

**LEXINGTON CHAPTER — November, 2013**

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

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The Lexington chapter of *Wild Ones* meets the first Thursday of every month and at other times for special programs. Visitors welcome! Check our website [www.wildones.org/chapters/lexington/](http://www.wildones.org/chapters/lexington/) for details.

This newsletter is a publication of the Lexington chapter of *Wild Ones*. It is published nine times a year—March through 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](mailto:annbowe@annbowedesigns.com) or Judy Johnson, newsletter editor, at [judydex@twc.com](mailto:judydex@twc.com).

*President's Message...*

The month of November invites reflection on the gardening year that is ending. And what a terrific year it has been for us in central Kentucky! A largely frost-free, yet cool and rainy spring caused plants to leaf out in slow succession and to hang on to their blooms for a long time. In summer, temperatures rarely rose above 90 degrees and the rains kept coming. There never was a need to water established plants. In early October, just when it seemed that dry conditions had finally caught up with us, we were blessed with another 1 inch+ rainstorm.

True, there were a few negatives. Some plants, above all, certain goldenrods in my gardens, reacted to all that moisture by developing a fungus that impacted their flowering. Other plants simply grew too tall or too voluminous. And, of course, the weeds kept coming and coming. Crabgrass never slowed down for a moment and the winter annuals are with us in huge abundance due to that early October rain.

One troubling aspect of this summer, possibly related to the weather, was the paucity of butterflies. Without a doubt, habitat loss is responsible for the long-term decrease in wild animal populations. But research increasingly shows that successful breeding among butterflies fluctuates with the weather. Both very cold and very warm temperatures can interfere with various stages of their reproductive cycle. This year, in addition to the monarchs, I have particularly missed the buckeyes, another migrating species that used to flock to my garden in late summer. Sadly, this August I saw only one. Hopefully, their absence is a cyclical and not a permanent event.



*Common buckeye butterfly poses with a delicate grey hairstreak.*

*Beate Popkin*

# Cocoon, What's the Secret You Been Keepin' ?

By Karen Lanier

Heading into the season of hibernation and turning inward is much like the metamorphosis of a butterfly. The romantic idea of a lowly caterpillar munching along and then one day becoming the beautiful, graceful creature it has waited so long to be captures our imagination but is the stuff of fairy tales. Do we really know what happens during that miraculous transformation inside the cocoon?

First, a few definitions: a *caterpillar* is the larval form of a butterfly, moth or skipper. A *cocoon* is the silk covering that encloses the *pupa*, the stage of insect development between larva and adult. In general, moth caterpillars spin various types of cocoons from their silk, while a *chrysalis* is the protective shell of a pupating butterfly. A distinct difference is that the chrysalis is a structure formed inside the butterfly caterpillar. It is revealed when metamorphosis begins and the caterpillar sheds its skin one final time.

The diversity of cocoon designs varies from a silk hammock to a rock climber's sling to a leaf-litter-woven sleeping bag. Depending on the species, the complete reorganization that happens within various cocoons can last from a couple of weeks to several months. Unable to react to predators with anything more than a twitch, the cocoon camouflages to protect the vulnerable creature during its transformation.

Slicing into cocoons may reveal the state of the pupa but destroys the life. If you do it at just the right stage, you find it filled with wet goo, the disintegrated caterpillar. This slop is made of imaginal cells, which are undifferentiated, similar to stem cells. Both terms describe the blank slate of possibility, the basic building blocks that will construct the new winged form. The protein-rich soup will multiply and

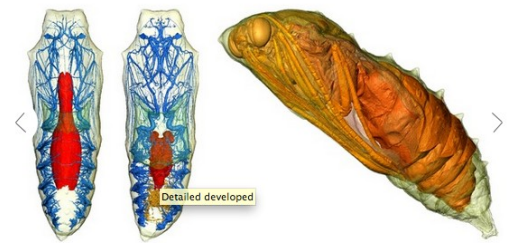


Image credit: [www.livescience.com/32007-image-gallery-butterfly-metamorphosis-in-3d.html](http://www.livescience.com/32007-image-gallery-butterfly-metamorphosis-in-3d.html)

organize cells into legs, wings, sexual organs and other parts designed for a completely new purpose in life. The caterpillar's body is designed to eat and store fat; the winged butterfly or moth is all about mating—two different bodies for two different life stages.

With advancements in technology, a noninvasive glimpse inside the mummy-like pod is possible. X-rays have been used to display internal structures and computed tomography (CT scans) creates multiple views showing more dimensions within an object. Through a technique known as Micro-CT, researchers have now scanned and recorded the entire metamorphosis of a single caterpillar. Magnetic Resonance Imaging (MRI) shows more contrast between different soft tissues and the multiple images lend themselves well to animation sequences.

Dr. Richard Stringer peered inside monarch chrysalids with an MRI at Duke University Medical Center, recording images over ten days. Hundreds of images created a composite 3-D portrayal of the changes taking place within. Animators took his research and illustrated the butterfly life cycle in the film *Metamorphosis*.

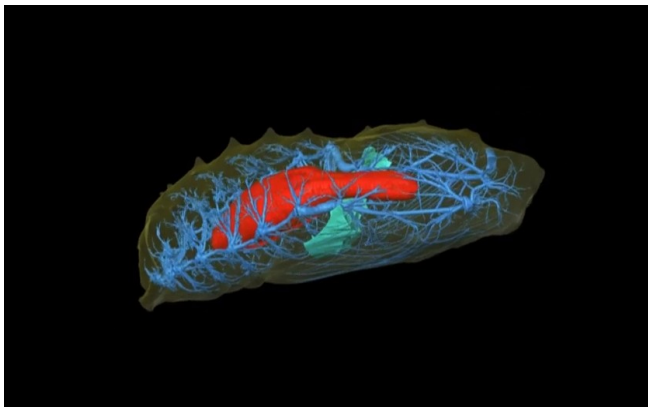


Image credit: [www.evolutionnews.org/2013/06](http://www.evolutionnews.org/2013/06) another look in

The MRI showed brain tissue forming as early as day one of the chrysalis and a breathing apparatus that remained functional throughout the whole process of change. Even with the high-tech magnifying glass peering inside the womb of a chrysalis or cocoon, the fact that these creatures dissolve and then orchestrate their resurrection remains baffling.

Human or insect, wrapping ourselves up in a blanket and just letting ourselves unwind may be the natural order of things. We have the rest of the winter to develop our new spring selves.

## Grow Your Own!

By Ann Bove



Connie May demonstrates the process of seed collection and germination for Wild Ones members.

*Wild Ones* member and native plant landscaper Connie May showed us that propagating plants is fun, saves money and results in lots of native plants to share with others. She shared some tricks for ensuring that seeds germinate and also showed us how to divide existing plants. Those attending took home seeds for over a dozen native plants!

Connie's favorite book on the topic is *Growing and Propagating Wildflowers of the United States and Canada* by William Cullina. This, and his *Native Trees, Shrubs and Vines*, about propagating our native woody plants, are available at the public library.

After Connie's outdoor demonstration we moved indoors to celebrate our success at adding many Monarch Waystations to Kentucky. Betty Hall, who gave the original talk that inspired us to plant milkweed and register our waystations, spoke with passion about the ongoing need to help the monarchs. We drew for prizes and many of those who had registered their waystations went home with a gift to much applause.

Please continue the effort. Plan now to add more milkweed to your gardens next year. We'll all thank you!

## What Is Mother Nature Trying to Tell Us?

By Deborah Holloway

Twenty-first century meteorologists rely on streams of data from electronic devices to provide us with the latest weather forecasts by which we plant and tend our gardens. Sometimes it seems their resources are no more accurate than the lore from the past. For your reading pleasure, here are a few wise words about what to expect in the fall and winter months.

- Woolly worms have black bands at each end of their reddish brown bodies. The wider the black bands, the more severe the winter will be. According to <http://webecoist.momtastic.com/2012/11/02/signs-of-winter-weather-14-folklore-predictions/>, these caterpillars have an 80% accuracy rate with their predictions.
- Animals grow thicker winter coats and begin the process earlier in the fall before harsh winters.
- Squirrels bury more acorns and dig deeper holes before snowstorms.
- Trees produce a larger quantity of bigger pine cones before a severe winter sets in.
- Cows or sheep will cluster together before an oncoming storm.
- The wishbone of a roasted goose can be left to dry. If it turns black, blue or purple, expect a bad winter. The darker the color, the harsher the weather.
- Most intriguing of all, it is said that the shape of a persimmon seed can tell us how wet the winter will be. A spoon shape indicates lots of heavy, wet snow. A fork shape means light, powdery snow. And a knife shape says there will be cutting, icy winds.

Now will someone please let us all know what to expect? Thanks!



Deborah Holloway offers a persimmon seed

## Some Buzz about Native Bees

By Victoria Ligenza

We hear a lot about honey bees, which, by the way, are not native, but may not realize there are nearly 4,000 species of native bees found throughout North America, ranging in length from less than 1/8 of an inch to more than one inch. Although these native bees are not as noticeable as the big colonies of non-native honey bees, they do an essential job of pollinating our flowers and vegetables.

All bees build nests, stocking them with a nutritious mixture of pollen, nectar, and saliva before laying their eggs and sealing them so the larvae remain safe. Bumble bees (there are about 45 species in the U.S.) are the only native bees that are truly social, living in colonies and sharing the work. They mostly nest underground, often in abandoned mammal burrows. In contrast, the vast majority of bees are solitary nesters. Although they often will nest together in great numbers when a good nesting area is found, they tend to create and provision a nest on their own without cooperating with other bees.



Bumble bee from [library.thinkquest.org](http://library.thinkquest.org)



Halictid bee from [cirrusimages.com](http://cirrusimages.com)

Managing native bees in large hives, as we manage honey bees, is not possible. However, we can enhance the habitats of native bees, providing nesting sites and forage plants to help them survive, thrive, reproduce and pollinate. Such habitat management benefits honey bees, as well.

Some basic ideas: add a shallow birdbath as even bees need an occasional drink of water; reduce or eliminate chemical usage; provide undisturbed areas for nesting, preferably in a sunny spot. (No mow zones will help since mowing often kills bees.)

Consider building a simple bee box. This is a block of wood with holes of different sizes drilled into it. Most people think that only mason bees use these but many other bees are attracted to them, too. Excellent instructions complete with pictures can be found at [http://www.foxleas.com/bee\\_house.htm](http://www.foxleas.com/bee_house.htm).

There is evidence that bees are more attracted to native flowers than to aliens. In some cases cultivars of native flowers created for more showy blooms may actually have less nectar. So even if the flower is more colorful to our eyes, bees will prefer the original native flower.

Experiments have shown that flowers with long flexible stems swaying in the breeze attract more bees. Large blooms help ensure the bees reach the nectar. Different species of bees have different shaped tongues so it helps to have a variety of blossom shapes. Single blooms are better than doubles for bee access. A succession of native flowers for all seasons is important. Some to consider are beardstongues, coneflowers, joe pye weed, asters and goldenrod. Plant flowers in clumps so the blooms are easy for bees to see. It is interesting to note that bees seem to favor blue, white, yellow, purple and violet blooms.

Bees see in the ultraviolet spectrum which humans cannot detect. Under an ultraviolet light the colors of some flowers, such as cranesbill geranium and black-eyed Susan, change to create a bull's eye with streaks radiating out from the center. This image directs bees to the pollen at the center of the flower.

Finally, a strong floral fragrance increases the probability of attracting bees for pollination.

All bees are valuable pollinators whose existence is threatened by the ever increasing use of chemicals. Let's welcome them to our gardens, providing them with safe habitat and nourishment.



Carpenter bee from [americanpestcontrol.net](http://americanpestcontrol.net)

## AREA CALENDAR



### Bernheim Arboretum

Nov. 7-17—Selected trails closed for wildlife management. **The arboretum remains open and all closed areas will be clearly marked for your safety. Weekend admission during this period will be free.** Enjoy the fall color and begin your holiday shopping at the Visitor Center.

Sat., Dec. 7 from 10:00 a.m. to 12:00 p.m.—**Winter Raptors**—Guided hike to an observation spot used to view eagles and other raptors that make Bernheim their home during winter. **Members: \$10; Non-members \$15. Registration and payment due by 4 p.m. on the day prior to the program. Call 502-955-8512. Space limited to 10, so register early!**

### Floracliff Nature Sanctuary

Sat., Nov. 2 and Dec. 7 from 10:00 a.m. to 1:00 p.m.—Volunteer opportunity clearing exotic plants from the preserve. Please call ahead **859-351-7770** to register and receive more information.

### UK Arboretum

Tues., Nov. 12 at 6:00 p.m.—**50 Shades of Green: Courtship and Mating in the Plant Kingdom**—Todd Rounsaville is the instructor for this class which will explore the evolutionary history that has shaped contemporary reproductive strategies in plants. Discover the strange world of flowers that mimic animals, melt snow, change sex and even kill their own pollinators. **Cost: \$5 (\$4 for Friends). Preregistration is required. Call 859-257-6955 or email [dmbast0@uky.edu](mailto:dmbast0@uky.edu).**

#### **CHILDREN'S PROGRAMS**

**Pre-register by calling 859-257-9339 or email [emma.trester-wilson@uky.edu](mailto:emma.trester-wilson@uky.edu).**

Wed., Nov. 6, 10:00 to 11:00 a.m.—**Autumn Colors. Ages 2-5.** Investigate colors of autumn by going on a hike and making natural artwork.

Sat., Nov. 23, 10:00 to 11:00 a.m.—**Fantastic Fall. Ages 5+.** Hike to look for seeds and make seed art.

Sat., Dec. 14, 10:00 to 11:00 a.m.—**Short Days, Long Nights. Ages. 5+.** Nearing the winter solstice we will determine why daylight changes and play with light.

Wed., Dec. 18, 10:00 to 11:00—**Hibernating Animals. Ages 2-5.** Discover what animals do in winter—hike to look for animal homes and make a winter habitat of our own.



## Mark Your Calendars Now!

### The *Wild Ones* Annual Holiday Party

Saturday, December 7th at 7 p.m.

Beate Popkins' house, 124 Idle Hour Dr.



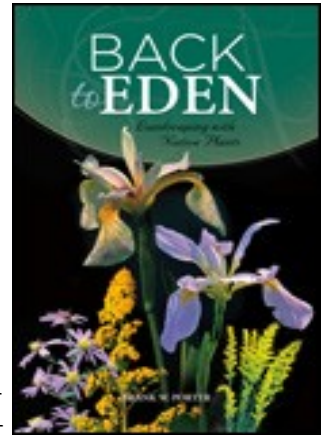
Potluck dinner for chapter members and their spouses/partners.



Please bring hors d'oeuvres, casserole or salad to share. Desserts, drinks provided.

## Remedy for the Winter Blues

When our gardens go dormant as cold weather settles in with grey skies and blustery winds, what better time to settle into a comfortable chair with a good book like... "*Back to Eden: Landscaping with Native Plants*" by Dr. Frank Porter.



This book has won the Evergreen Book Silver Medal for Nature Conservation presented by Independent Publisher in the series of Living Now Book Awards.

Dr. Porter has been collecting, growing and encouraging other people to plant native varieties for more than 25 years at his Porterbrook Native Plants Nursery on the banks of the Ohio River near Pomeroy in southeastern Ohio. In the book he shares his personal philosophy, a practical guide to landscaping with natives and a look at the history of Ohio Valley botany.

The book retails for \$20, available in bookstores and online.

With this issue, the newsletter settles in for a winter break. But we will be back in 2014 with a March issue full of fresh ideas and information to help us learn about our native plant heritage.

