

# The Tracker

The Central Texas Master Naturalist Newsletter

October 2015

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Banner: Richard McCarthy's photo of a yard in Rockport full of Hummingbird feeders. Right: by Diane Lloyd.

## Calendar at a Glance

October 5, Hours due

October 4th at 2:30 p.m. and October 5th at 6 p.m., Orientation for Nature Fest, Bend of the River park

October 13, 6 p.m. General meeting

October 9, Night Hike/Star Party

October 10, Nature Fest

October 23-25th, State Conference

November 14th, Advanced Stream Team Training

## Hummer Bird Celebration!

- Richard McCarthy

The weekend of September 17-20 was a deep immersion into the life and love of humming birds.

I attended the 27<sup>th</sup> annual Hummer Bird Celebration in Rockport/Fulton, Texas. This year was as great as the previous years. There were new speakers; new topics and the hummers cooperated by showing up in the hundreds.

The celebration had a great variety of activities: viewing opportunities, class room presentations, bus and boat birding tours, humming bird banding and more.

There were twenty-two homes that had set out many, some yards had over twenty, nectar feeders and their yards were open to the public to sit and observe the feeding hummers. To visit these yards one could either



Continued on page 6...

*Chapter Motto*

**Earth Day,  
Every Day**



# From the President's Pen



## Central Texas Master Naturalists Presents:

A day packed full of activities and exhibits for the whole family to explore and experience Central Texas wildlife and wild places. Plus, grab lunch from your favorite food truck.

[CentralTexasNatureFest.org](http://CentralTexasNatureFest.org)  
**\$5 per vehicle**

2015 Central Texas  
**NATURE FEST**  
*nature, look into it*



**October 10, 2015 11am-5pm**

Bend of the River 7915 South General Bruce Drive Temple, TX 76502

Special Presentation:

**NIGHT & HIKE  
&  
STAR PARTY**

**Friday, 10.9.2015  
7:30pm-10pm**

**Free Admission**



# 2015 Central Texas NATURE FEST



- Zoe Rascoe

The 2015 Central Texas Nature Fest is almost here! If you thought last year was fun, this year is going to be even better. We have about 60 nature and natural resource-related exhibitors lined up as well as about a dozen vendors selling items that promote nature and the outdoors. We have also added a guided Night Hike and an Astronomy Society-led Star Party on Friday night before Nature Fest. We are going to need a good supply of herders in the dark! Please plan to come and enjoy the presentations while helping safely deliver guests where they need to be.

I suspect most of you already have a task for Nature Fest, but if for some reason you have slipped through - please call Lynn Fleming and volunteer! We will need all our Maui Blue Shirts on deck for this large event. And don't forget to invite your neighbors, friends, relatives or people you don't know but look like they could use a fun day outdoors.

Below is the back of the counter card. Posters are popping up all over Central Texas. If you know a place that needs a poster or counter cards, let Zoe or Rehanon know - help us get the word out that Nature Fest is coming!"

Required orientation is Sunday, October 4 at 2:30 p.m. and Monday, October 5 at 6 p.m. at the Park.

## 2015 Central Texas NATURE FEST

*nature, look into it*

[CentralTexasNatureFest.org](http://CentralTexasNatureFest.org)



**Partial List of Exhibitors:**

- Waco Cabela's - Archery and BB gun shooting ranges
- CRASR Baylor University - Get WET! Activities
- Texas Hawking Association - Falconry
- Gault School of Archaeological Research - Incised Stones & Flint Knapping
- Texas A&M AgriLife Extension - Feral Hog Eradication Program
- Texas Parks and Wildlife - Texas Wildscapes, Hummingbird Watch
- Texas Forest Service - Be FireWise and SMOKEY THE BEAR
- US Fish & Wildlife Service - Prescribed Burning
- Nature Resources Conservation Service - Rainwater Simulator
- Clearwater Underground Water Conservation District - Every Drop Counts
- Bell County Master Gardeners - Garden Crafts
- Twin Lakes Audubon Society - Birdwatching 101
- US Army Corps of Engineers - Water Safety
- Bell County Museum - Native Americans
- American Bird Conservancy - Bird Nest Display
- Native Prairie Association of Texas - Seed Bombs for planting
- Franklin HERPS - Reptiles from Texas and Around the World
- TWPD Angler Education - Backyard Bass Casting and Knot Tying
- Boy Scouts - Campfire Building and Dutch Oven Cooking
- Texas Bluebird Society - Bluebird Conservation and Houses
- Fort Hood Natural and Cultural Resources - Hands-On Skull and Fur Display
- Central Texas College - Aquatic Insects and Beneficial Insects
- Bats Conservation International - Attracting Bats
- Ancient Grains - Growing Historical Grains
- Texas Crawdads - Learn from Live Crawdads
- Fleming Grain and Cattle - Animal Tracks
- Miller Springs Alliance - Invasive Plants
- The Meadows Center for Water & the Environment - Texas Stream Team
- Native Plant Society of Texas - Monarch Watch
- Balcones Canyonland Refuge
- Mother Neff State Park and Colorado Bend State Parks

## October 10, 2015 11am-5pm

Bend of the River 7915 South General Bruce Drive Temple, TX 76502

**Event Sponsors:**

Central Texas Master Naturalists  
City of Temple Parks & Recreation

T E X A S



Master Naturalist



City of Temple  
PARKS & RECREATION

**Event Supporters:**

Clearwater Underground Water Conservation District  
Concentus Media Group  
Little River San Gabriel Soil & Water Conservation District  
PaperGraphics LTD  
Temple Parks Foundation  
Waco Cabela's

# Spotlight on Natives



## Dragonflies and Damselflies

*Editor's Note: Pat Donica of the NPSOT/Williamson wrote the following story on the talk given by Dr. Abbott at their September monthly meeting. It was a terrific talk. If you ever have a chance to hear Dr. Abbott, make sure you take advantage of it. Thanks to NPSOT/Williamson and Pat Donica for sharing.*

### - Pat Donica, NPSOT/Williamson

Dr. John C. Abbott spoke about “Dragonflies & Damselflies of Texas”, sharing remarkable information and beautiful photography with an engaged audience. Dr. Abbott is Director of the Wild Basin Creative Research Center at St. Edwards University and the author of three books: *Dragonflies and Damselflies of Texas* and the South-Central United States, *Damselflies of Texas*, and *Dragonflies of Texas*.

We learned that dragonflies and damselflies spend most of their lives as nymphs, a stage that lasts 1 month to 8 years (!) while molting 8 to 17 times, and only a relatively short time as adults (averaging only 4 to 6 weeks). We saw video of an adult emerging out of a nymph. We learned that molting is traumatic as the new individual breaks out of its predecessor's exoskeleton. The newly emerged adult's color sorts out over several days as it hardens and color will change as it matures.

The short adult lifespan is focused on procreation. Who's hanging around the pond? You'll mostly find males. Females come around when they are ready to mate. As you might expect, there's considerable competition and some shenanigans going on to promote self-interest.

Nymphs and adults are predators – feeding on biting flies, mosquito larvae, and more. We saw video of a worm being grabbed at the bottom of a pond, and a photo where dinner was a small fish, incapacitated and nearly decapitated by a bite. Some prey upon other species of damselflies or dragonflies, and some prey upon their own species. A large dragonfly can even take down a hummingbird!

Dragonflies and damselflies are thermoregulated. When not flying, they may bask (exposing as much surface as possible to the sun) or obelisk (abdomen pointed directly to sun to minimize exposure). Some might perch vertically or horizontally on a surface. Color change can indicate temperature. A particular species is bright blue when warm, dull grey when cool.

Huge eyes take up the majority of the head in these aerial predators, with a 360 degree view and up to 30,000 lenses per eye making them great motion detectors. (Their small short antennae are used for touching and tasting.) They see in color though for some colors they see with different intensities than humans – more blues/purples, less of reds/yellows. A video demonstrated how a dragonfly/damselfly would likely see a woman in a red dress in front of greenery.

Only dragonflies, not damselflies, migrate and only *some* dragonflies migrate. In North America, about 16 species migrate between Canada and Mexico with research tending to focus on 5 main species. Our chances for seeing a migration are better along the coast but migration paths are unpredictable. Dr. Abbott has not seen a migration through our area.

There are 163 species of dragonflies in Texas out of 328 in the United States. There are 80 species of damselflies in Texas out of 139 in the United States. Most species are in “pretty good shape”. Some are endangered.

In response to a question about the impact of climate change, Dr. Abbott said insects with shorter lifespans are better off, that dragonflies and damselflies are very agile compared to most insects, and he believes they will be able to shift their ranges.

That's good news!

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# More Dragonfly Info

- Terrie Hahn

I attended the Dragonflies and Damselflies seminar spoken about on the previous page. Here are some additional points of interest from the talk.

The most accurate way of deciding whether you're looking at a dragonfly or damselfly is to look at the size and shape of the wings. The Damselfly wings are the same size and shape. The dragonfly's back wings are broader than the front wings.

If you look at the damselfly nymphs, they have 3 noticeable gills at both ends of the body. The dragonfly nymph has gills in the rectum and you can't see them. Nymphs are about 3/4" - 1 1/2". When the time comes to become an adult, it takes about 3 hours for the nymph to adult stage while shedding their skin. And then up to 3 days for the adult to harden their bodies at which time they are very prone to being eaten by predators including birds. Adults generally live 4-6 weeks.

To get more information or become a citizen scientist helping check on migratory patterns of dragonflies, go to:

<http://www.pondwatch.org/index/welcome>

"Dragonfly Pond Watch is a volunteer-based program of the Migratory Dragonfly Partnership (MDP) to investigate the annual movements of five major migratory dragonfly species in North America: Common Green Darner (*Anax junius*), Black Saddlebags (*Tamea lacerata*), Wandering Glider (*Pantala flavescens*), Spot-winged Glider (*Pantala hymenaea*), and Variegated Meadowhawk (*Sympetrum corruptum*). By visiting the same wetland or pond site on a regular basis, participants will be placed to note the arrival of migrant dragonflies moving south in the fall or north in the spring, as well as to record when the first resident adults of these species emerge in the spring."

Dr. Abbott said that Hornsby Bend Bird Observatory in southeast Austin has had quite an abundance of Dragonflies.

Go to: <http://hornsbybend.org/index.html>



Photo of Giant darner by Tripp Davenport on Bugguide.net

# Hummers...continued

drive to them or take a bus for a nominal fee.

A sampling of the subjects presented:

Hermits; a special kind of hummer; they are considered the more ancient than the “modern” hummer in plumage as well as habits and behavior.

Hummingbirds from Texas to Cuba, Central and South America- information on many species, from the sword-billed to the tiny Bee hummingbird.

The Hummingbirds of Costa Rica; Costa Rica is about the size of West Virginia and is home to about fifty of the world’s 338 hummer species.

Hummingbird courtship; “FLASH, ZOOM, DONE.” Male hummers principally use their colorful Garget and aerial displays to earn the right to mate. Once mating is over, the male disappears and leaves the nest building and rearing the chicks to the female.

This is a synopsis of only half of the presentations attended, but will give an idea of the variety of subjects available.

There were also sixty-four vendors set up, so one could purchase anything from T-Shirts, binoculars, bird feeders, bird food and nectar, and too many to list here.

I always enjoy going to the coast, but seeing all of the migrating hummers, learning, and enjoying the fellowship of fellow hummer fanciers made for a great weekend-looking forward to 2016.

Photos by Dr. Juan Bohamon and [www.rockporthummingbird.com](http://www.rockporthummingbird.com).



# HummerBird Banding

*This article is reprinted with permission from the Rockport-Fulton HummerBird Celebration website <http://www.rockporthummingbird.com/banding>*

Each year during Rockport-Fulton's HummerBird Celebration two licensed hummingbird banding teams busily band the hummingbirds caught in their nets. Each hummer is fitted with a tiny band containing a letter and five numerals to identify it. The hummers then continue on their southbound journey to their wintering grounds in Mexico and Central America.

All bird banding information is carefully recorded by the bander and the data is sent to the North American Bird Banding Laboratory where banding records are maintained.

Whenever a banded bird is recaptured by another bander, the information is sent to the banding lab. The banding lab notifies the original bander of the place and date their bird was recaptured. The bander who recaptured the bird is notified where and when the bird was originally banded.



This Leucistic Hummingbird is being banded. Also in the picture is a blue box containing the bands that are put on the birds.



This Buff Bellied Hummingbird is drinking nectar during the banding process. The white spot on the head is a drop of paint applied by the banders so they can easily spot the birds in other locations during migration. Banders at one location used one color, banders at other locations used other colors.



Notice that the Leucistic Hummingbird is not completely white; the tail feathers have normal coloration on the tips.

# *If you feed them, they will come*

**- Frances Idoux, Bell County Master Gardener**

Triple digit temperatures reduced the number of blooming plants in my yard to only the strongest survivors -- lantanas in full sun and petunias in shade (as long as they are watered). What the gardens have lacked in flowers, they have made up in tiny visitors -- hungry hummingbirds. I have three feeders which have attracted numerous customers. Their needs are specific -- simple feeders kept clean and filled with nectar, homemade with the easy formula of one cup sugar dissolved in four cups water heated to boiling.

This summer's hummingbird population has taught me a few lessons. Their arrival for breakfast is not always peaceful. Male hummingbirds are territorial and tend to claim one feeder or all the feeders nearby as their own. The smallest of all birds, their wings can beat nearly 80 times a second. No wonder they are so hungry! In addition to the hum of those wings, hummingbirds also "chatter." And they are ferocious dive bombers, driving any intruder away.

This year one of the hummingbird flock produced a delightful surprise - a small cuplike nest with two small occupants. Like many of nature's gifts, this one would have been easy to overlook. Fortunately, it was spotted by the young man who tends my garden when I'm away. As a very observant Eagle Scout, he noticed the nest and the babies. Luckily, I came home in time to take the picture!



# Bees and Wasps and Hornets...Oh My!

- Terrie Hahn

Today, I listened to the Extension Webinar series seminar entitled "Bees, Wasps and Hornets – They're all Different" given by Dr. Charles Ray of Auburn University. You can listen at: <http://www.extension.org/pages/72197/2015-all-bugs-good-and-bad-webinar-series#.Vq3YH5d2hLP>

These insects are Aculeate Hymenoptera, also called stinging hymenoptera. Of course, only females sting. Males may look like they're going to sting and may even get aggressive and bump you like they're going to sting you. But, alas, they can't! Most of these insects sting out of a defense mechanism. The venom in their stingers have 3 ingredients: small nonproteinaceous molecules which cause the pain, peptides which help release the molecules that cause the pain and large molecules – enzymes and proteins which enhance the pain. Most people are NOT allergic to stings even if you have asthma. The very few people who die each year of Hymenoptera stings have received a sting some 15 years before. It's the second sting's enzymes that get you and if you're truly allergic, it will kill you in 20-60 minutes. If you do get stung by a Yellow Jacket, the stinger will place an alarm pheromone at the site which will attract others to sting you close to the same spot for about 14 hours. In other words, get inside for the rest of the day if you've been stung by a yellow jacket.

## BEES

Most bees are vegetarians. Pollen is their protein source. Nectar is their carb source. Most bees have feathery hairs. Males and females look different, so if you see several types of bees flying around, it may simply be that they're male and female. Bees don't



want to sting. It's only done as a defense mechanism. If you are stung, Honey bees and Bumble bees are the

usual culprits. Others don't sting. With bees, their eggs come out of the base of the ovipositor shaft (stinger), so the venom goes to the tip.

There are 2400 species of bees in North America, all beneficial except a couple like cleptoparasites, a thin, almost hairless bee that enters other bees' nests to lay eggs. Their eggs hatch quicker. Their young eat the other young and the pollen stored for the other young. And, Carpenter bees tend to be destructive to the wood in our homes and decks.

Seventy percent of bees worldwide live underground. They are solitary and live to reproduce, not defend. Ground bees like sandy, well drained soil with a southern exposure. If these types of bees become pests, you can usually do some heavy watering and they'll move along.

## WASPS

Wasps have narrow waists. The females can sting repeatedly; their sting apparatus is used for egg laying also. They live on a diet of insects for protein with nectar used as fuel (carbs). Ants are also members of the super family of Vespidea which wasps are a part of.

There are **paper wasps**

(vespidae:polistinae) which build a single layered paper nest connected by a pedicel. These colonies are built around a foundress which is the head female. Sometimes there are a couple of them.

They look the same as the others, but are a bit larger. These alpha females lay most of the eggs, but others

Continued on next page...

Photo below from TAMU of paper wasp nest. Photo in corner is of bees that come every day to our fountain.

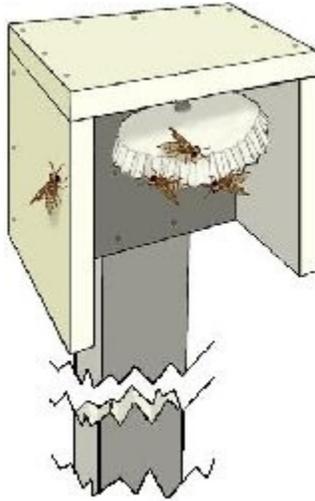


Photo by TAMU/Galveston



## Bees and Hornet and Wasps...continued

can slip an egg in here and there. Workers can lay eggs during the reproductive phase of the nest, but they'll all be male. The larvae of paper wasps are fed exclusively on masticated caterpillars. Many farmers will add shelters for paper wasps around their fields to help get rid of caterpillars. Overwintering wasps are usually fertilized females.



They like high, dry places for the winter and have no interest in stinging anyone.

You can get directions for building a shelter for paper wasps at: <http://www.ces.ncsu.edu/depts/ent/notes/Other/note121/note121.html>

There are **yellow jackets** (vespidae:vespinae) which are divided into 3 genus: **yellow jackets (vespula)**, **aerial yellow jackets (dolichovespula)** and **true hornets (vespa)**.

**Hornets** tend to nest in hollow trees. There is only one true hornet in the U.S.-a European hornet (*vespa crabro*) which tends to live in the Eastern States. It is considered the "gentle giant" in Europe.

**Yellow Jacket** is a North American term. They are just another wasp in other parts of the world. They are usually yellow and black, but can be black and white and some are red. They create flat combs of cells suspended by pedicels and are multi-tiered protected by a bag-like outer envelope. They use oral fluids and macerated wood for their nests. The underground nests of the cavity dwellers are also multi layered. The female who does most of the egg laying is the Queen. Workers lay eggs at the end of the summer, all of whom will end up being male. The males live for only a few weeks, long enough to fertilize the queen who will overwinter.

There are **aerial yellow jackets**. These yellow jackets are considered by many to be hornets.

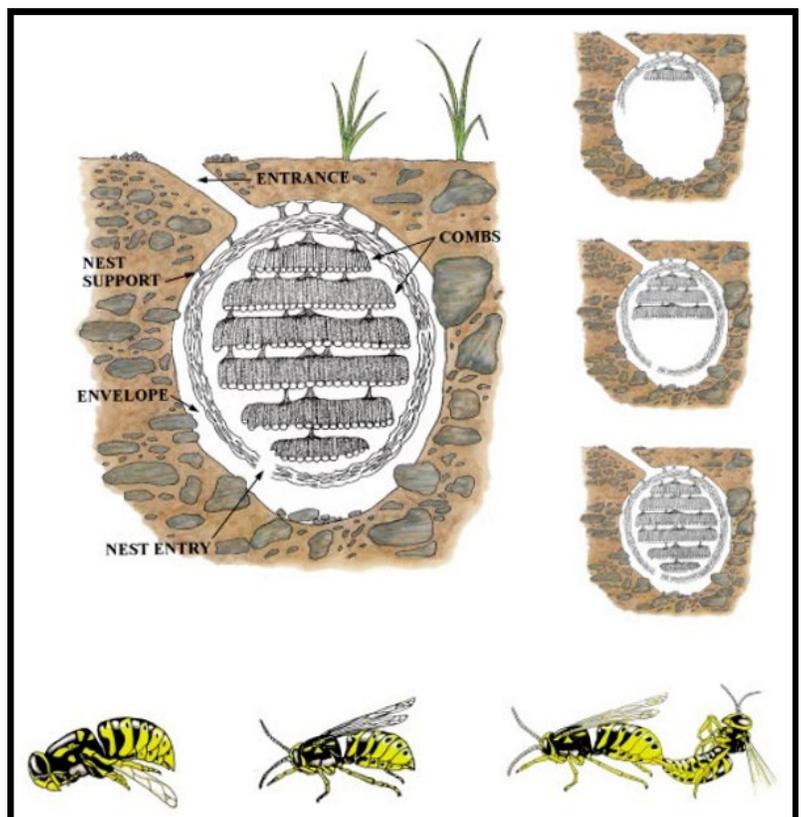
There are 6 species in North America. Their nests are stronger and more water resistant since they are in the elements above ground. They have 200-700 workers.

There are **cavity dwelling yellow jackets**. Fourteen species reside in North America. They often use old underground rodent nests to build their nests, but any cavity will do. If you get to 14 inches of the entrance to their nest, they'll sense it and come flying out to check things out or defend their nest. The queen builds a cell, lays one egg and continues on that way always opening downward making an oval nest. The main entrance to the underground nest is at the bottom. The larvae hatch, are fed and cared for in the cell, then pupates within the cell and spins a white silken cap at the opening. The adult emerges and the cell can be reused 2 or 3 times that season. In fall, it becomes vacant and won't be reused.

Eastern yellow jackets are more in eastern states and in east Texas and into the panhandle. We probably have Southern yellow jackets.

Check out some of these Webinars! You'll be glad you did!

Diagram of cavity dwelling yellow jacket next by:<http://markdmckinney.com/yellowjacket.html>



# August Celebrations!

- Zoe Rascoe



Dale Hughling received his 1,000 (or a gazillion) hour Milestone pin - You are welcome, says VMS!; Andreas Wooten received his certification pin - not long after graduation! Both Sarah Byrd and baby Olivia, who attended all training classes with (in) mom, received their certification of completion; Sue Valdez, Kathy Cantu, Lyna Pitts and Jacki Bakker all received their recertification pins.



# Swapping Seeds

- Zoe Rascoe

We participated once again at the Harker Heights Seed Swap on August 8th. Not so much a swap as it is "Free Stuff." We took some native grass seeds and other plants and seeds to put on the tables for sharing. We also promoted Nature Fest, sold our loupes, nature guides and nature-y coasters. As in the past, we received nice coverage by the local newspapers which helps spread the word about the work Master Naturalists do in our communities. The CTMN booth was manned by Lynn Fleming, Marilyn Whitworth, Dale Hughling, Gail Hughling and Zoe Rascoe. Thanks goes to Jacki Bakker for stopping in to buy some of our merchandise!



# Nolan Creek/South Nolan Creek Partners Meeting

Killeen, TX October 8, 2015: The Texas Commission on Environmental Quality (TCEQ), Texas Institute for Applied Environmental Research (TIAER) and City of Killeen cordially invite you to a Nolan Creek Watershed Partnership meeting. We are collaborating with local citizens, agencies, and municipalities within the watershed to identify sources and design an educational program to improve stream water quality. Currently, portions of Nolan Creek/South Nolan Creek do not meet Texas water quality standards due to elevated bacteria concentrations.

At the meeting, you will have the opportunity to hear updates on water quality monitoring along the creek, particularly with regard to bacteria levels. Additionally, an update on potential sources will be presented and steps in moving towards watershed protection planning for Nolan Creek/South Nolan Creek.

Because decisions concerning the water quality of Nolan Creek/South Nolan Creek affect all landowners, citizens, industries, and municipalities within the watershed, your partici-

pation is important. Local stakeholders are key to improving water quality. The meeting will be held on October 8, 2015 from 6:00pm – 8:00pm, at the City of Killeen Transportation Services Building located at 3201 W.S. Young Drive, Killeen, TX 76541. For more information contact Anne McFarland at 254-968-9581 or mcfarla@tiaer.tarleton.edu or visit our website at <http://www.killeentexas.gov/nolancreekwatershed>.




## Walker County Master Gardeners Present

# Texas Pollinators Garden Symposium

**Friday, October 16, 2015**  
**Veterans Conference Center**  
 455 Hwy 75,  
 Huntsville, TX 77340  
 8:00 am to 5:00 pm



**Registration**  
**\$75**  
 (Lunch and t-shirt Included)

at:  
[www.walkercountymastergardeners.org](http://www.walkercountymastergardeners.org)

or contact  
 the AgriLife Extension office  
 936-435-2426

**At the Door**  
**\$95**  
 (Lunch and t-shirt Included)





**Felder Rushing**  
 Keynote Speaker  
 Butterfly Gardening



**Henry Flowers**  
 Herbs in the  
 Pollinators Garden



**Chris Moore**  
 Bees as  
 Pollinators



**Dotty Woodson**  
 Water Collections  
 for the Garden



Join us for our **6<sup>th</sup> Annual Butterfly Festival**  
 October 17<sup>th</sup>  
 WCMGA Demonstration Gardens,  
 102 Tam Road, Huntsville TX  
 Starts at 8:00 am





# Stream Team Advanced Training

- Richard McCarthy

Stream Team Advance Training will be conducted **November 14th**, at Waco Wetlands, 10:00AM to 3:00 PM. **AT**

Training is open to anyone that has completed the Basic Stream Team Course. Training will consist of sampling & testing for: E-Coli; Turbidity; Orthophosphates; Nitrate-Nitrogen; and Stream Flow.

Training will be conducted at the Wetlands. Please bring your lunch. Water, coffee and light snacks will be available. Part of the training will be conducted outside. Dress for the weather.

Any questions and to register for the training please contact: Richard G. McCarthy [rgm3372010@live.com](mailto:rgm3372010@live.com)

## Upcoming Events

- Yvonne Eele

October 10, 11:00-5:00 **(V)** Nature Fest 2015. Lots of opportunities. Contact Rehanon Pampell [terrapathic@hotmail.com](mailto:terrapathic@hotmail.com)

October 23-25 **(AT)** & **(V)** State Conference at Horse shoe bay. Two education sessions given by our own Nicole Norelli. More information as it is released or check the chapter website.

**CHECK US OUT ON FACEBOOK!**

<https://www.facebook.com/Central-Texas-Chapter-Texas-Master-Naturalists-116648718373317/timeline/>

**V** Approved for Volunteer Hours

**AT** Approved for Advanced Training

**MA** Must Apply for approval of hours

## *Newsletter Mission Statement*

*"Our mission is to inform and educate Master Naturalist members and the general public about our local environment and resources, and what we, as caretakers, can do to protect them."*

### **Board of Directors**

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### **Newsletter Staff**

**Editor:** Terrie Hahn

**Contributing Writers and Photographers:** Richard  
McCarthy Zoe Rascoe, Yvonne Eele

**Please send any news of events, articles or photos of  
what you're doing or what's going on in your yard or  
area to:**

**Terrie Hahn at [moompie45@hotmail.com](mailto:moompie45@hotmail.com)**

### **The Central Texas Master Naturalist Chapter:**

Holds member meetings the 2nd Tuesday of February, April, June, August, October and December at 6 p.m. at the Belton Church of Christ at 3003 N. Main. Location exceptions are in December and June.

**PACE** meetings are at the Church location at 6 p.m. the 2nd Tuesday of January, March, May, July, September and November. **THE PUBLIC IS WELCOME AT ALL OF OUR MEETINGS.**

**Programs      Activities      Committees      Everything else**

The Board of Directors meet the 1st Friday of January, March, May, July, September and November at 9 a.m. in the Board Room at the Agrilife Extension Center at 1605 Main in Belton.