



The Dragonfly

Newsletter of the North Texas Chapter of Master Naturalists

Smooth False Buttonweed at Big Spring, Dallas

By Jim Flood

Jim Flood (Class of 2002) is a steward of the Buckeye Trail in Rochester Park, mentor to the Class of 2014 Herbarium project, and educates many about the Great Trinity Forest of Dallas.

For about the last year I have been volunteering on a plant survey of the Big Spring area of the Great Trinity Forest in Dallas. Part of this survey includes working with the North Texas Chapter Class of 2014 herbarium



project. This area includes a meadow upland, a unique natural limestone/seep spring with the elevation following down into the bottomlands not far from lower White Rock Creek and the Trinity River. Aside from the interesting flora of the spring itself (which includes arrowhead (*Sagittaria*), pennywort (*Hydrocotyle*), and horsetail (*Equisetum*), the bottomland is revealing to me the many woody and herbaceous plants that I am familiar with and also some plants that I have not seen before this year like Finger dogshade (*Cynoscadium digitatum*) Willow slimpod (*Amsonia tabernaemontana*), Winged lythrum (*Lythrum alatum* var. *lanceolatum*), and Shade betony (*Stachys crenata*).

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Photo by Jim Flood

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Learn how you can support our chapter for North Texas Giving Day on **page 3**.

Announcements

Speakers for upcoming chapter meetings

September 3

Ben Sandifer, "Big Spring in the Great Trinity Forest"

Ben Sandifer is a native Dallasite, 6th generation Texan, accountant, and volunteer water quality tester for the Texas Stream Team at Big Spring in the Great Trinity Forest. In addition to writing adventure travel articles in the Texas/Southwest, Ben is the author of the Dallas Trinity Trails website.

October 1

Sue Alvarez, "Living With the Trinity Over Time"

Sue is one of our members and works for the City of Dallas on Trinity watershed issues.

Chapter meetings are open to the public, and held on the first Wednesday of the month at the **AgriLife Extension Office, 10056 Marsh Lane in Dallas, suite B-101 (downstairs).**

Social time and refreshments at 6:30pm, announcements and speaker at 7:00pm.

Registration is now open for the State Meeting October 24-26

Spend a fall weekend in the Hill Country with Master Naturalists from all over the state. The Texas Master Naturalist State Meeting will be at Mo Ranch near Hunt and is a great time to complete lots of advanced training hours. Register at <http://txmn.org/2014-state-meeting/>

You can see the complete schedule of activities and session topics [here](#). On Saturday there are several full-day training sessions, including Invasive Species and Texas Stream Team Water Monitoring. There is a social on Friday night and a campfire on Saturday night, plus many chances to learn from other chapters about their projects, challenges, and successes. There are photo and art contests, and the videos from the first annual video contest will be presented.

Donations of prizes are needed for the silent auction. Examples include items solicited from businesses, hand-made art and crafts, books, gift certificates, and anything naturalists would want to bid on. Contact Mary Ann Richey with questions about the auction at LindheimerMN.auction@gmail.com.

Another Award for the State Program!

The OneStar Foundation announced that the Texas Master Naturalist Program is one of the winners of the 31st Annual **Governor's Volunteer Awards** in the community leadership category. The award will be presented September 17 in Austin. Here are the latest numbers about the impact of our program:

"The Texas Master Naturalist Program (TMN) sponsored by Texas Parks and Wildlife Department and Texas A&M AgriLife Extension has trained over 8,850 Certified Master Naturalist Volunteers who have contributed over 2.4 million hours valued at more than \$53.9 million to date impacting over 206,300 acres and over 1,866 miles of trails. Twenty new partnerships were developed by TMN chapters statewide in 2013 with over 370 partnerships established statewide. The Master Naturalist program has been so successful in Texas that it has been replicated in 29 other states."

Announcements

Editor's note

Often, while hiking with my curious 4-year-old, we will come across a memorial sign on a bench along the trail, thanking someone who helped make that trail or preserve possible. He always wants to know what it says, so I read it and explain that somebody felt this land needed to be protected, so they worked on keeping it a green space for everyone to enjoy. Occasionally the name is a person I know from Master Naturalists, and I can tell him who it is. It warms my heart to know that, not only are naturalists and conservationists ranking up there with superheroes in his mind, but that these are people he can meet and talk to, and he can see us doing this important work because we enjoy it.

As you can see from this issue of *The Dragonflyer*, even during the dog days of summer the naturalists are out there, documenting new or lost species, patiently collecting data as citizen scientists, supporting biodiversity by battling invasive species, and educating North Texans about our natural resources. If you believe all this is worth doing, the Master Naturalist Program could use your support. Our chapter is participating in North Texas Giving Day **September 18**. Donations will be received from 6am through midnight at <http://www.NorthTexasGivingDay.org>, and gifts of more than \$25 will be amplified by bonus funds and prizes. All tax-deductible donations collected support our local non-profit work of education and training. North Texas Giving Day is made possible by the Communities Foundation of Texas and the Center For Non-Profit Management. There will also be an event at the Communities Foundation of Texas, 5500 Caruth Haven Lane in Dallas on September 18 from 11am until 2pm if you'd like to donate in person. Find us at the North Texas Giving Day site by searching for "Texas Master Naturalist" in the upper right corner, and thank you for your support!



See your project announced here

Do you have an idea for our next **Big Chapter Project**? It should be something that a large number of us (usually 40-50) can work on together on a Saturday morning in November. It's a chance for us to get together as a group and socialize while doing the work we love, and supporting one of our partner organizations at the same time. Past Big Chapter Projects have included: trail-building at Blackland Prairie Raptor Center, building a campsite at Trinity River Audubon Center, and removing invasive plants at Twelve Hills Nature Center. If you have a suggestion for a project and venue, please contact Charlotte Flowers at charart1234@aol.com.



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or join our group
"North Texas Master Naturalist"
(members only)

Chapter News

Buttonweed at Big Spring, continued

In late June, on one of my periodic walks, I came upon a plant I had not seen before. I just had to know what it was. Using the *Illustrated Flora of North Central Texas* I keyed the plant to the Rubiaceae family, then followed the family's dichotomous key to Spermacoe (pointed seed).

In the species' text entry, on page 970, for *Spermacoe glabra*, a line which stated "...

collected at Dallas by Reverchon*, but not found so far w recently ..." really piqued my interest. I collected and hand delivered a sample, fresh in a bucket of water, for the Botanical Research Institute of Texas Herbarium. I wanted the BRIT botanists to see the 3mm flowers up close before they dessicated in a plant press. While at BRIT, Barney Lipscomb, one of the authors of *Shinners and Mahler's Illustrated Flora of North Central Texas*, invited me into the Herbarium to see if the Julien Reverchon collection for *Spermacoe glabra* was still on file. Yes, it was on file and was dated 1902. I was so excited to have seen the original Buttonweed that Reverchon had collected and to have played an ever-so-small, yet not insignificant role in the science of documenting what plant species we have here in North Texas and particularly at the Dallas Big Spring area of the Great Trinity Forest.

* Julien Reverchon (1837 – 1905), an early European Dallas settler in the La Reunion Colony (Oak Cliff) and a Botanist/Teacher (Professor of Botany in the Baylor University College of Medicine and Pharmacology at Dallas) who collected about 20,000 specimens of more than 2,600 Texas species.

On the afternoon of July 23, a wildfire was discovered burning on about 15 acres of the Big Spring conservation area. Dallas firefighters worked on the area until sunset, and returned in the following days to extinguish hot spots with the help of several volunteers. While a fire causes dramatic changes in the short term, the diversity of species in a place like this will hopefully persevere in the long term. Come to our chapter meeting September 3 to hear more about Big Spring from our guest speaker, Ben Sandifer.



Throwback to a cooler season: this photo of the pool at Big Spring was taken last winter by Ben Sandifer.



At our Summer Social we got a preview of our newest outreach tool, the **bird trunk**, still under construction. Members of the Class of 2014 have been gathering supplies and consolidating information to include in the trunk, which will be used at events and wherever Master Naturalists visit. Examples of eggs, nests, feathers, and other hands-on teaching tools will be included in this kit. Our chapter also has a prairie trunk, wetland trunk, and mammal trunk with similar items, including skulls and skins, which spark conversations and learning.

Thanks to Jim Bagley for the photo.

Chapter News



2014 Summer Social

Every July the North Texas Chapter spends an evening enjoying each other's company at the summer social. This year the festivities included the usual potluck dinner, goofy games such as the cherry pit spit, and the not-so-trivial trivia contest, reviewing some of the facts and figures from our training manual. The trivia winners are pictured *above left*, choosing some of the prizes donated by Texas Discovery Gardens, and members Tim Allsup, Bob Richie, Ellen Guling, and Karla Pollock. As naturalists we like to visit with TDG's education animals, including the milk snake *above right*. Cherry pit-spitting winners are pictured *below right*, and include some defending champs from last year. The best things about the summer social are: the food, the good company, the gorgeous view of the Texas Discovery Gardens, and the food.

Thanks to Linda Cooke and Jim Bagley for the photos.

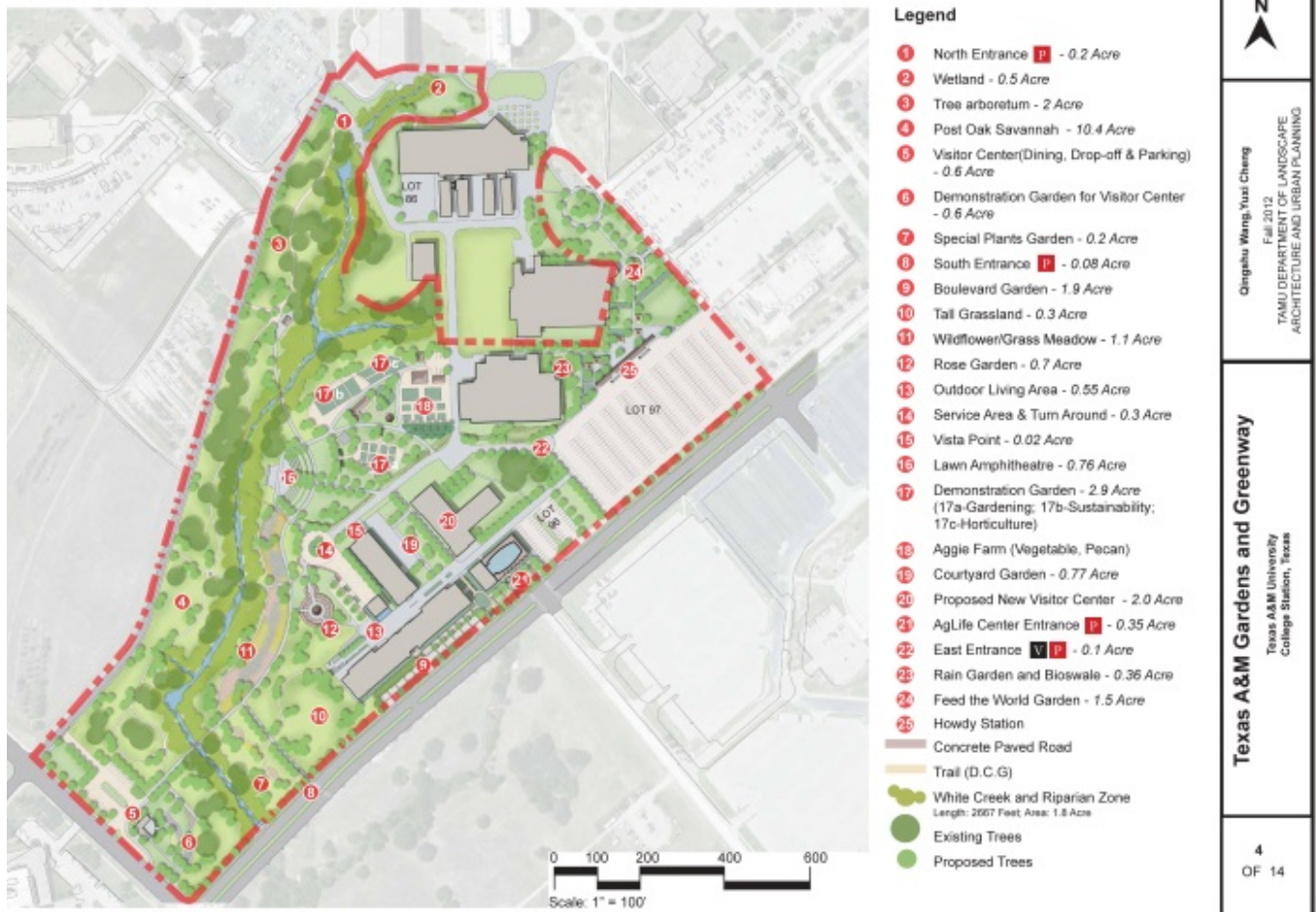


Garden & Greenway in College Station to teach conservation

Texas A&M is building a new 45-acre garden and “greenway” on its campus to serve as a teaching site for students of all ages, including Master Gardeners and Master Naturalists. Features will include vegetable and fruit gardens, butterfly, bee, and bird gardens, a landscape design and construction demonstration, wildflower meadows and grassland prairies, a Texas-tough rose garden, and an Earth-Kind® garden to showcase and interpret the goals and seven principles of Earth-Kind®. Riparian areas along White Creek will also be enhanced as the stream is restored with natural channel design. The vision is that many parts of the greenway will serve as a gathering place for college students and community members, for field trips, concerts, a farmer’s market, and special events. And the teaching areas will promote water and energy conservation, low fertilizer and pesticide use, and reduction of yard waste entering landfills. Construction will be visible on the campus this fall, and the wildflower patch already bloomed this spring (including, of course, the Aggie-favored maroon bluebonnets.)



For more information on the project and vision, visit <http://agrilife.org/texas-am-gardens-and-greenway-project/>.



Feature Articles

Heat, Drought, and Trees

By Steve Houser

Regardless of the moisture levels in the soil, extended daytime periods of 95 degrees and above slow the biological functions of plants. This slowing phenomenon, which protects plants by reducing water loss through transpiration, is known as “self-induced dormancy.” Transpiration uses water, absorbed by the roots and transported to the upper parts of the plant, to be released into the air. This evaporative cooling is much like the piping that emits a mist to cool the air during the State Fair.

Unfortunately, this slowing of biological function also reduces the amount of plant food (sugars, carbohydrates, and others) produced and stored by the plant. Although fertilizers are often promoted as “plant food,” they are actually elements that are absorbed by the roots and transferred to the foliage. The foliage, with help from the sun, produces a plant’s actual food through photosynthesis. The resulting food is stored in the plant’s tissues. Extended periods of heat reduce the amount of time a plant can produce and store its food. Given our Texas weather, even a Mexican plum can be affected.

Reducing the effects of heat

Although some of our native plants were negatively affected by the extended period of heat in 2011, native and adapted plants are best suited to survive and function quite well. Heat-tolerant landscapes contain mostly native plants that are grouped in a natural setting or environment appropriate for the plants. Including other native companion plants as part of a planting group helps to create (or restore) a natural ecological balance. Any plant properly placed in a healthy and balanced ecological system will better survive anything that nature can whip up. When we isolate plants from their normal companions or when the ecology is not in balance, it is much more difficult to keep them healthy. Grouping species typically found growing together in nature provides a greater level of protection from heat, as well as from other forces of nature.

Which species of plants may be native or adaptable to an area is often debated. However, the late plantsman Benny J. Simpson researched various tree species from West and South Texas that are adaptable and heat/drought-tolerant, including the Chisos red oak (*Quercus graysii*) pictured above. He was a true pioneer in native plant knowledge and a research scientist at the Texas AgriLife Research and Extension Center at Dallas. The trees he planted in test plots off Coit Road, in North Dallas, were watered only for the first year or two — purposely. His research groves are open to the public and still exist today without irrigation, as an example of adaptable species that can tolerate both heat and drought. Although many of these trees are not currently available in retail nurseries, they could be if more folks ask for them in the future, wink...wink. (<http://aggie-horticulture.tamu.edu/ornamentals/natives/about.html>)

If a smaller plant in your yard is not heat-tolerant, covering it with a shade cloth or similar material may help. Mistlers that emit water vapor around smaller plants during the heat of the day can help reduce heat damage. Plants near a white or light-colored structure or a glass wall may receive more reflected sunlight, adding to the potential for heat damage. Plants in areas affected by the Urban Heat Island Effect must also be able to withstand increased surrounding temperatures (www.epa.gov/heatisland/).

If it can't stand the heat, it may not belong in our Texas kitchen.

This article appeared previously in Neil Sperry's "Tree Tips" blog.



Feature Articles

Alien Species

By Pauline Schafer

At my favorite city park recently I found that a huge elm tree had fallen over the creek because parts of the trunk had died and rotted. The city had cut the remaining parts but not hauled them away yet, so I counted the rings and came up with fifty years of growth. The smell of the freshly cut elm wood brought back a memory from my childhood of playing with the newly cut branches and sawdust after the two large elm trees in front of my Chicago home had been taken down. Dutch Elm Disease had been spreading through the closely-planted elms on the city streets since the 1960s, and ours became infected in the late 70s. Judging by the dark staining I saw on the interior of the trunk, this one in Texas succumbed to Dutch elm disease also. Bark beetles are the vector for DED, including native elm bark beetles, but much more efficiently spread by beetles of the genus *Scolytus*, native to Europe. These were accidentally introduced, along with the DED fungus, when an American furniture company imported infected logs from Europe.



Human beings have been transporting living things around the planet, knowingly and unwittingly, for at least as long as there has been agriculture. We take our favorite crops with us when we migrate, and we share new food crops around the world. (I am grateful for this every time I eat pizza.) We brought house sparrows and European starlings to America on purpose, but many invasives, such as zebra mussels, hitch a ride without us knowing. As we see the impact on biological diversity that these invaders are having, it's easy to look back and see the moments of mistake. We are a species that seems to impact our environments dramatically with our active lifestyles. But is there hope for preserving biological diversity, which is a key factor in the health of any ecosystem? I say, let's keep increasing our knowledge about populations and see.

Populations of living things are dynamic, and fluctuations, even within a balanced ecosystem, are normal. Looking at the range of a bird species on a map in a field guide makes it seem as though the range is ideally fixed: this is where the birds are supposed to be. But with a little perspective one might see that ranges change, as the white-winged dove's range is expanding northward, taking advantage of urban areas and feeders. Texas Parks & Wildlife Department's dove banding program helps track the population and is an important tool for helping us understand these changes. Citizen science data is becoming a wealth of information that can help us deepen our understanding of populations and ranges. Just look at the Spatio-Temporal Exploratory Model (STEM) [occurrence maps](#) that have been created using data collected by eBird participants, and you can see where bird species are at any point throughout the year. Imagine a moving model like this, tracking populations over decades, or centuries, and we can begin to get a picture of what is normal. A measured, thoughtful response to invasive species can be better planned the more background information we have.

Our speaker at the August chapter meeting, Dr. Robert McMahon of UTA's Biology Department, gave us daunting figures about the spread of zebra and quagga mussels throughout North America. The bad

continued on next page

Feature Articles



Alien species, continued

news is that they have made it much farther into our freshwater systems than expected since being introduced from Ukraine in 1986, and they are showing signs of adapting to warmer temperatures in Texas lakes. There isn't any good news about zebra mussels. But despite the dire story, I left that presentation feeling hopeful that there are knowledgeable people asking important questions, and the public awareness of how not to spread the infestation seems to be increasing. Every time we educate ourselves and others we are part of the solution. It is imperative that we keep up on the latest findings and participate in data collection, whether through [eBird](#), [Texas Amphibian Watch](#), [Invasive Plant Database](#), or any other citizen science effort.

And we are learning lessons from the past. As the damage from the introduction of the emerald ash borer, introduced from Asia in 2002, spreads across North America's ash trees, efforts are underway to collect the seeds of green ash trees. The seeds will be stored so that their adapted genetics may be used in the future to restore an ash tree population or develop resistance to the emerald ash borer. The combined effort of the Forest Service and other agencies including the Ladybird Johnson Wildflower Center aims to identify and collect seeds from at least 50 trees per ecoregion with the help of trained volunteers. Many Texas Master Naturalist chapters are participating; contact Minnette Marr at mmarr@wildflower.org to get more information.

Zebra mussel photo by Larry D. Hodge, courtesy of TPWD. Ash tree photo from David L. Roberts at Michigan State University. Elm photo by Pauline Schafer



"A society grows when old men plant trees whose shade they know they will never sit in. It's not about instant gratification. It's about generations to come."

Ancient Greek Proverb

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 our local communities.

Primary objective: develop a Texas Master Naturalist volunteer network that can be self-sufficient.

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* executive board member (officer)



Meetings are held at the Texas AgriLife Extension Service 10056 Marsh Lane, Suite B-101, Dallas, Texas

Chapter meetings: first Wednesday of each month at 7:00pm, refreshments and fellowship at 6:30pm

Board meetings: Monday before the first Wednesday of each month at 6:30pm (Exceptions: July board meeting is July 7, member meeting is picnic on July 9, September board meeting is August 25, September member meeting is September 3)