conditioning system. Cost: \$25 per person for members; \$35 for non-members. To register, go to [www.cibolo.org](http://www.cibolo.org).

### **SATURDAY, MAY 18 2-4:30PM GUADALUPE RIVER STATE PARK (GRSP), HEADQUARTERS**

AT 13-128 TWO O'CLOCK TRAIL WALK

Join Park Ranger Craig Hensley for walk to enjoy GRSP's Bauer Unit. This is a fairly strenuous hike, so plan accordingly: bring water and wear sturdy hiking shoes; a hiking stick also is encouraged. Not recommended for children under 10 years old. For more information, call 830-438-6753.

### **WEDNESDAY, MAY 22 8AM-4PM HILL COUNTRY UNIVERSITY CENTER, FREDERICKSBERG**

AT 13-118 TEXAS WATERSHED STEWARD PROGRAM - PEDERNALES RIVER

Paul Schattenberg will conduct this workshop on water quality and availability issues related to the Pedernales River. The training is presented by the Texas A&M AgriLife Extension Service and the Texas State Soil and Water Conservation Board in coordination with the Hill Country Alliance. Free; pre-register at <http://tw.s.tamu.edu>.

### **THURSDAY, MAY 23 10AM-2PM GUADALUPE RIVER STATE PARK**

AT 13-129 WOODY PLANT WORKSHOP

Join Park Ranger/Naturalist Craig Hensley for an introduction to the woody plants of the Hill Country. The workshop is limited to the first 15 registrants. Cost: \$5 requested donation to the Friends of Guadalupe River and Honey Creek. To register, call 830-438-7653 or email Craig at [craig.hensley@tpwd.state.tx.us](mailto:craig.hensley@tpwd.state.tx.us).

### **FRIDAY, JUNE 7 9AM-4PM KERR WILDLIFE MANAGEMENT AREA (KWMA)**

AT 13-133 STREAMSIDE LANDOWNER WORKSHOP - UNDERSTANDING RIPARIAN AREAS

An introduction to riparian areas that includes a field trip to illustrate concepts and identify vegetation. Presented by the Upper Guadalupe River Authority, Kerr County Soil and Water Conservation District, and Guadalupe-Blanco River Trust. Free; includes lunch; limited registration. To register, call UGRA, 830-896-5445.

### **MONDAY-WEDNESDAY, JUNE 10-12 FLAGLER RANCH, MOUNTAIN HOME**

AT 13-109 L.A.N.D.S. TEACHER VOLUNTEER TRAINING

Learning Across New Dimensions in Science training. Cost, \$150 per person (includes food, lodging, and materials). For information, contact Kay Coffey, 830-866-3066, [kcoffer@texas-wildlife.org](mailto:kcoffer@texas-wildlife.org) or Leslie Wittenburg, 512-680-6000, [lwittenburg@texas-wildlife.org](mailto:lwittenburg@texas-wildlife.org)

Dr. John Nielsen-Gammon, Regents Professor, Department of Atmospheric Sciences, Texas A&M University and Texas State Climatologist will be the speaker at our monthly meeting on June 24. Dr. Nielsen-Gammon's subject will be "Drought: Past, Present, and Future."



We meet on the fourth Monday of most months -- but not this month -- in the Upper Guadalupe River Authority Lecture Hall at 125 North Lehman Drive in Kerrville.

Join us next month at 6:30 for our social half-hour. Everyone is welcome.

Texas Master Naturalist 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.

**Board of Directors 2013**

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The Texas Star is a monthly publication of the Hill Country Chapter of the Texas Master Naturalist Program. News stories, comments, and ideas are welcome.

Please email them to:

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The Hill Country Chapter does not recommend or endorse organizations or commercial sources mentioned in our newsletter. The opinions expressed are those of the authors and editor.



*Questions about our chapter?*

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