Workday at Heard - Saturday, Jan. 24

At this month’s Heard Workday, we plan to (with help) prune some of the large, lower branches from several oaks as well as trim some of the shrubs. Along with gloves, you might bring hand and shrub shears.

We'll begin at 9 am and work until around noon. Come if you can, get Master Naturalist service hours, learn about the Heard plants and provide a much needed service to our hosts. There is no obligation to stay the whole time; we need supervisors as well as physically fit folks. So come out and help supervise community service workers even if you can’t physically dig in the dirt or pull weeds yourself.

Our Next Meeting - Tuesday, Feb. 3

The next meeting topic for the Collin County Chapter of the Native Plant Society of Texas is “The Outlook for Water in Texas” by John DeFillipo, Director of the John Bunker Sands Wetland Center. John presents his outlook for water in Texas and what the Center has done to promote water and environmental conservation. The meeting will be held in Laughlin Hall at the Heard Museum. Doors open at 7:00. The program starts at 7:15.

We look forward to seeing you there. It will be an interesting and informative presentation!

Reminder

We still have plenty of durable and beautiful metal, Texas shaped plant stakes for sale in bunches of 5 for $15. They would certainly look good identifying your favorite plants – and would help us fund future projects.

New Heard Museum Entry Gardens

This photo shows the new entry area for the Heard Museum grounds. The Collin County Chapter of the Native Plant Society of Texas plans to help install a garden there. We hope to begin work in February and we need your help. Bill Woodfin will have more details soon.

New Plant Signs

The above photo shows the new plant signs for the Heard Museum Gardens. A great deal of the work was done by our members Bill Cornette, Carol Clark, Melanie Schuchart and Tony Manasseri. A friend of our Chapter, Brett Laplante, also made essential contributions.
Nature Walks at Oak Point Park

Our president, Carol Clark, is going to do some plant walks and nature walks at Oak Point Park and Nature Preserve for the City of Plano. (All walks meet at main parking lot at 5901 Los Rios, and are subject to change or weather related cancellation.) Pre-registration is required.

To sign up, register online beginning in March. Contact Leanna Jennings (with City of Plano) at 972 941-5403 or via email at leannaj@plano.gov, or use the Leisure Online feature on the Plano Parks and Rec webpage.

Walks:
Mar. 17th, Tue., Nature Walk 10 am-$5 fee
Apr. 8th, Wed., Wildflower/Plant Walk 10 am-$5 fee
Apr. 14th, Tue., Nature Walk, 10 am--$5 fee
May 5th, Tue. Wildflower/Plant Walk, 10 am-$5 fee
May 12th, Tue., Nature Walk, 10 am-$5 fee

Talks:
Apr. 4th, Sat. “Buzz Buddies”, 10 am-$25 fee, includes bee house materials. Learn about the fascinating, beautiful and gentle native bees in our area, and make a native bee nest box to take home for your own backyard.
May 16th, Sat., “Monarchs and Milkweeds”, 10 am-$5 fee. Program and then a walk to observe butterflies and milkweeds in the park,
Jun. 6th, Sat., “Working Birds”, 10 am-$7 fee. Learn how birds’ beaks, feet, legs and wings are uniquely adapted to different niches in their environments and explore the features that make them just right for their own environmental “jobs”

Closed-toed shoes and long pants are recommended for all events

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Native Plant Society of Texas – Collin County Chapter
2015 Programs/Field Trips/Events

Monthly Programs:
Presented in Laughlin Hall at the Heard Museum
1 Nature Place, McKinney Texas 75069.

Tue. Feb. 3rd 7:00pm: ‘The Outlook for Water in Texas’, John DeFillipo, Director of the John Bunker Sands Wetland Center, will present his outlook for water in Texas and what the Center has done to promote water and environmental conservation.

Tue. Mar. 3rd 7:00pm: ‘Gardening for Butterflies’, Collin County Chapter member, Melanie Schuchart and Volunteer Director of the Heard Museum Butterfly House and Garden.

Tue. Apr. 7th 7:00pm: ‘Coevolution of Flowering Plants and Pollinators,’ Dr. George Diggs, Professor of Biology and Botany, Austin College.

Tue. May 5th 7:00pm: ‘Photographing Flowers and Plants - and More!’, Collin County Chapter member, John Worley.

Tue. Jun. 2nd 6:00pm: Tour of the Heard Gardens and Meadows. Collin County Chapter members lead members and guests on a tour of the Heard. Meet in Laughlin Hall. Note early start time.


Tue. Aug. 4th 7:00pm: ‘Northeast Texas – A Diversity of Ecosystems’, Collin County Chapter member, Betsy Farris, will present photos from the 2014 NPSOT Symposium held in Texarkana and preview of the 2015 Austin symposium.

Tue. Sep. 1st 7:00pm: Garden Show and Tell. Features photographs, videos and plant commentary from our own members and guests gardens, botanical outings, favorite plants, or plants of interest. One of the most interesting meetings of the year! Send photos to John Worley at worljm@yahoo.com

Tue. Oct. 6th 7:00pm: ‘The Key to Plant ID: Using a Dichotomous Key to Identify Common Vines’, Dana Wilson will teach the basic techniques in plant ID by examining specimens of common vines.

Events
Mar. 21st - 22nd – The Garden Show by Collin County Master Gardeners. Myers Park and Event Center, 7117 CR 166, McKinney, TX. Sat. 9am - 5pm, Sun. 11am - 5pm.

Apr. 17, 18, 19 – Native Plant Sale Heard Museum. Fri. 4 - 7pm-members only, Sat. 9am - 5pm and Sun. 1 - 5 - Public.

Sat. May 9 – 11th Annual Stiff Creek Wildflower Walk, northern Collin County. Tour the beautiful, natural terrain of the Buckner’s, Woodfin’s, and Laplante’s farms. 9:30 am–12:00 pm: Wildflower Walk. 12:00 pm–1:00 pm: Brunch. Bring a dish to share. Voluntary donations accepted to help support the chapter’s work of advocacy for the promotion and preservation of our native flora. Tour begins at 4545 CR 412, McKinney 75071

Oct. 15th - 18th – ‘NPSOT Annual Symposium’ – Austin.

Sat. Nov. ? 1:00pm: Annual Potluck. Home of a chapter member Tony Manasseri, McKinney

4th Sat. of most months 9am till noon – Supervise work days in the Heard gardens and other areas. Meet at the Demo Garden at the main entrance.
You Call This Dirt?
Some Science of Our Clay Soil

When we got our first house in the late 70’s, I was excited to start some real gardening. Oh sure, back in married student housing, we built containers and grew tomatoes. But that didn’t really count.

Finally, our own yard! It had a 10’x20’ fenced area that we could use for a garden. I ran out with a shovel and it just bounced off the dirt. I cursed, “It’s as hard as concrete!” You call this dirt?” (Colorful language - get it?)

It’s been my experiences trying to grow things in the clay that has pointed me more toward Native Plants. They have had a million years to adapt and grow in this stuff we call ‘Dirt’. (More colorful language.) Native Plants are pretty as well as attract insects, birds, and other wildlife.

Over the years, turning in straw that had been used as mulch (along with what amendments I could afford in those early days of my career) resulted in a pretty good garden.

But I’m a nerd. I had to learn some of the science of this clay. I took gardening classes and read as much as I could find on our Clay Soil. Our soil has a name: Houston Black clay. The 1969 USDA publication, Soil Survey: Collin County Texas, said of our soil:

- “rated fair as a source of topsoil”
- “not well suited to gardening and landscaping”
- “rated poor as a source of road fill”
- “risky for building foundations or for pipelines”, and
- “does not provide good reservoir areas”.

Oh, come on! Don’t hold back. Tell us what you really think!

The Houston Black series occurs on about 1.5 million acres in the Blackland Prairie which extends from north of Dallas south to San Antonio.

Clay particles are less than \(\frac{2}{1000}\)th of an inch in size. When they dry, the particles clump together to form a clod that is as hard as a rock. Wet clay sticks to shoes, shovels, hands, dog paws, . . . (more colorful language)

It can shrink by 30% in each dimension when it is dry. Our clay soil can crack more than 3” wide and 3’ deep in dry summers. It’s a testament to turf grass roots in their ability to hold the soil together. Bunch grasses are more common in rural areas and cracks more easily form there.

The photos below were taken during a drought, just a few feet from some newly transplanted (hand watered) persimmon trees. But time, and rain, heals all things (bottom right photo). That area looks fine three years later.
When wet, water permeability is less than $1/10$ inch per hour. I can attest to that fact. Living with a septic tank and lateral lines can be a challenge in the rainy season. Water that manages to infiltrate takes the easy way (rather than soaking in), back up the lateral line, filling the septic tank. Then, the system is full until the water level drops.

The low permeability results in the subsoil reaching an Equilibrium Moisture Content. At 3 feet deep, movement is only 10% of that at the surface. At 12’, the clay don’t really move.

A confined clay deposit, like under your foundation, can exert pressures of 20,000 pounds/sq. ft. or more. The low permeability results in the clay in the center to reach equilibrium, while the outer edges of the clay can dry out during a drought and shrink away from the foundation.

As a tree goes about the business absorbing water from the soil, the moisture equilibrium in that area is less than it would be without the tree. When a tree is added or removed, soil movement (from the change in moisture) can affect nearby sidewalks, etc. According to one study, it can take over 10 years to stabilize.

Over time, the ground cracks and recloses, but not always fully closed. A low spot is left that holds water after a rain. Some particularly bad cracks can leave a hole 8”-10” deep and 24” across.

The surface of our clay can move up and down more than 1” over a year and more than 2” between wet and dry years. All this movement can wreak havoc with retaining walls, too.

Clay can be very corrosive on metal. Combine that problem with soil movement due to wet/dry spells, water pipes have a hard life here. In one local study, plastic pipes fared only slightly better than metal; the clay corrosiveness damaged more metal pipes than the shrink/swell broke plastic pipes. Over 60% of the breaks occurred as the fall rains expanded the dry clay.

Finally, here are some uses for clay:

- Bricks: mold and bake to 1500°F
- Brick Mortar: add sand and water and stir
- Concrete: add gravel to mortar
- Ceramics: mold and bake to 2000°F
- Stoneware: mold and bake to 2400°F

Maybe the USDA was trying to dissuade us from living here. But this is our home. And **YES, we call this dirt!**

The best way to guarantee plants will thrive and perform to expectation is to properly prepare the soil. (Even Native Plants will enjoy a little soil improvement.) Soil is the very foundation of plant life. Soil provides structure within which the plant can grow and anchor itself, nutrients the plant requires for vigorous growth and vitality, and water which assists in the uptake of nutrients and cools the plant by way of transpiration.
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Soil consists of minerals, organic matter, bacteria, fungi, earth-worms, etc. A healthy composition of these materials would be 45 – 50% mineral material, .05 – 3% organic material, and 50% open pore space. Optimally, the open pore space would be 50% air and 50% water. It is not very likely that the soil North Texans will find in their backyard gardens will initially have this ideal composition. The good news, however, is that amending the soil to a healthy state is a relatively easy and inexpensive process.

A good first step is to get the soil tested. Collect a few soil samples and send them off for analysis. The basic test measures the amount of major nutrients present and pH level of the soil and makes recommendations for addition of fertilizers.

Regardless of the test results, the addition of Compost to the soil is always essential for soil health. Compost is the end result of fully decomposed organic matter. In clay soils, compost allows for air space and better drainage. The greatest benefit from the addition of this organic material is increased presence and activity of beneficial organisms in the soil, as they turn the nutrients in the soil into a form which can more readily be taken up by plants.

When preparing a new bed, remove the grass and roots with the top 2” of soil and till 6” to 8” deep. Then add 2” - 3” of compost and till it in.

Top the conditioned soil with a thick layer of mulch. Mulching the landscape has several benefits. As a soil amendment, wood-based mulch will continue the soil conditioning process for years to come. As it breaks down, wood mulch gives the soil additional structure and adds airspace. Place new mulch upon the old as it ages.

These straightforward practices will produce a healthy soil in which plants will thrive. Each year the process will become easier as the microorganisms that have been invited into such a healthy environment do most of the work.

An article is often closed with a photo of the author. Ego leads me to use one from a younger day. I offer this photo in that spirit. John Worley

Closing Shot:

This photo from the John Bunker Sands website shows river water entering the lower left pool and becoming notably clearer as it flows toward the top of the photo.

The John Bunker Sands Wetlands cover 1,840 acres along the East Fork of the Trinity River, southeast of Dallas. River water moves through a series of cells (sediment basins and wetland plant pools), where it is naturally filtered, primarily by water plants. The water in the final retention pool is clean enough to be pumped for use in our water systems.