

The Texas Star



Newsletter of the Master Naturalist, Hill Country Chapter

JULY MEETING ... OASIS PIPELINE FIRE AND RECOVERY



Scott Richardson, president of the **South Llano Watershed Alliance**, will detail the devastation which took place in April 2011 when a wildfire burned through almost 10,000 acres south of Junction.

His will focus on the marshalling of efforts and techniques by the South Llano Watershed Alliance, Texas Parks and



Wildlife Department, and other local organizations and businesses to address the effects of the fire. The fire scene became a laboratory for developing recovery initiatives to mitigate erosion from coming rains. The results of those efforts will be discussed.

Join us Monday, July 23 at 7p.m. in the UGRA Lecture Hall. We gather at 6:30 to visit with members and guests.



PRESIDENT'S MESSAGE ... Priscilla Stanley



Picnic Thank You

Each year our family picnic is a special time when our family members

join us to socialize and enjoy each other's company in a nice Hill Country park or other natural setting. This year we had a wonderful event at Muleshoe Farm and Ranch in Comfort. If you were not able to attend, you can read about it in Tom Hynes' letter on page 5. If you attended and had a great time, you can revisit the event by reading Tom's letter.

I want to thank our many members and their family members who made our family picnic such

a gala event. These are mainly folks who already volunteer on the gardens, grounds, and trails at Muleshoe Farm, a chapter volunteer project. These folks include: **Cynthia Burgin, Jim Burgin, Tom Hynes, Rheda Boardman, Daneshu Clarke, Jim Clarke, JD Clarke, Dan Carabin, Ann Dietert, Louis Giusti, John Huecksteadt, Myrna Langford, Diane McMahon, Sharon McLaughlin, Mike McLaughlin, Pat McCormick, Nina Wagner, Kathleen Mundy, and Kendra Schwarz** (Daneshu's granddaughter). Those helping with the successful silent auction were organizer **Cynthia Burgin, Sharon McLaughlin, Diane McMahon, and Nina Wagner**. **Diane McMahon** and **Nina Wagner** were responsible

continued.

T E X A S



It was one of those days... unique unto itself, and will not happen again.
page 6.



Watson's
Milkpea
*Galactia
watsoniana*
Bandera
County

July 2012

Volume 10
No. 7



THIS MONTH WE HONOR



Milestones	2012 Recertification	Special Recertification	First Year Certification
<i>1000 Hours - Gold</i>	<i>Mexican free-tailed bat</i>	<i>Mexican free-tailed bat</i>	<i>Dragonfly</i>
Glenn Randow	Kip Kiphart	Merrily Labarthe	Betty Clyburn
Karla Trefny	Ward Miller	Ric McCormick	Pat McCormick
<i>250 Hours - Bronze</i>	Linda Louise Ross		
Bernadette DeShields	Garry Speir		
	Marian Worthington		

To those devoid of imagination a blank place on the map
is a useless waste; to others, the most valuable part.

Aldo Leopold

Do you know?

The ecosystem of the Edwards Plateau evolved with fire. With the possible exception of grazing and browsing, fire is probably the most important and widespread natural phenomenon functioning to retard development of natural grassland and savanna vegetation toward dominance by trees and shrubs. Fire is Mother Nature's choice for woody plant management.

President's message continued.

for auction recordkeeping and oversight at the event. Thanks go to Cynthia Burgin for providing such a helpful list of her many volunteers.

A very special thank you goes to our member and speaker at the picnic, **Bill Csanyi**. His excellent presentation and demonstration of the ancient art of flintknapping included a discussion of geology and the benefits that flintknapping skills brought to ancient peoples. Bill exhibited many examples of various ancient stone tools that he re-created over the past eighteen years with his incredible knapping skills.

It takes a lot of work to plan and host our picnic, but we are fortunate to have many capable members who have been very generous with their skills and time. Please thank them next time you see them.



ADVANCED TRAINING

**AT 12-047 WILDFLOWER EXPLORERS' CLASSES**

Wednesday, August 1, 15; September 5, 19; October 3, 17; 9-10a; RNC

First and third Wednesday mornings, learn about 150 native wildflower species found in the Hill Country. Volunteers will meet to walk and talk through the gardens of RNC.

AT 12-095 DRAGONFLIES WITH JAMES LASSWELL

Saturday, July 21, 2-3p, Wild Birds Unlimited, Kerrville

James speaks about his extensive knowledge of dragonflies. Limited to twenty. Call 830-895-7393.

AT 12-097 THE OASIS PIPELINE WILDFIRE AND RECOVERY

Monday, July 23, 7-8p, UGRA

Chapter monthly meeting.

AT 12-092 ELEMENTS OF HABITAT

Friday, August 3, 1-5p, Kerr Wildlife Management Area (KWMA)

First Friday Tours addressing resource concerns in the Edward's Plateau. Part 1 "Elements of Habitat." First of three seminars will deliver the central components in management of any wildlife species: food, water, and cover. Wildlife tax valuation procedures and outdoor tour will follow. Reservations required. Call KWMA office, 830-238-4483.

AT 12-068A-E CANYON GORGE DOCENT TRAINING CLASS

Friday, August 31, September 7, September 14, September 21, September 28; 11a -5p;

Community Resource & Recreation Center; Sattler

Gorge Volunteers Needed! An intense training that includes half day in the gorge. All five classes must be completed to qualify as a docent.

Registration required. Contact Jaynellen Ladd, 830-964-5424 or tours@canyongorge.org.

AT 12-092 NATURAL RESOURCES: ADDRESSING CRITICAL ISSUES IN THE EDWARD'S PLATEAU

Friday, September 7, 1-5p, KWMA

Part 2 "Natural Resources: Addressing Critical Issues in the Edwards Plateau" Second seminar of three with emphasis on critical issues including, recent research investigations, updates, and conclusions.

Reservations required. Call KWMA office, 830-238-4483.

AT 12-094 ECOSYSTEMS MANAGEMENT

Friday, October 5, 1-5p, KWMA

Part 3 "Ecosystems Management, putting it all together. Finding a cure rather than treating a symptom." Third and final seminar discussing white-tailed deer management, grazing management, prescribed burning, brush control, and endangered species. The seminar will also include over thirty-years of nutrition and genetics research.

Reservations required. Call KWMA office, 830-238-4483.

AT 12-096 BRUNS RANCH TOUR

Friday, October 19, 8:30-9:30a, Comfort

The Kendall Soil & Water Conservation District is hosting a ranch tour. Registration, coffee, and snacks at 8:30a. Tour at 9a. Tour the Bruns Ranch with stops along the way to listen to speakers discussing: spring development, brush sculpting, plant identification, prescribed burning, and riparian areas. Four-wheel drive vehicles required. If you do not drive a 4WD, you'll buddy up with someone who does. Wear walking shoes; bring walking stick, hat, and sunscreen. Cost includes covered wagon lunch.

Registration required. \$20.00 per person. Call 830-249-2821.

HILL COUNTRY MASTER 1th ANNIVERSARY 2002|2012 NATURALIST CHAPTER

The Hill Country Chapter celebrates ten years of education, outreach, and service dedicated to the beneficial management of natural resources and natural areas within Bandera, Gillespie, Kendall, and Kerr Counties.



Class of 2002



The first chapter officers, l-r: Jane Crone, vice president of training; John Rogers, Jr., vice president of communications; George Tinsley, vice president of programs and projects; Myrna Langford, secretary and vice president of membership; Sandy Peña, president; and Michael Johnson, treasurer.

Other positions gleaned from 2003 newsletters:
Barbara Lowenthal and Jane Crone - new class organizers
Betty Thomas - database manager
Kim Whitaker - webmaster
Priscilla Stanley - internal communications chair and first newsletter editor
Jim Stanley - advanced training chair
John Quinby - volunteer projects chair



Class Aquatic Field Trip to Louise Hays Park



First to earn certification were Julia Campbell, Sandy Peña, and Alice Bulechek.

Second to certify were Maggie Tatum, Myrna Langford, Priscilla Stanley, and Jim Stanley



OUR CHAPTER WAS ONE OF ONLY 18 CHAPTERS IN 2002

First Year Firsts



The Class of 2002 included thirty adventure-seeking future Texas Master Naturalists.

The 2002 class project involved heavy labor and trench-digging at Bandera Park.



A graduation party was held at Roberts Ranch. Graduates received a packet of Texas Star seeds.

A December potluck social started our holiday tradition.



The first annual report to the state office showed 296 volunteer hours and 325.75 AT hours recorded from October to December 2002.



First chapter website launched January 2003.

Chapter received a \$1,000 donation from Friends of Kerrville-Schreiner Park.



April 26, 2003 opened the application period for the fall training class.



By April 2003, after only six months, members reported 700 hours on 23 volunteer projects.

A chapter field trip to Love Creek Preserve occurred May 31.

In June, Sandy Peña and Jane Crone were interviewed on the local cable channel to promote the fall training class.



The 2003 class had 22 candidates, and began September 3, 2003.

First year meetings had refreshments!

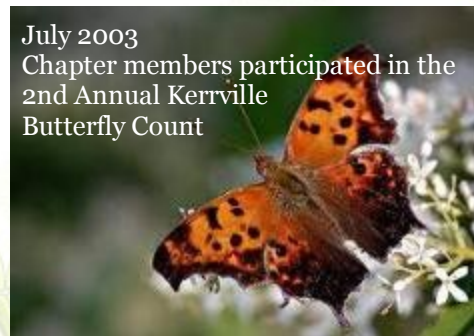


June 2003
Myrna Langford discovered a moth previously unrecorded in Kendall County
arctiid moth *Cynia inopinatus*



First Committee Chairs

July 2003
Chapter members participated in the 2nd Annual Kerrville Butterfly Count



2003 Original Certifying Members

An Open Letter to the Master Naturalist, Hill Country Chapter and Our Friends:



My first iteration of this letter was up to five pages and I said, "This just won't work." I wanted to thank everyone who came, who volunteered, and to say to those who could not attend, I'm truly sorry you missed the chapter picnic. It was one of those days that was unique unto itself, and will not happen again.

Many thanks to all of the volunteers who put in time, planning, and hard labor, drenched with sweat; all for the purpose of making our picnic an experience. I could not do justice trying to name everyone - you know who you are.

Thanks to our hosts, Betty Karger Barth, who made Muleshoe Ranch possible, and John Karger of Last Chance Forever Conservancy. John and his staff worked as if the picnic was their promotion. John worked late into the preceding night to hand letter the overlay sign stating "Master Naturalist." He and his wife Melissa rushed to install the sign at the entrance the morning of the picnic.

Activities got off to a late start. Did anyone complain? No! Everyone adjusted to the flow of events with determination and patience, and lots of water. Speaking of events, hikers returning from the trails were enthusiastic in their response to the experience. Led by chapter experts, they had not only seen trees, shrubs, and forbs, but also raptors tethered at stations along the trails.



Master Naturalist Bill Csanyi, dressed in buckskin leather and stove pipe hat, held the attention of those gathered for the better part of an hour and a half as he conducted a clinic on geology, archaeology, and flintknapping that any Master Naturalist could appreciate. Bill, a veteran of the Vietnam War, disclosed that cancer resulting from exposure to Agent Orange* is taking his life and has claimed his vision, thus limiting his everyday life, and impacting his passion for knapping. Bill's presentation with wit and humor was a display of high courage and fortitude.

It was then time for 92-year-old Betty Barth to capture the hearts of the crowd with the story of Muleshoe Ranch. Her other stories lent insight into daily life on the farm and the character of the people who lived in that early time.

During the morning our silent auction unfolded inside the old farm house and lasted through the lunch hour. The chapter garnered more than \$1,600.00 due to the generosity of those donating items for the auction and those bidding on the items.



At the conclusion of lunch, finalists in our chapter tagline contest were announced. Sally Garrett and Merrily Labarthe report the results on page 9.

Next came the birds of prey demonstration, and what a show it was! How often do you have the chance to get that close to these magnificent birds, and the educational lesson that goes along with the presentation? And, how can you top seeing a young bald eagle right in your face to conclude the festivities?

One of the most amazing things that I observed was seeing the majority of more than eighty people stay the course throughout the day regardless of weather conditions. Was everyone hot? You bet! Was everyone tired? You bet! Were there any discouraging words?

Not that reached my ears. Was everyone glad they came and had a good time? I believe the answer would be a resounding, YES!

One of our volunteers is developing a photo DVD of activities. I will let you know when it becomes available. Koy Coffey has created a picnic photo album at **twalands.shutterfly.com**.

Once again I say thanks to the volunteers, our hosts, the staff, and to all chapter members and friends who made this a memorable experience for all of the right reasons.

Sincerely,

Tom Hynes

2012 Vice President

Master Naturalist, Hill Country Chapter



*Agent Orange is a blend of tactical herbicides the U.S. military sprayed from 1962 to 1971 during Operation Ranch Hand in the Vietnam War to remove trees and dense tropical foliage that provided enemy cover. More than 19 million gallons of various "rainbow" herbicide combinations were sprayed, but Agent Orange was the combination the U.S. military used most often. The name "Agent Orange" came from the orange identifying stripe used on the 55-gallon drums in which it was stored.



Feral Hogs Community of Practice



extension.org/feral_hogs

A nationwide online resource with experts contributing information from across the country.

Find numerous articles and FAQs with information on biology, history, damage, control methods, and many other important aspects associated with feral hogs.

Submit questions to "ask an expert" and receive answers.

facebook.com/FeralHogCoP

Report volunteer and AT hours at the end of each month.

Email report form to **sandy325@windstream.net**.



Picnic in PICTURES

Photographs by Paul Stafford



handheld apps for naturalists



The TickApp
for Texas and the
Southern Region



Butterfly Collection



SciSpy



Notability



WORTH *Watching*

from Garry Speir

American robin lays four eggs in a hanging basket and homeowners film the results.

[vimeo.com/moogaloop.swf?](http://vimeo.com/moogaloop.swf?clip_id=9479342&server=vimeo.com&show_title=0&show_byline=0&show_portrait=0&color=00ADEF&fullscreen=1)

[clip_id=9479342&server=vimeo.com&show_title=0&show_byline=0&show_portrait=0&color=00ADEF&fullscreen=1](http://vimeo.com/moogaloop.swf?clip_id=9479342&server=vimeo.com&show_title=0&show_byline=0&show_portrait=0&color=00ADEF&fullscreen=1)

from Charles Smith

What A Wonderful World With David Attenborough

<http://www.youtube.com/embed/auSo1MyWf8g?rel=0>

from David Langford

High above Texas' rivers, drones track environmental data

statesman.com/news/local/high-above-texas-rivers-drones-track-environmental-data-2400880.html?viewAsSinglePage=true

from Michelle Haggerty

Horseshoe Brings Butterflies, Hummingbirds & Bees to Your Garden - Texas Wildlife Diversity Program

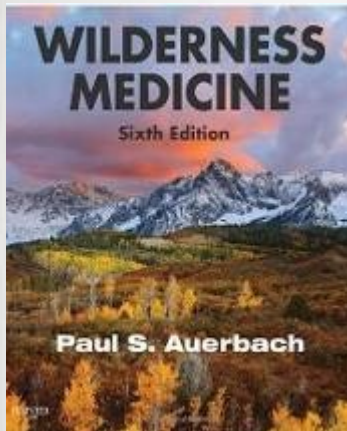
youtube.com/watch?v=HTvGlrwR008&feature=youtu.be



The Big Year (comedy)

Three men pursue the Bird of the Year title. The film was based on the book *The Big Year: A Tale of Man, Nature and Fowl Obsession* by Mark Obmascik.

Nature of Reading BOOKS FOR NATURALISTS



Wilderness Medicine
Expert Consult Edition

Paul S. Auerbach
2011

The more you read, the more things you will know.
The more that you learn, the more places you'll go.
Dr. Seuss

Kendall County Partnership for Parks
has a new website!

kendallcountyparks.org

Visit KCPP's awesome new
site to learn all about
our parks and our
conservation
activities.

Learn something
new on every
page!



The chapter tagline contest winner was announced at the chapter picnic, but due to hanging chads in the recount, new results confirm Susan Longacre, author of "Keeping the Hill Country Native!" as winner.

Keeping the Hill Country Native!

Susan Longacre Wins Tagline Contest

Paul Stafford is Runner-up

Paul Stafford takes runner-up with his contribution, "Naturally Nice Things Happen Here". Susan and Paul both received *Salvia greggii* plants as prizes.



We had a total of fifty-five entries in the contest. Each board member voted on his or her top five choices in order of preference. The winning entry, runner-up, and fourteen honorable mentions emerged. All entries will be kept on file to be used as occasions arise.

Thank you to Kristie Denbow for the contest idea that sparked the process and thank you to all participants for your creative offerings. We now have many clever and meaningful slogans to describe our chapter. We found that to do this kind of project, well, it takes a village.

Sally Garrett and Merrily Labarthe

Contest Results

Winner: Keeping the Hill Country Native!

Susan Longacre

Runner-up: Naturally Nice Things Happen Here!

Paul Stafford

Honorable Mentions:

Naturally Essential

Carolyn Bean

Education. Action. Stewardship.

Giving Back to Nature and Communities

It's our nature!

We are a force of nature.

Volunteers, naturally.

Kristie Denbow

Be the change you wish to see in the world/
your community/your Hill Country

Michelle Haggerty

A Texas Star

Sharing nature's wonders with our neighbors

Bright Stars Shining in the Hill Country

Sharon Hixson

Master Naturalist LOVE - Learn-Observe-
Volunteer-Educate

Learn to Speak the Language of Nature - Become
a Master Naturalist

Open a window on the Hill Country - Become a
Master Naturalist

Tom Hynes

Have you hugged your planet today?

Phyllis Muska

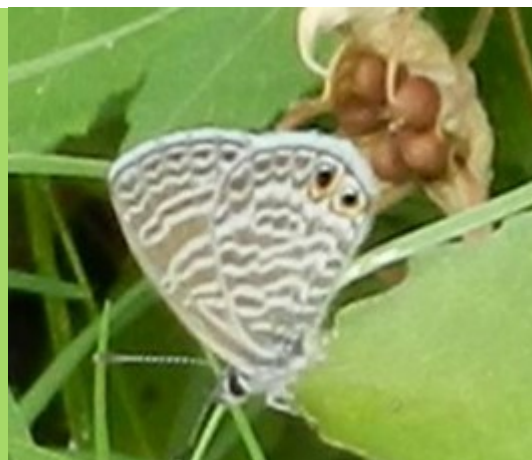
Riverside Nature Center Weekly Fauna Census 6/29/2012

The fauna census was completed as part of the Kerrville NABA count. A new butterfly record was documented when the team found a marine blue.

This report completes the fifth year, plus two months, of the project that I committed to lead. I will summarize the five-year data and update the RNC Nature Checklist. Look for a note in the fall concerning continuation of the census.

Virginia deWolf
Cynthia Johnson
Harriet Warren
Tom Collins

Ron Hood
Martha Miesch
Marion Worthington





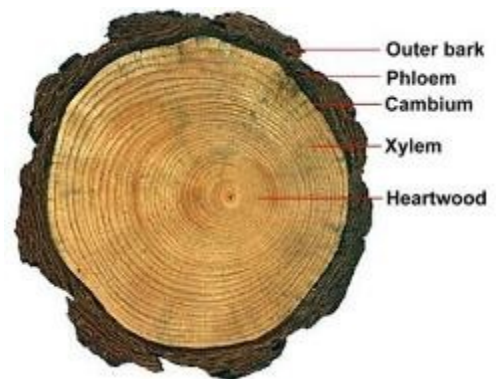
How Does a Tree Work?

Have you ever stopped to think about what goes on inside a tree? We know that roots of a tree take up water and minerals from the soil transporting them to the leaves where some of the water is used in photosynthesis to combine with carbon dioxide from the air to make sugars, starches, and cellulose.

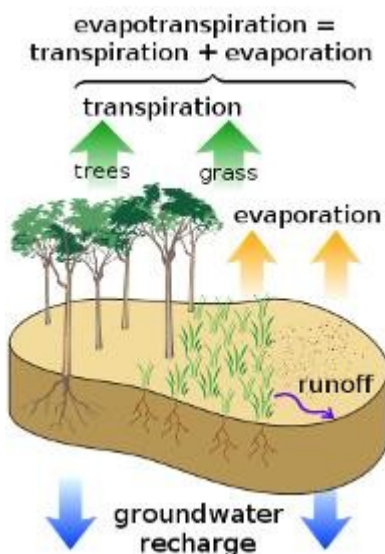
But the roots are thirty feet below the top of the average Hill Country tree, and many trees that are several times that tall. How does water get up to the leaves? Trees do not have hearts. They do not really even have a closed circulatory system. So how does it work?

Just under the bark of a tree are three structures that are involved with transportation of fluids within the tree. The outermost structure is the phloem (pronounced flow-em), just inside that is the cambium, and then the xylem. The xylem and the phloem structures are made up of many long cells connected end to end in a chain that reaches from the roots to the leaves and which form rings of living tissue just under the bark.

The xylem, running from the finest root hairs to the tallest leaf is where water and minerals from the soil are transported to the leaf. But how does it get there? If we were designing such a system, we would use a pump, which would require an external energy source. The tree does not have a pump.



It turns out that there is an unbroken column of water from the roots to the top leaf, from one xylem cell to another all the way to the top. The water molecules are attached to each other in this column of water by adhesive and cohesive molecular forces. On the underside of the leaves are microscopic structures called stoma which open and close with temperature and humidity and from which droplets of water evaporate.



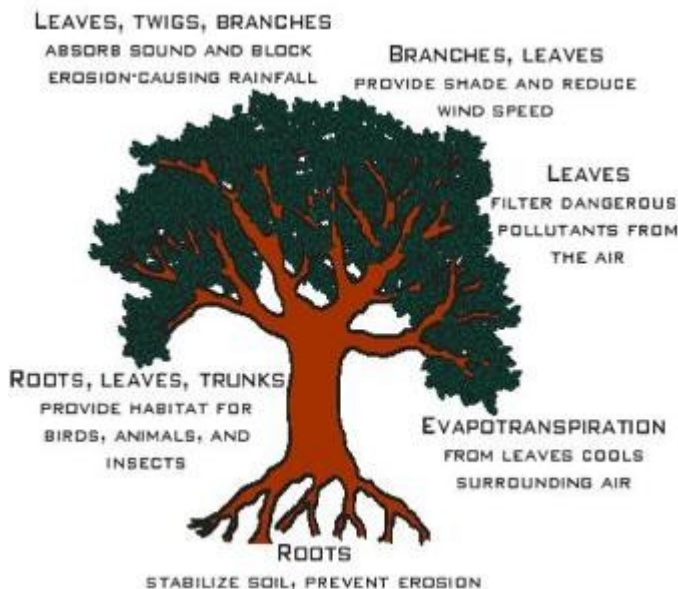
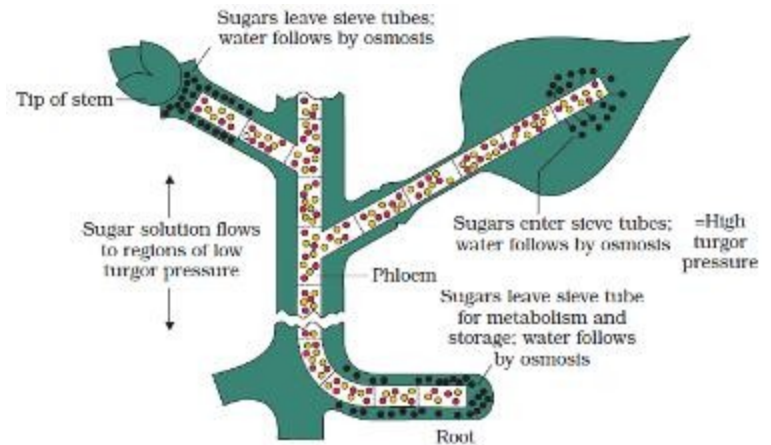
When a water molecule evaporates from a leaf, in a process called evapotranspiration, its place is taken up by the next molecule below it, which pulls up the molecule below it and so on and so on all the way down to the roots. Thus water flows from the roots to the leaves through the xylem cells.

When the leaves make sugars from carbon dioxide and water, not all of these sugars are used to make starches and cellulose for the leaves. The roots have to grow too, and they can't make their own sugars. So sugar solution made in the leaves (sap) is transported down to the roots through the phloem structures under the bark. The sugar molecules are the building blocks for starches and cellulose, the former being energy stores and the latter being structural components (wood) of the plant.

continued.

How does a tree make its first leaves of spring when it does not have any leaves as yet to carry out photosynthesis? The answer is that sugars are transported from where they were stored in the roots for the winter back up the phloem to make the new leaves. So at different times, sugar solution can flow both directions in the phloem. How does it do that?

The energy to drive that process is called osmotic pressure, in which water in the xylem flows into cells with high sugar concentrations, forcing the sugar solution into the phloem which then flows through the phloem into cells with lower sugar solutions. Thus sugar is transported from areas of high concentration to areas of low concentration. In the summer and fall the leaves have higher concentrations of sugar than the roots, but in the early spring the roots have the higher concentration, and these concentration gradients drive the flow of sap from where it is not needed to where it is.



By the way, the process of storage of starches in the roots is where we get our potatoes, carrots, radishes, turnips, and beets, and the sap flow in early spring gives us maple syrup.

Most of the growth of trees is at the tip of the branches as the tree grows taller and longer branches. But the trunks also grow a little in diameter each year as older xylem becomes sapwood and older phloem becomes bark and are replaced by new layers produced in the cambium. This process is revealed in the growth rings of trees.

Anyone interested in joining the fall 2012 class of Master Naturalists should e-mail me or call Eileen at 830-367-4001.

Until next time...

Jim Stanley is a Texas Master Naturalist and author of *Hill Country Landowner's Guide*. Email Jim at jstmn@ktc.com. His columns can be read at hillcountrynaturalist.org.

Attention Landowners:
Lease your land to
Texas Parks and Wildlife



TPWD is interested in leasing land for hunting birds, feral hog, squirrel, and rabbits. We are most interested in areas of 100 acres or more located within a two hour drive of population centers. Support the hunting heritage of Texas and help us offer affordable hunting opportunities for families while earning supplemental income. Email us at hunt@tpwd.state.tx.us.



We want to hear from YOU!
TAKE OUR CONSERVATION SURVEY NOW >>

Take The Trust for Public Land's **2012 National Survey on Conservation**. Your opinions on open space and nature are vital.

Thank you for all that you do to help us save the best of America for generations to come.

Survey statistics help prove support for conservation for grants, donations, and talks with stakeholders. A donation is requested after the survey, but is not required.

Kerrville NABA Counts

Interesting statistics from the eight Kerrville North American Butterfly Association (NABA) counts.

- 43 species and 447 individuals (average including this year = 33 species and 316 individuals). This year's 43 species was the second highest count.
- Of the 65 species seen since the first count, this year's 43 species is 66% of the total. Any percent greater than 60% is considered a good count.
- 4 new species were counted which increased to the total to 65 species seen since the first count, and 9 new individual high counts.
- We had 11 exclusives (one individual) which is average for the past counts.
- Of most interest is how variable the lists are from the east to the west side of the circle.

Consider the following:

Sleepy Orange – East 8 West 45

Variegated Fritillary - East 6 West 27

Red Admiral - East 0 West 9

Hackberry/Tawny Emperors – East 28 West 1, plus there were an additional 50-plus+ species in the east that were not studied.

Clouded Skipper – East 23 West 1

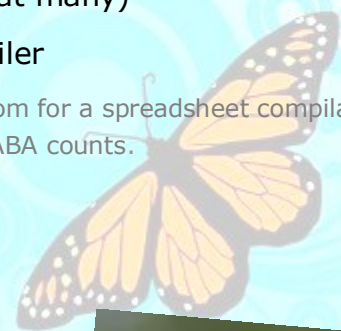
The east was covered by seven folks while the west was counted by one. Still, why were there hundreds of emperors in the east and only one in the west, no admirals in the east and nine in the west? Almost all butterflies were being counted along the Guadalupe River basin, yet they appear to be in large numbers in very restricted zones along the river.

Rain fall for this year on our ranch in Pipe Creek was 17 inches = recent abundant wildflowers = 43 species.

Same time last year we had 3.75 inches = almost zero wildflowers = 24 species (fairly amazing to find that many)

Tom Collins, compiler

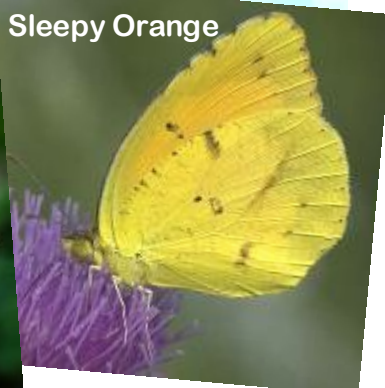
Email denbow@gvtc.com for a spreadsheet compilation of all eight Kerrville NABA counts.



Sleepy Orange



Variegated Fritillary



Red Admiral



Hackberry Emperor



Clouded Skipper



Attractive Deer Favorites That Need Our Support:

ROCK PENSTEMON

& BIG RED SAGE

by Priscilla Stanley

Rock Penstemon *Penstemon baccharifolius* is an attractive evergreen plant with spikes of bright red tubular flowers above its dark green leaves from June through September. These blooms are favored by hummingbirds and mellow native bees. This one to two feet tall perennial is native to the Edwards Plateau and Trans-Pecos, and thus is well-adapted to our alkaline soil. It is found in the wild on limestone cliffs, probably to escape hungry deer that will browse the plant. It is not common in the wild in the Hill County, probably because our area has one of the highest deer populations in Texas.



Priscilla Stanley

Rock penstemon requires very good drainage, as it has on cliffs where it grows in the wild. It is easy to grow in raised beds which can offer drainage similar to the rocky, sandy, gravelly soil of its native habitat. We have had two plants for nine years in different raised beds inside our homestead high-fence. Periodic drip irrigation, only when the beds are dry, prolongs the bloom period. It can grow in full sun or part-shade. Its neat growth habit works well in both natural and formal plantings.

Big Red Sage *Salvia penstemonoides* was thought to be extinct in the wild until the 1980s when a few plants were found near I10 in Boerne. Native nurseries carefully propagated more plants and were able to create a substantially enhanced population in nature centers and private native plant gardens throughout the Hill Country. Big red sage is a very attractive, easy-to-grow, semi-evergreen perennial that deserves wider use, if a high deer population is not present or deer protection is available, such as a high fence.



Priscilla Stanley

In the wild, big red sage is found in moist areas, often in riparian areas or near seeps on steep slopes beyond the reach of deer. Big red sage can grow in sun or part-shade reaching a height of three to six feet and benefits from periodic drip irrigation in dry times. These large plants have deep root systems and thus benefit from being in a raised bed with deep soil. The plant adds more stems each year (some older plants have over thirty stems) and each stem is covered with racemes of bluish-red tubular flowers that attract hummingbirds and butterflies. Each flower makes a small hard seed that is eaten by various seed-eating birds, with enough seed left over to form an impressive colony of big red sage over time.

If just starting to learn plant scientific names, congratulations! It helps to know that *Salvia penstemonoides* means "the salvia that looks like a penstemon". It is a sage with a square stem, but the leaves are opposite and the individual flowers are held at right-angles to the stem, like a penstemon.

UGRA'S 9th Annual River Clean Up

Saturday July 28 Louise Hays Park Kerrville



Pre-register by July 20 and avoid the lines on the 28th! The first 100 pre-registered volunteers receive an official 9th Annual River Clean Up t-shirt. Great prizes and awards for the most unusual item and the biggest item. Plus, free refreshments!

Email Tara Bushnoe, tbushnoe@ugra.org or Travis Linscomb, tlinscomb@ugra.org, or call UGRA, 830-896-5445.

Visit the UGRA website to learn more and download forms
ugra.org/annualrivercleanup



Bionic Butterfly Wings are Ultimate Heat Sensors
[click for more...](#)



Every moment Nature starts on the longest journey, and every moment she reaches her goal.
Goethe

WORTH *Reading*



Brightly colored bird bills indicate good health
The color of a female bird's bill has an important biological purpose.

sciencedaily.com/releases/2012/05/120524134705.htm

'Stunted' pot plants cannot reach full potential

Plants grown in pots never reach their full potential, images of their roots show.

bbc.co.uk/nature/18612661

Drought-killed trees could become liability issues for landowners

txforestservice.tamu.edu/main/popup.aspx?id=15761

from Kip Kiphart

Drought Reaches Record 56% of Continental US
livescience.com/21419-drought-record-weather.html

from David Langford

Read and listen

Part 1: How One Drought Changed Texas Agriculture Forever

npr.org/2012/07/07/155995881/how-one-drought-changed-texas-agriculture-forever

Part 2: Texas Seeks New Water Supplies Amid Drought

npr.org/2012/07/08/156366821/texas-seeks-new-water-supplies-amid-drought

T E X A S



Hill Country Chapter
a 501(c)(3) corporation

We meet the fourth Monday of each month (excluding June and December) at 7:00p.m. in the Upper Guadalupe River Authority Lecture Hall at 125 North Lehmann Drive in Kerrville.

Join us at 6:30p.m. for our fun 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.

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Questions about our chapter?

Email Eileen Gotke,
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Texas Star *Lindheimera texana*

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 contact Kristie Denbow, denbow@gvtc.com.

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