

LEXINGTON CHAPTER — SEPTEMBER, 2012

<http://wildones.org/chapters/lexington/>

Dropseed Native Plant Nursery

By Ann Bowe

Margaret Shea has over 25 years of training and practical experience in natural areas management, restoration and biological inventory along with a Master's Degree in Ecology from Indiana University. She had noted the difficulty of buying local seed for native plant projects and decided to fill that gap by starting her own nursery in 2004.

Dropseed Native Plant Nursery is located northeast of Louisville in Goshen, Kentucky. Dropseed specializes in providing high quality local genetic plants for use in habitat restoration and landscaping projects.

Margaret and her staff are committed to protecting the natural communities and native plants of our region. In order to provide local genetic plants, they collect seed from natural areas in Kentucky with the permission of the landowners and grow out this seed in their plant production beds.

Dropseed Nursery now has two greenhouses and starts about 50,000 plants each year! One of Margaret's favorite times of the year is starting seeds in January. While it may be cold outside, it's cozy and warm in the greenhouses. "The seeds are beautiful, the tiny plants are so lovely," says Margaret, showing her passion for this work. She also enjoys the diversity of her clients, from private landowners to parks—such as Daniel Boone National Forest—as well as non-profits.

Dropseed Nursery staff also designs and implements the restoration of wetlands, grasslands and woodlands. They are experienced in native plant propagation and planting, soil stabilization, invasive species control, water quality management and fire management.

FALL PLANT SALE: Head to Dropseed Nursery on **Saturday, September 8 and 15** for their fall plant sale, from 9 a.m. to 4 p.m. each day. Free "Seed Collection and Storing" class at 11a.m. on each day. Directions are on their website www.dropseednursery.com.

Wild Ones Picnic at Arboretum

By Mary Carol Cooper

The *Wild Ones'* Second Annual Picnic (the first was rained out last year) was held at the UK Arboretum on Thursday, August 2, 2012.

Thank goodness we had a beautiful evening after so many nights where you couldn't sit outside without sweating buckets. Thirty brave people showed up with tons of scrumptious potluck dishes to share. I can assure you, no one went away hungry.

After much visiting and catching up with news and stuffing ourselves, some of our members chose to sit and chat but others took up the challenge of a hike to the rain gardens offered by Beate Popkin, our president.

The Arboretum looked exceptionally well considering the hot dry summer we have had. As we traipsed across the hills and valleys toward the Glendover Project rain garden, Beate explained to us how the mechanics of the rain garden project were set up and how the storm water followed the path down to the bottom of the hill into the storage area. This is part of the wetlands section of the Mississippi Embayment, which is a \$500,000 city-funded project that controls storm water. It prevents flooding in nearby neighborhoods. If you would like to know more about this project, join the Bluegrass Pride/*WildOnes* Rain Garden Tour on **September 9th**. Check the Events listing on the last page of this newsletter for details.

Wild Ones September Meeting

Thurs., Sept. 6, from 6:30-9:00 p.m., we will meet at the Coca Cola plant, 2275 Leestown Rd., to preview the two rain gardens there that will be part of the Sept. 9 tour. Russ Turpin will be our guide.

WINGSTEM

Verbesina alternifolia

By Victoria Ligenza



Wingstem is a native perennial that grows to be 3 to 8 feet tall and unbranched. The central stem usually has lines of ridges that run up the stem with a scattering of white hairs between the ridges. It has alternate leaves that can be 10 inches long and 2 ½ inches wide. At the apex of the plant are numerous daisylike composite flowers with a ragged appearance. Each flower is about 2 inches across and has up to 10 yellow ray florets that droop downward. The bloom period occurs from late summer to early fall.

This flower does best in full sun to light shade. Its habitat is moist meadows, woodlands and areas near rivers. It may also be found in roadside ditches, preferring to grow in fertile soil that is high in organic matter. The lower leaves may fall off during hot dry weather.

Silvery Checkerspot caterpillar on Wingstem leaf.

Wingstem is a nectar plant for bees, butterflies and skippers. Caterpillars of the Silvery Checkerspot (*Chlosyne nycteis*) feed on the foliage and the Gold Moth (*Basilodes pepita*) feeds on the flowers and developing seeds. The nectar is inaccessible to many short tongued insects such as flies and wasps due to the long tubes of the disk flowers. However, beetles and other insects do feed on the foliage. Wingstem has a bitter taste and usually is not consumed by deer, rabbits or other herbivores.



WHEEL BUG

Arius cristatus

By Victoria Ligenza



The Wheel Bug, though ferocious looking, is one of the good guys but be careful as its bite can be very painful. It is in the *Reduviidae* family which includes Assassin Bugs. It is one of the largest terrestrial true bugs in North America at 1.5 inches long.

The Wheel Bug has a structure on its dorsal side that resembles the cogs of a wheel and it is the only bug to have this. It has a long beak with which it pierces the soft bodies of other insects it considers to be food items. Through these conduits it injects salivary fluids that paralyze and dissolve the victim's insides as it pins its prey with its front legs. Females may also feed on the male after mating is concluded.

Wheel Bugs move and fly slowly and produce a noisy buzzing sound by rubbing the tip of its beak over grooves on its upper belly (thorax). When captured they extrude a pair of bright orange-red scent sacs which give off a pungent scent.

Wheel Bugs have one generation a year and overwinter in the egg stage. The female lays 40 to 200 eggs on a twig. The adults may be found on goldenrod, sunflowers and other flowers, as well as on the trunks of locust and fruit trees and in shaded forested areas. I have had one in my vegetable garden for several days near my cucumber and melon vines. Happily, my Japanese beetles are now gone. Is that because of the Wheel Bug? I don't know for sure but it is nice to know he is there. The Wheel Bug also feeds on the immature locust leaf-miner while it is still imbedded in leaf tissue. It is a valuable predator in forest and shade areas because it can prey on the well-protected hairy caterpillars that are defoliators. So if you run across one of these assassins of the bug world don't hurt it... but don't touch it either!

The article reviewed below by member Victoria Ligenza continues the fascinating exploration of plant capabilities begun with last month's article "How Mother Trees Perpetuate the Forest."

Do Plants Think?

By David Chamovitz

Scientist David Chamovitz is director of the Manna Center for Plant Biosciences at Tel Aviv University. This summary is taken from an article that appeared in the June 5, 2012, issue of *Scientific American*.

According to Dr. Chamovitz, plants can see, smell and feel. They can mount a defense when under siege and warn their neighbors of impending danger. A plant can even be said to have a memory. But does this mean that plants think? This topic was explored in an interview with Gareth Cook of *Mind Matters*.

Dr. Chamovitz says that in his research he discovered a unique group of genes necessary for a plant to determine if it is located in the light or in darkness. This same group of genes is also part of the human DNA. These genes are important in animals for the timing of cell division, axonal growth of neurons, proper functioning of the immune system and internal circadian clocks. Results of his studies led him to realize that the genetic differences between plants and animals is not as significant as was once believed. He began to question the parallels between plant and human biology.

Plants are complex organisms that live rich, sensual lives. If you think about it, rootedness is a huge evolutionary constraint. So plants had to develop incredibly sensitive and complex sensory mechanisms for an ever changing environment. Just because we don't see plants moving doesn't mean that there is not a very rich and dynamic world going on inside the plant.

Dr. Chamovitz goes on to explain how plants can hear by responding to vibrations. They also communicate with other plants by releasing pheromones when attacked by bugs. These pheromones trigger other plants to start producing chemicals to help fight off the bug attack. He states a recent study showing that plants communicate through signals passed from root to root. It is known that the signal travels through the roots because it is not received by potted plants whose roots do not touch.

Regarding possible plant memory, Dr. Chamovitz states that plants have short term memory, immune memory and transgenerational memory. An example of short term memory that he offers—a Venus Fly Trap needs to have two hairs on its leaves touched in order to shut, so it must remember that the first one has been touched. The transgenerational memory is apparent when stressed plants give rise to progeny that are more resistant to the stress.

When asked if there is any analogy between what plants do and what the human brain does, Dr. Chamovitz notes Darwin's proposal that the tip of a root acts like the brain does in lower animals, receiving sensory input and directing movement. Dr. Chamovitz further states shoot development is partially dependent on a signal that's generated in the roots and leaves send signals to the tip of the shoot telling them to start making flowers.

But can plants think? Dr. Chamovitz differentiates between thinking and information processing. He says plants exhibit elements of autonoetic consciousness but does not classify this as actual thinking, although he reminds the reader that such discussion borders on the philosophical and should be approached with care.

This article can be read in its entirety at www.scientificamerican.com/article.cfm?id=do-plants-think-daniel-chamovitz.

Also note: Daniel Chamovitz is the author of a new book *What A Plant Knows: A Field Guide to the Senses*, described as "an intriguing and refreshing look at how plants experience the world." It is published in the United States by *Scientific American*.



Attractive and Aromatic Sassafras albidum

By Heather Wilson

Sassafras, a member of the Laurel family of trees, has a long, well developed history in the eastern United States. Native American tribes used Sassafras in many medicinal poultices and infusions, as an herb and thickening agent for cooking, as a tea, as a fertilizer for beans, as a fragrance for soap, and as wood for furniture.

Sassafras is a native tree that grows approximately 30 to 60 feet tall. The national champion in Owensboro, Kentucky is 78 feet tall! Young trees have greenish bark that turns a dark reddish/orange-brown as it ages. The leaves extend into one of three shapes resembling a mitt, a fork, or a “plate” and are light, bright green through the summer. In the fall they turn bright yellow-orange to red-orange. Flowers, found on the female trees, are yellowish-green and aromatic. Berries on female trees occur in purplish-black clusters. These berries make Sassafras a great choice for wild-life lovers, as many birds and animals, from crested flycatchers and pileated woodpeckers to black bear and rabbits, will frequent the tree for its fruit.

With all parts of the plant spicy and aromatic, the sassafras makes a great tree in the landscape. It does sucker, so suckers must be removed to maintain a single tree.

For more information, please visit the plant guide pdf at:

<http://plants.usda.gov/java/profile?symbol=saal5>



Garden Resources at Your Fingertips

By Judy Johnson

Looking for information to make wise plant selections? Want to try your hand at improving your garden design? Think you might like a new reference book? Look no farther than your computer.

- plantnative.org—This site is simple and easy to use. It provides a **Nursery Finder**, a **Community Service Organization Finder**, and a **Regional Plant Finder**. Just click on your state. You will also find a link to a **How To** tutorial for creating native plant landscapes that is easy and fun to play with. And it carries **Book Recommendations** for each region of the country. Can't go wrong here!
- wildflower.org—This is the **Lady Bird Johnson Wildflower Center at the University of Texas at Austin**. One of its main endeavors is the **Native Plant Information Network** which is searchable by scientific or common name or by family. Check out its database where you can enter your requirements for a plant (light, bloom, size, soil, appearance, lifespan, etc) and up pops a list of possibilities. The site also contains an **Images Gallery** (to check out what plants look like); **How To** (do almost anything) articles; **Step by Step Guides** for doing everything from pruning to transplanting to raising a butterfly; **Mr. Smarty Plants** who will answer those questions that have been bugging you—and much more.
- musicofnature.org—Would you like to recognize a bird or critter noise you have heard? Here is the site for you. This is a blog of postings by people dedicated to amplifying the voices of nature around us. A lot of fun to explore!
- [facebook.com/#!/WildOnesLexingtonChapter](https://www.facebook.com/#!/WildOnesLexingtonChapter)—our very own page! Read blogs by local members, connect to informational sites recommended by members, keep up with local events, check out member photos. Right now you can sign a petition to the EPA to ban pesticides that are killing bees. Friend us on Facebook!

SEPTEMBER EVENTS

- **SUN., SEPT. 9 from 2 to 5 P.M.—**
BLUEGRASS PRIDE/WILD ONES TOUR
OF RAIN GARDENS. The tour will feature three sites with two gardens at each site. Sites are: 507 Chinoe Rd., 325 Glendover Rd., and 2275 Leestown Rd. (Coca Cola plant.) Maps and refreshments available at all locations. The designers/installers of three of the gardens will be there to discuss their work. Open to the public. Details on website: <http://wildones.org/chapters/lexington/>.

Ecological benefits of these gardens include: filtering rain water that falls on impervious surfaces, helping to alleviate drainage problems, increasing percolation and reducing erosion, providing habitats for wildlife and enhancing the beauty of our community.

- **Wed., Sept. 5, 10 a.m. to noon—Bernheim Forest Monarch Watch**—Join Interpretive Guide and Naturalist Corine Mastey for an exploration of the Big Prairie. Call **502-955-8512** to register. There is a small charge.
- **Sat., Sept. 8 and 15, 9 a.m. to 4 p.m.—Dropseed Native Plant Nursery FALL PLANT SALE** (See page 1).
- **Sun., Sept. 9 at 2 p.m.—UK Arboretum—Tour of the Fruit and Nut Collection**—free and lasts about 1 hour.
- **Floracliff Nature Sanctuary**—Call **859-351-7770** to register for all hikes and workshops.

Fri., Sept. 7 and Sat., Sept. 8—KY Aquatic Biodiversity Workshop with Michael Compton, Aquatic Zoologist, and Ryan Evans, Aquatic Biologist. Time will be spent in stream and in lab. \$50 fee.

Wed., Sept. 12 at 7 p.m.—Eastern Deciduous Forests Through the Eyes of Lucy Braun—Rob Paratley of UK will discuss the field work of this early to mid-20th century ecologist/botanist.

Sat., Sept. 29 at 1 p.m.—Native Alternatives to Invasive Plants—Hike along Elk Lick Creek with Preserve Manager Beverly James to see and discuss popular garden plants that have become invasive and some native alternatives.

Coming Soon...Member Survey

In October you will be offered the opportunity to respond to a newsletter reader survey. Quick...online...easy. Three to five minutes to complete. Please help us provide communications that suit your needs.

Additional Information on Japanese Barberry

By Victoria Ligenza

The June issue of this newsletter carried information about current research into the role the Japanese barberry (*Berberis thunbergii*) providing a perfect environment for the ticks that carry Lyme disease.

This barberry is an invasive now reported in 20 states. It is capable of increasing soil nitrogen cycling rates and soil pH by altering the functioning of soil organisms (Kourtev, 1998, Ehrenfeld, 2001). This makes the pH more basic, changing the types of soil organisms which alter the ability of native plants to survive. This altering process results in a reduction of the necessary litter layer in a healthy forest.

The Japanese barberry with a 90% germination rate also produces a large number of seeds. Even with removal if root fragments remain they can sprout new plants.

There is no biological control organism available for this plant.



This newsletter is a publication of the Lexington Chapter of the *Wild Ones* organization. It is published nine times a year: March, April, May, June, July, August, September, October, November as an electronic newsletter.

If you have any questions, suggestions, or information for future editions, contact Ann Bowe, chair of the Marketing and Communications Committee, at annbowe@annbowedesigns.com or Judy Johnson, newsletter editor, at judylex@insightbb.com.