



# Prairies & Pines

A Quarterly Newsletter

Vol. 7 Issue 1 - Winter/Spring 2015

**Education Roundup**

Part One and Part Two of the Native Bee article is included in the newsletter for this quarter in case you missed Part One last quarter or would just like to have the entire article together in one location.

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**Heartwood Adventures**

Please consider submitting an article or picture for our next newsletter. We would love to share your hard work with everyone. The next deadline for submission is March 15th.

**Reflecting on Nature**

If you have traveled and would like to share your experiences, we would love to put them in the newsletter. The time it takes to write an article for the newsletter counts towards your volunteer hours. Deadline is March 15th.

**Calendar of Events**

Keep up with volunteer opportunities, advanced training, Heartwood Chapter meetings, and events.

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**Member Spotlights!**

Get to know our new board members for the Heartwood Chapter. A personal message from a few of the new board members and their contact information.

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**Assorted News**



New Intern Classes will begin March 14th. See attached schedule and application.

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## Native Bees in Texas Ecosystems

Part One and Part Two

by Suzy Briseño, Heartwood TMN Member

Despite all the buzz about declining honey bees, little attention has gone to the 4,000 to 4,500 species of native bees in North America, as many as 500 of which reside in Texas and provide pollination services for native and agricultural plants. The European honey bee (*Apis mellifera*) is our best-known species, brought here by Europeans colonists almost 400 years ago. Due to agricultural intensification, pesticides use, disease and parasites, honey bees have declined precipitously since the 1950s. "Unabated loss of this bee will have significant repercussions for large-scale, intensive agriculture..." said Michael Warriner, former invertebrate biologist for Texas Parks and Wildlife

Department. "However, it will not be an ecological calamity. The conservation challenges facing native bees are where the real concerns for natural ecosystems lie."

Natives such as leaf-cutter bees (*Megachile* sp.), mason bees (*Osmia* sp.) and sunflower bees (*Diadasia* sp.) are the unsung heroes of the gardens, agricultural crops and natural settings and are responsible for a significant amount of pollination in agricultural and ecological systems. Another native, the southeastern blueberry bee (*Habropoda laboriosa*) is much faster and more efficient at pollinating blueberry flowers than honey bees. Squash bees (*Peponapis* and *Xenoglossa* spp.), specialist pollinators of cucurbits, begin foraging just before dawn, when flowers are in full bloom, and as discussed later in this article, are faster and more efficient than honey bees at pollination.

### What Exactly Is Pollination, and Why Is It So Important?

Plants ensure future generations by developing seeds that contain genetic material from both parents. Most grasses and many

trees rely on wind to spread their pollen, but most fruits, vegetables and ornamental plants depend on insects—butterflies, moths and wasps, but primarily bees and occasionally other animals—to move their pollen from flower to flower. The insects' reward is nectar at the base of the flower, and as they burrow to drink, they brush against the pollen-bearing parts (anthers) coating themselves with the sticky grains they then carry to and deposit on the next flower. In the same way, a great number of plants depend on this cross-pollination by insects or other pollinators, thousands of animal species depend on the fruits, foliage, nuts or seeds the pollinated plants produce.

The Xerces Society, an international non-profit organization with a central program that focuses on native [pollinators](#), uses an example of an apple cut crossways to illustrate the importance of pollination. In its book, [Attracting Native Pollinators](#), Xerces claims that if an apple contains ten seeds—five on each side of the apple halves—the fruit is completely pollinated by a bee. If, however,

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there are fewer than 10 seeds, not enough pollen has reached the flower's stigma to develop all the seeds. Without enough pollen, the apple will be small or perhaps misshapen; without any pollen, the flower will fail to develop into a fruit.

Some garden vegetables that rely on bees for pollination include broccoli, okra and cucurbits, such as cucumbers, squash and pumpkins. Solanaceae (the nightshade family, e.g., tomatoes, peppers and eggplants) store their tiny pollen grains in long, narrow, tubular anthers that require sonication or buzz-pollination from bumble bees (*Bombus* spp.) to dislodge and spread their pollen.

### What Makes Native Bees Such Great Pollinators?

According to Warriner, if the USDA were to pay native bees an annual dollar amount for the pollination service they freely provide, it would be over \$3 billion. He asserts that two traits make native bees pre-eminent pollinators: First, their purpose in visiting flowers is to collect pollen to feed their offspring. Using special, long, branched, stiff hairs (scopae) or a pollen basket (corbicula), bees are especially good at trapping sticky pollen, which is then moved from flower to flower. Over the course of one day, a female bee may visit several hundred flowers, leaving pollen behind as she goes. Second, native bees tend to be specific about the flowers they visit. "During a foraging trip," Warriner says, "a female may only visit the flowers of a particular plant species. The benefit of such foraging preferences is that the plants' pollen is not deposited on the flowers of a different plant species and wasted."

Commercial farmers and some home gardeners have come to rely on honey bees to take care of the job of pollination; however, more and more scientists are now reporting that honey bees, while conveniently manageable and transportable, are not necessarily the best pollinators. According to Cornell University entomologist Bryan Danforth, native bees are two to three times better pollinators than honey bees, more abundant than previously thought and not as susceptible to the colony collapse disorder that has devastated honey bee numbers. "An individual visit by a native bee is actually worth far more than an individual visit by a honey bee," Danforth said. "Honey bees are more interested in the nectar. They don't really want the pollen if they can avoid it," he continued. "The wild, native bees are mostly pollen collectors... they are collecting pollen to take back to their nests."

### Native Bees Can Augment Pollination of Honey Bees

An impressive alliance of bee researchers from several countries examined the process of pollination in dozens of different crops, including cherries, coffee, strawberries, and watermelons. As they reported in the journal *Science*, adding wild, native insects, such as bumble bees or carpenter bees, to an ample supply of commercial honey bee hives gave crops a marked advantage. "The surprising message in all of this is that honey bees cannot carry the load," says a Maria Spivak, professor of entomology at the University of Minnesota. "Honey bees need help from their cousins and relatives, the other wild bees. So let's do something to promote it, so that we can keep honey bees healthy and our wild bee populations healthy."

Unfortunately, a subsequent report, also released in *Science*, made it clear that scientists believe that many native bees are now experiencing population declines. Research has documented range reductions for several bumble bee species across North America. Franklin's bumble bee (*Bombus franklini*) has been petitioned for protection under the U. S. Endangered Species Act. Texas Parks and Wildlife Department regards 18 native bee species as those with greatest conservation need. Consequently, many scientists are working to help native bees and in turn help farmers who benefit from their invaluable pollination services.

### No Flowers, No Bees; No Bees, No Flowers

Claire Kremen, a conservation biologist at the University of California, Berkeley and a co-author of the first study in *Science*, notes that a chief concern for native bees is the agricultural specialization known as monocropping, where vast fields of a single crop are produced. For example, the almond groves of California are an ocean of blossoms in February, a feast as far as the eye can see for nectaring insects that come here from all over the country. "But for the rest of the year, there's nothing blooming," Kremen says. "In fact, in places where we have very large monocultures of almond, we don't find any native bees anymore," she says. "Planting other flowers in and around these almond groves, maybe as hedgerows, blooming all summer long, would help," she continues. "Even better would be farms with smaller fields, and many different crops flowering at different times. Wild bees," Kremen says, "need diversity."

Warriner agrees that widespread habitat destruction, specifically the loss of flower-rich

grasslands, savannas and woodlands, is a primary factor that precipitates declines in native bee populations. In addition to agricultural considerations, aside from grasses, "most native plants in North America need insect pollination to produce fruit and viable seed... fruit and seed that, in turn, support entire terrestrial ecosystems," says Warriner. As a great number of plants depend on this cross-pollination by insects or other pollinators, thousands of animal species depend on the fruits, foliage, nuts or seeds the pollinated plants produce. "Of all the insects that visit flowers," he continues, "from beetles, butterflies and wasps, bees are the most important pollinators."

### Profiles of a Few Native Texas Bees

#### *Bumble Bees (Bombus spp.)*



American Bumble Bee (*B. pensylvanicus*) 1

Photo: © Suzy Briseño

Round, fuzzy and often brightly colored, bumble bees are from 0.4 to 0.9 inches long and perhaps the most easily recognized and beloved of our native bees. They are also among the most industrious pollinators, among the first bees to emerge in the spring and the last to vanish in the fall. As generalists, bumble bees will forage on a wide variety of plants, pollinating everything from willows, salvia, peppers and tomatoes to goldenrod. Texas is home to nine species of bumble bees: American (*Bombus pensylvanicus*), black and gold (*B. auricomus*), brown-belted (*B. griseocollis*), common Eastern (*B. impatiens*), golden northern (*B. fervidus*), Sonoran (*B. sonorus*), two-spotted (*B. bimaculatus*), variable cuckoo (*B. variabilis*) and Southern plains (*B. fraternus*).

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Bumble bees, along with their European cousins, the honey bees, are among the five percent of eusocial colonies that consist of a queen and her daughter workers who live together, communicate with and will protect their nest site if disturbed. Bumble bee colonies, however, are much smaller, containing as few as 100 to 200 workers as compared to the 15,000 or more workers in a honey bee colony. Their colonies persist only from spring until fall, when all but mated queens die. Bumble bees usually nest underground in abandoned rodent nests or occasionally in a grass tussock.

*Large Carpenter Bees (Xylocopa spp.)*



*Large Carpenter Bee (Xylocopa) 1*

Photo: © Suzy Briseño

Large, from 0.5 to 1.25 inches long, carpenter bees are often confused with bumble bees. While bumble bees are hairy all over, the upper abdomen of carpenter bees is nearly hairless, almost glossy or metallic in its sheen. Their robust size and the propensity of males to fly close to humans emitting a loud buzzing sound can be intimidating, but carpenter bees are gentle, and males have no stingers. With their powerful mandibles, females excavate wide tunnels in soft wood for nesting, but carpenter bees rarely leave serious structural damage. They do, however, deserve their reputation as ill-behaved pollinators. Should a carpenter bee encounter a flower with a long throat that her tongue cannot penetrate, she may tear a hole at its base and siphon out nectar, bypassing the pollen-bearing parts. Bumble bees and honey bees also occasionally perpetrate this so-called nectar robbing.

*Leafcutter Bees (Megachile spp.)*



*Leafcutter Bee*

Photo: © Carol Leonardi Clark (used with permission)

Leafcutter bees get their name from the fact that they precisely cut pieces of leaves or petals they then use to line their nests inside tube-shaped cavities. The bees prefer leaves that are smooth on one side and while perhaps unsightly, the damage to the foliage is merely cosmetic. Highly efficient pollinators, leafcutter bees include species that forage on a variety of flowers, as well as those of the aster and pea families. Leafcutter bees are about the same size as honey bees, from 0.4 to 0.8 inches long. The bees' compact bodies and an upturned abdomen give them a somewhat belligerent look, but leafcutters rarely sting, and when they do, it is mild.

*Mason Bees (Osmia spp.)*



*Mason Bee (Osmia) 1*

Photo: © Carol Leonardi Clark (used with permission)

Mason bees build walls of mud to separate nest cavities into brood cells. These small (from 0.1 to 0.8 inches long) bees are fuzzy and metallic—many have brilliant blue green

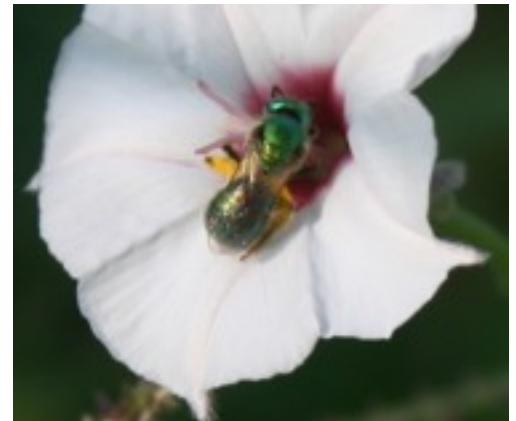
or even purple coloring. They nest in hollow stems or holes excavated in dead wood by beetle larvae or other insects.

Mason bees are most active in spring, when they pollinate a variety of flowering shrubs and small trees in the rose family, most notably fruit trees in orchards. Some farmers claim that a few hundred mason bees can do the work of thousands of honey bees. Females carry pollen in scopae on the undersides of their bellies. Mason bees are important pollinators for apples, cherries and plums.

*Squash Bees (Peponapis and Xenoglossa spp.)*

Specialist pollinators of squash, pumpkins, melons and other cucurbits, female squash bees provide their offspring with nectar and pollen exclusively from squash plants. Squash bees begin foraging about half an hour before sunrise, when the blossoms open. Honey bees, conversely, arrive later in the day, when the blossoms have begun to fade. According to "Bee Basics: An Introduction to Our Native Bees," even with honey bee hives nearby, squash bees are many times faster and more efficient at pollination. Adults squash bees live just a few months, from mid to late summer, when the squash plants are in flower.

*Sweat Bees (Halictidae spp.)*



*Sweat Bee (Halictidae) 1*

Photo: © Carol Leonardi Clark (used with permission)

Some of our most beautiful solitary bees are sweat bees. Most are dark, but many are shiny and metallic-colored. Tiny, from 0.1 to 0.9 inches long, and easy to miss, these native bees are actually quite common and worth

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investigating. Sweat bees get their common name from their affinity to human perspiration, which they drink for its salt and mineral content. They are not aggressive and rarely sting. They are generalist feeders, foraging on a range of plants for nectar and pollen and are usually solitary, burrowing in flat, sandy or sandy-loamy soil.

## 12 Cool Things About Bees

1. Bees descended from wasps, but while wasps are either predatory or parasitic, bees are vegetarian.
2. Like wasps, only female bees can sting.
3. Despite bees' reputation as hoards of defensive, stinging insects that emerge from their nest to attack hapless victims, 90% of Texas bees are solitary and make no effort to defend their nests. It is improbable that bumble bees will sting, as they are not aggressive, but unlike honey bees that can only sting once, bumble bees can sting repeatedly.
4. Allergy to bumble bee venom is rare, and when it does occur is usually milder than that produced by honey bees.
5. Only female bees gather pollen and thus pollinate flowers.
6. The vast majority of bees in Northern America are native (unlike the imported honey bee).
7. Bees have five eyes, two compound and three simple eyes.



Head of Bumble Bee 1

Bumble bee head showing two compound and three simple eyes  
 Photo: © Carol Leonardi Clark (used with permission)

8. Of bees in the United States, only honey bees make honey.
9. As a rule, native male bees sleep outside nests and can occasionally be found clinging by their mandibles (jaws) to the undersides of flower petals, stems or twigs or resting inside blossoms.



Male Bumble Bee Sleeping Under Leaf 1

Male bumble bee sleeping under a leaf  
 Photo: © Suzy Briseño

10. Queen bumble bees lay female eggs throughout the season but also male eggs near the end of the summer. The young females born at the end of the season become the new queens, which mate with the males at maturity.
11. After mating, the new bumble bee queens leave the nest to find a place to overwinter. The old queen, all female workers and the males die at the end of the summer.
12. Of all the animals that can pollinate, including bats, birds and even lemurs, insects are the most important. Of all the insects that visit flowers, including beetles, butterflies, moths and wasps, bees are the most important pollinators.

## How We Can Help Ensure Native Bees' Survival

Native bees have two basic needs that naturalists and gardeners can help provide: food in the form of nectar and pollen and a suitable place to nest and lay eggs. While some bees are active for a short period, others need a wide array of native herbs and shrubs that offer a succession of flowers for sustenance from March through November in Montgomery and surrounding counties. Warriner emphasizes that Texas native plants are preferable, as these evolved with the bees and thrive in the area's unique climate. Since native bees vary in their preference for floral color, shape and size, it helps to add as much

variety as possible. For suggestions on native plants for our ecoregion, visit The Pollinator Partnership's Web site ([www.pollinator.org](http://www.pollinator.org)).

American bumble bees (*B. pensylvanicus*), digger bees (*Anthoporidae* sp.) and mining bees (*Andrenidae* sp.) nest either underground in burrows excavated in bare ground, in abandoned rodent burrows or within clumps of vegetation, while carpenter bees (*Xylocopa* sp.) nest in small tunnels left in standing dead trees by wood-boring beetle larvae, under loose bark of downed trees or in hollow stems.

To supplement habitat for ground-nesting bees, provide access to sunny, well-drained patches of bare ground. Clear vegetation from a small area or build a two-foot-deep pit filled with a sandy loam mixture and keep some portion of flowerbeds free of mulch. In lieu of deadwood, use nest blocks, or so-called bee houses. Bees that use nest blocks are solitary, do not defend their nests and are much safer than honey bees to have in a backyard setting. See Xerces Society for information: ([www.Xerces.org](http://www.Xerces.org)). Bumble Boosters has designed a bumble bee domicile that it provided citizen scientists to place at their residences to document whether or not bumble bees will use artificial nest box. For more information, contact [Bumble Boosters](#).



Mason Bee House 1 Mason bee house  
 Photo: © Carol Leonardi Clark (used with permission)

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## Sources

For more information, see the following:

[Bumble Bee Watch](#) (a citizen-scientist Web site where users can post photographs of bumble bees to help document ranges and populations. Includes information and identification tools).

[Bumble Boosters](#) (a cooperative project that includes the University of Nebraska that coordinate citizen science projects to help document ranges and populations of bees).

[Bumblebee Conservation Trust](#)

[Bumblebees of Texas](#) (a citizen scientist Web site where users can post photographs of bumble bees to help document ranges and populations).

[Bumblebee Pages](#)

[Garden for Wildlife](#) (National Wildlife Federation)

[The Pollinator Partnership](#) (nonprofit consortium of conservation groups, government agencies, universities and private industries from the United States, Mexico and Canada).

[Project Bumble Bee](#)

[Texas Bumblebees](#) (social media and Web site whose stated purpose is outreach and research effort aimed at assessing the status of bumblebees in Texas).

[Texas Native Bee Co-Op](#) (social media and Web site designed to promote the conservation, promotion and management of native bees in Texas).

[Xerces Society](#)

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**Our Newly Elected 2015 Board:**

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**Messages from Your Board Members**

Hi, my name is Andre Houser, and I'm looking forward to serving as your President in 2015! I am always looking for new ideas, so if you feel the urge to contact me, my email is [ahouser@yahoo.com](mailto:ahouser@yahoo.com), and you can also reach me on my cell phone at 972-978-1769.

I am heavily involved with Boy Scouts and with Leave No Trace. I am a Leave No Trace Master Educator, and currently serve as one of the two Texas State Advocates for Leave No Trace. As you might guess, most of my volunteer work is centered in that area, because all of us, whether Master Naturalists, campers, hikers, outdoor lovers in general, need to avoid leaving our mark when in the outdoors, so that those who come behind us

can enjoy the same aspects of nature that we do.

I have been a member of Heartwood for a couple of years now, just finished my second recertification, and I really do enjoy coming to the meetings and gaining perspectives from the other members!

I will try really hard to carry on as President in the fine manner that has been done by Teri in the past, but that will definitely not be an easy task, as she has done such an excellent job. I look forward to working with each of you in the coming year, so let's have some fun!

Andre

Hello All,

My name is Kerry Spencer and I look forward to serving as Secretary for the Heartwood Chapter. I work on the Heartwood Newsletter every quarter along with a great team of contributors. I also try to post updates and share information on the Heartwood Facebook page. Once the new online calendar is set up, I will be posting updates to that as well.

I love being a Texas Master Naturalist and love being outdoors. I hope that my love for nature will carry down to my children and that they learn to love and appreciate what is around us.

I started out in 2012 as an intern at Heartwood, then had my first child and my official certification became delayed. I was able to finish my certification in 2014. I am now expecting baby #2 any day now! I still plan on working on the newsletter, updating Facebook when I can, updating the online calendar when it becomes available, and serving as your secretary. Thank you for allowing me the opportunity to serve.

PLEASE, PLEASE, PLEASE consider contributing to the newsletter for the next quarter. The deadline to submit an article, story, blog, picture, etc. is March 15th. You can email me at [heartwoodtmn\\_fb@yahoo.com](mailto:heartwoodtmn_fb@yahoo.com) or [kerry3613@sbcglobal.net](mailto:kerry3613@sbcglobal.net). You can also email Joy Klumpp at [tmnheartwoodnews@gmail.com](mailto:tmnheartwoodnews@gmail.com).

Also, if you have any events or announcements that you would like to include in the newsletter or online calendar, please email me at [heartwoodtmn\\_fb@yahoo.com](mailto:heartwoodtmn_fb@yahoo.com) or [kerry3613@sbcglobal.net](mailto:kerry3613@sbcglobal.net).

Kerry



John Stacy

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I've been a TMN and Heartwood member since 2012.

After retiring from a 36 year career in the petrochemical and software industries, I actively looked into volunteer opportunities. I was reading "Best Hikes Near Houston" by Keith Stelter and saw in his biography that he was a Texas Master Naturalist. Intrigued, I did a bit of quick research and found information about the program. I've always had a strong interest in the outdoors and the environment, so it seemed just right for me. Not only did I learn a lot, but it opened up a lot of doors and contacts to organizations and programs which I probably would never have otherwise known about. With such a wide variety of opportunities, I have been able to focus on just a few that fit me best. Currently, I volunteer with the Bayou Land Conservancy, conducting annual surveys of many of their conservation preserves. This gives me a rational to be wandering around the woods and streams of East Texas with just a map and GPS. I also work on invasive species eradication at the Kleb Woods Nature Center, just West of Tomball. While these activities may not be for everyone, the Master Naturalist certification creates the opportunity for anyone to find just the right place to be active and contribute to our community and our environment. My participation on the Board is simply a way to try to give back and keep the Heartwood Chapter growing and active. Hopefully, this will allow others to find their niche in the volunteer community.

JANUARY

3 - Birding + Winter Bird Count at **Jones PARK, 7:45am to Noon**

7 - Heartwood Chapter Meeting at **Jones State FOREST, 6pm**; Plan to arrive a little early for refreshments and fellowship before our guest speaker Amber Miller, a biologist with USFWS, talks about Sprague's pipit and other migratory birds.

17 - Arbor Day Celebration at **Jones PARK 10am to 4pm**, with Paper Making Workshop with Ginger Winningkoff from **10am to Noon**

18 - Arbor Day continues with Tree ID walks at **10am and 2pm, Jones PARK**

21 - Landscape Problem Spot? Not for Long! **Wednesday, Jan. 21, 8:30 a.m. – noon**. Develop creative solutions to your landscaping problems with Darnell Schreiber of Landscape Problem Solving. This class is limited to 16 participants, so it will fill up fast! To register or receive additional information, contact **Mercer Botanic Gardens** at 281-443-8731.

30 - Sustainable Landscape Conference: "Resetting the Meter: Innovative Strategies for Sustainable Parking." **Friday, Jan. 30, 8 a.m. – 3:45 p.m.** During this one-day conference, experts will share strategies to create environmentally-harmonious parking schemes that can also enhance surroundings. Six CEU credits are available, approved by LA CESTM. To register or receive additional information, contact **Mercer Botanic Gardens** at 281-443-8731.

31 - Winter Tree Walk at **Jones PARK**, with Tree ID walks at **10am and 2pm**

FEBRUARY

4 - Heartwood Chapter Meeting at **Jones State FOREST, 6pm**; Plan to arrive a little early for refreshments and fellowship before our guest speaker, Gary Clark of the Houston Chronicle and LoneStar College gives a talk on eagles.

21 - WINTER WOODS ORIENTEERING. **Sat., Feb. 21, 10 a.m.-noon. Jones PARK** Enjoy the winter forest without fire ants, mosquitoes, or snakes and learn to follow an off-trail course with a compass. Participants supply compass. Ages 10+. **Reservations required beginning Wed., Feb. 11.**

MARCH

4 - Heartwood Chapter Meeting at **Jones State FOREST, 6pm**; Plan to arrive a little early for refreshments and fellowship before our guest speaker, Debbie Bandfield of Heartwood, SCGNC speaks about creating rain gardens.

7 - NATUREFEST. **Sat., March 7, 9 a.m.-3:30 p.m., JONES PARK** Enjoy a fun, educational day as noted speakers discuss topics such as birds, native plants, and nature photography. Guided nature walks, pontoon boat tours, live animals, and nature-related educational booths will be available.

14 - New Intern Classes Begin. Please see schedule and application on the next few pages. **Jones State FOREST**

14 - TEXAS INVASIVES CITIZEN SCIENTIST TRAINING. **Sat., March 14, 9 a.m.-4 p.m. Jones PARK** Join Justin Bush, of LBJ Wildflower Center and learn how to identify, report, and remove local invasive species. A camera and GPS are helpful but not required. Ages 16+. Reservations required at: [www.texasinvasives.org/invaders/workshop\\_results.php](http://www.texasinvasives.org/invaders/workshop_results.php).

14 - STARGAZING. **Sat., March 14, 7 p.m. Jones PARK** Enjoy an evening learning about the planets, stars, and other celestial bodies with members of the North Houston Astronomy Club. Telescopes or binoculars welcome. **Reservations required beginning Wed., Mar. 4.**

20 - MARCH MART. **Friday, noon – 4 p.m. and Saturday, March 21, 8 a.m. – 4 p.m. Mercer Arboretum** One of the Texas Gulf Coast region's largest and most anticipated horticultural events, this plant sale features high-quality plants rarely found at local retail nurseries. Plan to attend and discover the diverse array of hard-to-find and hard-to-resist plants. Complete your day at the park with lunch in the café located in the Visitor Center, followed by a visit to The Gift Shoppe with stylish garden art, unique mementos and gifts. Proceeds benefit the gardens and programs at Mercer.

28 - SPRING BLOOMS. **Sat., March 28, 10 a.m. Jones PARK** Enjoy a morning walk in the woods with a staff naturalist to see and hear the first buds and buzzes of spring.

ANNOUNCEMENTS

Chapter members are invited and encouraged to submit/request program ideas or recommend speakers for monthly chapter meetings to Teri MacArthur at [texasnaturelover@earthlink.net](mailto:texasnaturelover@earthlink.net), Anita Tiller at [anitatiller@aol.com](mailto:anitatiller@aol.com) or [atiller@hcp4.net](mailto:atiller@hcp4.net), or Ken Kramm at [ken\\_kramm@me.com](mailto:ken_kramm@me.com). We currently have April to November open with approximately 2-3 "in progress" speakers for those months, but more suggestions are needed.

The Sheldon Lake State Park prairie restoration team has a workday every Tuesday morning. If you are interested, contact Jim Branch (713.444.6865) who has been working with the team for 5 years. The team includes members of Galveston and Gulf Coast Master Naturalist Chapters.

The deadline to submit any event, announcement, article, story, blog, picture, etc. for the newsletter is March 15th. Email Kerry Spencer at [heartwoodtmn\\_fb@yahoo.com](mailto:heartwoodtmn_fb@yahoo.com) or [kerry3613@sbcglobal.net](mailto:kerry3613@sbcglobal.net). You can also contact Joy Klumpp at [tmnheartwoodnews@gmail.com](mailto:tmnheartwoodnews@gmail.com) Please put Heartwood Newsletter in the subject line so we know what you need.

If you need any announcement or event posted to Facebook, there is no deadline. Please email Kerry Spencer at [heartwoodtmn\\_fb@yahoo.com](mailto:heartwoodtmn_fb@yahoo.com) or [kerry3613@sbcglobal.net](mailto:kerry3613@sbcglobal.net). Please put Heartwood Facebook in the subject line so I know what you need.

When the new online calendar becomes available, please email any events to Kerry Spencer at [heartwoodtmn\\_fb@yahoo.com](mailto:heartwoodtmn_fb@yahoo.com) or [kerry3613@sbcglobal.net](mailto:kerry3613@sbcglobal.net). Please put Heartwood Online Calendar in the subject line so I know what you need.

**If you know of anyone who is interested in becoming a Heartwood Texas Master Naturalist, the schedule of classes and the application are on the following pages. The application and fee deadline is February 27th, 2015. The new intern classes begin on March 14, 2015 at 8:30am at Jones State FOREST. Contact Teri MacArthur if you have any questions at [tmacarthur@hcp4.net](mailto:tmacarthur@hcp4.net) or 281-381-3281.**



**Heartwood Chapter Texas Master Naturalist  
2015 Primary Training Session**  
*Subject to change in case of instructor cancellation/request*

<b>March 14</b> 5.0 Hrs <b>8:30am</b>	Introductions to the Master Naturalist Program Historical Naturalists in Texas Eco-concepts and Ecoregions of Texas	WG Jones State Forest 1328 FM1488 Conroe 77384	MacArthur Meuth Others/Fletcher?
<b>March 21</b> 4.5 Hrs <b>9:00am</b>	Forest Ecosystems Geology and Soils of Texas Volunteering projects at Jones State Forest	WG Jones State Forest (see above)	Warner Fisher? Fletcher?
<b>April 11</b> 4.0 Hrs <b>9:00am</b>	Birding the Texas Coastal Regions – ID/Adaptations Introduction to Insects Volunteering: Monitor Birds and/or Invasive Insects	Jesse H Jones Park 20634 Kenswick Humble 77338	Barr Holmes Crum
<b>April 25</b> 5.0 Hrs <b>8:30am</b>	Texas Native Plants/Botany, Native Plant Conservation Texas Mammals and Urbanization Issues Volunteering: Monitoring Plants and/or Animals	Mercer Botanic Gardens 22306 Aldine Westfield Humble 77338	Tiller Foss (281-443-8731)
<b>May 9</b> 5.0 Hrs <b>9:00am</b>	Freshwater Ecosystems/Water Quality Issues Monitoring/Volunteering Opportunities	WG Jones State Forest (see above)	MacArthur Merrell? Fletcher?
<b>May 16</b> 4.0 Hrs <b>9:00am</b>	Interpreting Nature: Skills for the Naturalist Wetland Ecosystems Volunteer Projects at Sheldon	Sheldon Lake SP 15315 Beaumont Hwy Houston 77049	Olson Sipocz (281-456-2800)
<b>May 23</b> 4.0 Hrs <b>9:00am</b>	Wildlife Habitats/Environmental Issues Landscaping/Gardening with Native Plants for Conservation and Habitat Volunteering: Citizen Science Projects/Habitat Gardens	Jesse H Jones Park (see above)	MacArthur Eckenfels Crum
<b>June 6</b> 3.0 Hrs <b>9:00am</b>	Sustainability Issues in a Forested Environment ??? Still tentative awaiting instructor confirmation.	WG Jones Forest	Riley? Fletcher?
<b>June 20</b> 5.0 Hrs <b>8:00am</b>	Fossil Hunting Archeo/Paleo Aspects of Texas <i>(Travel to collecting location by caravan/carpool)</i>	<u>Meeting Place:</u> WG Jones State Forest (see above)	Bieniek
<b>July 11</b> 4.0 Hrs <b>9:00am</b>	Advanced Insect Study: Dragonfly Migration Classroom and Field Study/Monitoring Project	Jesse H Jones Park (see above)	Barr
<b>July 25</b> 3.0 Hrs <b>9:00am</b>	Graduation/Intern Presentations (Certification Awards as applicable)	WG Jones State Forest (see above)	

**Total Hours: 45.5 Plan to make up any missed classes!**

(Hours indicated are the expected amount of time for the class day, and are the number of hours you will be credited for attending the entire day's activities. If you arrive late or leave before the class day is over, you will only be credited with the actual number of hours you attend. Plan accordingly. LUNCH is provided on the **First and Last Class days ONLY**. **Bring a lunch on all other days that extend past mid-day**. Leaving for lunch will not be an option.)



## Heartwood Chapter Texas Master Naturalist Program

Application to attend the Primary Training Session beginning Saturday, March 14, 2015

**DEADLINE to submit Application and Fee is Friday, February 27, 2015**

Class size is limited. To assure space, submit early.

Name \_\_\_\_\_ Home phone \_\_\_\_\_

Address \_\_\_\_\_ Cell/work phone \_\_\_\_\_

City/ZIP \_\_\_\_\_ Email \_\_\_\_\_

County of residence \_\_\_\_\_ Male  Female

### OPTIONAL INFORMATION:

Providing this information helps the Texas Master Naturalist program acquire funding. Thank you.

Highest level of education achieved \_\_\_\_\_ Marital status \_\_\_\_\_

Ethnic heritage \_\_\_\_\_ Current occupation \_\_\_\_\_

(If not currently employed, or if retired, what was your previous occupation? \_\_\_\_\_)

*The Texas Master Naturalist Program is a collaborative effort between the Texas AgriLife Extension Service, Texas Parks & Wildlife Department, and local partner organizations. Education programs of Texas AgriLife Extension and Texas Parks & Wildlife are open to all people without regard to race, color, sex, disability, religion, age or national origin.*

### Please provide this information:

List your name as you wish it to appear on your:

Name tag \_\_\_\_\_ Certification form \_\_\_\_\_

Upon completing certification requirement, you will receive a shirt with the TMN logo. Please circle the size shirt you wish: S M L XL XXL

**Acceptance for the 2015 Primary Training Session requires your commitment to attend all classes and field trips scheduled. To allow for illness or emergency, the schedule includes more than the minimum requirement of 40 hours of training, however you should make plans to attend all classes**

\_\_\_\_ (INITIAL HERE) By my initial I acknowledge that I am available to attend all classes and field trips and that I must attend a minimum of 40 hours of training, and will be required to complete at least 40 hours of approved volunteer service and 8 hours of additional, approved advanced training to qualify for Certification as a Texas Master Naturalist within 15 months of the start of the Primary Training Session. I further understand that to maintain the status of Certified, I must complete a minimum of 40 hours of approved volunteer service and 8 hours of approved advanced training each calendar year after initial certification.

Please complete the other side and sign before mailing

Why are you interested in the Master Naturalist volunteer program?

What are some organizations for which you have volunteered in the past two years, and about how many hours per month have you volunteered for each?

Please indicate Skills, Professional Training, or Interests you could share as a Master Naturalist:

- Education and/or Public Information – Speaking, Nature Guide, Environmental Education for adults and/or youth groups, Project Development
- Field Activities such as Monitoring/Surveys, Plant/Wildlife Census, Habitat Restoration/Planting, Water Quality Testing, Bird/Butterfly Counts, Seed/Plant Collections, Invasive Species Monitoring/Removal
- Administrative Assistance such as Committee Member/Chair, Newsletter Editing/Reporting, Database/Website/Computer assistance, Fundraising Activities
- Other – Be specific

Please check **ONE** box below:

- In consideration of being accepted as a participant in the Texas Master Naturalist Volunteer Program, I hereby release, discharge and agree to hold harmless the Program and its sponsoring state agencies, their agents, employees, officers and successors for all personal injuries including death, and/or known and unknown or damage to property caused by or arising out of activities performed under the program.
- I am unable to attend the training session in 2015, however please retain my application and contact me about future training sessions or other educational opportunities of the Heartwood Chapter.
- I am no longer interested. Please remove my name from your mailing list.

Signed \_\_\_\_\_ Date \_\_\_\_\_

Mail with check or money order for \$150.00, payable to Heartwood TMN, to:

Heartwood TMN  
PO Box 9611  
The Woodlands TX 77387-9611

***Thank you for your interest in the Heartwood Chapter and the Texas Master Naturalist Program!***

The Texas Master Naturalist Program is a natural resource-based volunteer training and development program jointly sponsored statewide by the Texas AgriLife Extension Service and the Texas Parks & Wildlife Department (TPWD). These agencies have come together in partnership to make this educational volunteer program available to you. Our ultimate goal is to help improve your natural resource understanding and management activities in Texas.



Heartwood Website: <http://heartwoodtmn.org>



## TMN Heartwood Chapter

P.O. Box 9611  
The Woodlands, TX 77387

Phone: (936) 273-2261 ext. 401

Email: Teri MacArthur, Chapter President  
[TMacArthur@hcp4.net](mailto:TMacArthur@hcp4.net)

For Heartwood TMN newsletter inquiries, comments, or if you would like to contribute to the next issue, please contact:

Kerry Spencer [heartwoodtmn\\_fb@yahoo.com](mailto:heartwoodtmn_fb@yahoo.com)

or

Joy Klumpp [tmnheartwoodnews@gmail.com](mailto:tmnheartwoodnews@gmail.com)

## Newspaper Committee

Kerry Spencer — Publisher/Co-Editor/Contributing Author

Joy Klumpp — Co-Editor/Contributing Author

Susan Beckemeier — Reporter/Contributing Author

Suzy Briseño — Reporter/Contributing Author

Elissa Fletcher — Contributing Author/Artist

Contributing Photographers:

Suzy Briseño and Carol Leonardi Clark

## Heartwood Chapter Logo

RCW Photo Credit: Florence King

Design Credit: Kerry Spencer, TMN Heartwood Member