NATURALEXPLORATIONS Summer 2015

Environmental Interpretive Center
UNIVERSITY OF MICHIGAN-DEARBORN

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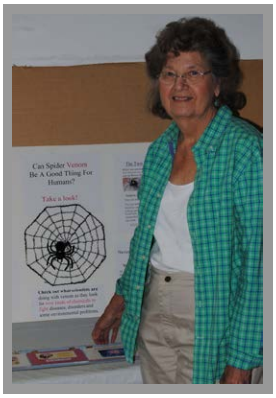
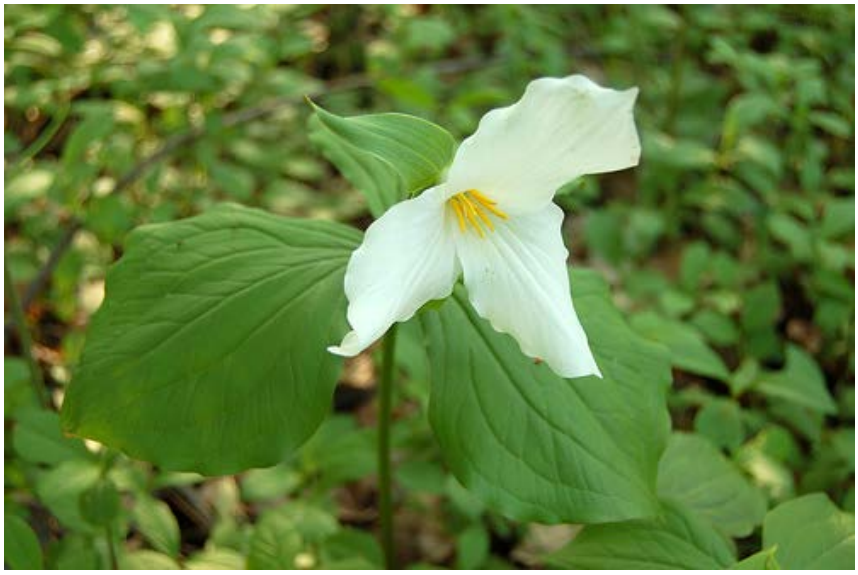


Volunteer Spotlight

If you have accompanied children to the Center in the last several years, you may have found that they were drawn to - and likely drew you toward-a corner of the exhibit area that was full of interesting and fun hands-on learning materials. These multi-media, seasonal nature

Summer 2015
Public Education Programs

Celebrate International Migratory Bird Day!
Saturday, May 9
8:00-10:00 AM
Our 300-acre"island of green" is a critical migratory stopover site for multitudes of songbirds as they travel to their nesting grounds, near and far. Bring your binoculars and take advantage of this natural phenomenon celebrated around the world and in our own neighborhood!



Go Wild Over Wildflowers!
Saturday, May 16

10:00 AM-Noon
Witness the arrival of spring in plant form. The Environmental Study Area is a great place to find spring ephemerals-just ask the white-tailed deer! Catch the wave of wildflowers as they welcome back spring and their pollinating partners and stick around for Stewardship Saturday (see HERE for more information).

Welcome to the Insect Orchestra!
Friday, July 31

displays are the work of EIC volunteer Sandra (Sandy) Wallace.
MORE HERE

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Sign Up Now

Rouge River Bird Observatory

Rouge River Bird Observatory is the longest-running, full-time urban bird research station in North America.

7:30-9:30 PM
No formal attire is required to attend this performance of the Insect Orchestra. Love is in the air as the resident artists perform their songs of courtship while we enjoy an evening stroll through the Natural Area. Learn more about their unique songs and the "instruments" used to play them. *Mosquitoes will be making their own music, as well, so prepare for their serenade with repellent and/or clothing that covers.*

Summer Young Naturalist Program

Get your child outdoors and learning about nature! Led by UM-Dearborn student interpreters, this science-oriented program provides direct, hands-on learning in a beautiful outdoor setting. Session topics will include pond life, birds, insects and spiders, and frogs and turtles. The program fee is $35 per child for the week.

Program runs from 9:30 AM - 12 PM
Ages 7 - 9: July 6,7,8,9
Ages 10 - 11: July 13,14,15,16

You can register your child online HERE.

Sprouts Gardening Program

Children ages 6-8 are invited to participate in another exciting season of gardening at the campus Community Organic Garden. The children will directly experience the joys of gardening as they plant, tend, and harvest their own vegetables. We'll include crafts, sing-alongs, and stories as part of the on-site program experiences. Each session will also find our group exploring some of the life we share space with at the garden, such as insects and birds.

The coordinator for the program will be Center interpreter Jenni McCue. Jenni brings wonderful enthusiasm and gardening experiences from a summer internship with Earthworks in Detroit to share. Also leading the program will be Lizzy Clyne and Sabrina Mastroanni. Jenni, Lizzy, and Sabrina are already planning for an exciting season of gardening with the group.

Nine program sessions are planned, from **6 PM - 7:30 PM on the following Tuesdays:**

May 26; June 2, 16, 30; July 14, 28; August 11, 25;September 8 (harvest party).

Each child must be joined and supervised by an adult companion at each session. The program fee is $35 per child. There is no fee for adult participants. You can register your child by going to HERE. The deadline for registration is May 20.

We hope to see you and your child at the garden!

Flower Power!

I'm resurrecting and repurposing this "retro" phrase from the 60s in honor of a familiar, diminutive flower of the forest floor, the violet. This humble flower has been culturally revered in legend and myth for centuries and imbued with powers and qualities from medicinal to human.

The violet is and always has been a very favorite wildflower. It is the largest genus (Viola) in the family Violaceae, containing between 525 and 600 species. Most species are found in the temperate Northern Hemisphere, however some are also found in widely divergent areas such as Hawaii, Australasia, and the Andes. There are about eighty different species within North America.

Violets prefer deep, humus-rich, slightly sandy soil and grow well in moist, shaded locations such as those found in open areas under trees. The number of violet blooms is an indication of soil richness: the richer the soil, the more blooms produced. The blossom's pouty lower lip makes a perfect landing pad for pollinators to dip deep into the tubular nectar spur.

Violets are easily propagated from seed, cuttings, or more commonly, by division of the creeping rhizome in spring or fall. As many gardeners have learned, violets are tenacious where they grow and colorfully pepper suburban lawns. One of their flower powers is the growth of cleistogamous, or "blind" flowers. These small, inconspicuous blossoms never open, which protects their pollen from predation, and are self-fertilizing. Look for cleistogamous flowers, often mistaken as immature buds, near or beneath the soil.

The violet blossoms that do open have inspired poets and romantics throughout human time. American naturalist John Eastman, in his book Forest and Thicket, writes of the violet,"It is the most visible of beginnings, this low blue flame in the woods. I think of it as a pilot light that ignites the entire burst of resurrection we call spring." Now that's flower power! Violets figure prominently in Greek, Roman, French, and Elizabethan culture. Several Greek myths feature the violet in the complicated love trevallies of Zeus, his wife, Hera, and the object of his affection, the nymph Io. Napoleon

chose the violet for the Bonaparte family crest since he promised to return to Paris "with the violets of spring," which he did on March 20, 1815. Shakespeare was quite enamored of the violet and included them as symbols of humility and constancy of love in his sonnets.

Historically, the Romans attributed medicinal powers to violets even before Rome was an empire. As a beauty regime, women would combine violets with goat's milk as a complexion cream. Pliny the Elder advised that violets had the power to induce sleep, strengthen the heart muscle, and soothe tempers. A wreath of violets on the head was thought to dissipate the odors of wine and spirits, thereby warding off drunkenness.

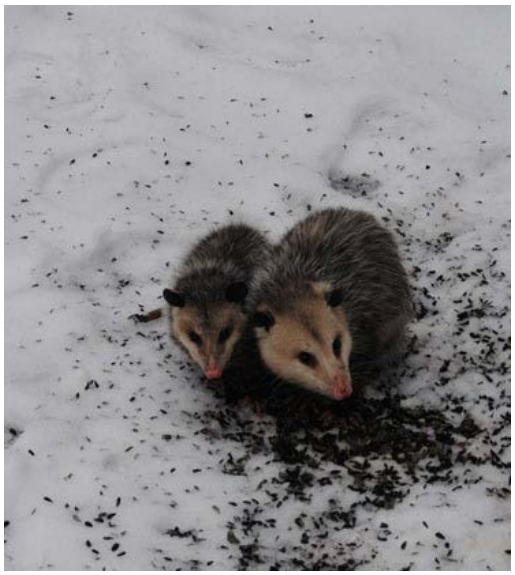
As it turns out, violets do have special powers! The leaves are high in Vitamins A and C and can be eaten raw in salads or cooked as greens. When cooked, they become mucilaginous and can be used as a thickening agent for soups and sauces. A tea made from violets helps get rid of a headache, thanks to the salicylic acid in the leaves. The leaves also contain antibiotic properties, so a violet poultice or salve will aid in healing wounds and ulcerated skin. The flowers can be candied, or used in jellies, jams, and simple syrups. Before modern day techniques were developed, chemists used crushed violet blossoms as an early "litmus test" to determine how much acid or base was contained in a substance.

This little flower that symbolizes modesty and humility has the power to capture human affection, live large in legend and myth, and become entwined with famous historical figures across oceans and continents, all the while offering up ethnobotanical uses for its admirers. A powerful flower, indeed!

-Dorothy McLeer

Ma and Pa "Possum?

These two opossums sidling up to each other under the EIC bird feeders indicate a likely "possum pairing" in the making. Note the larger body size-including the more robust head-of the probable male. In the weeks before this picture was taken in late February, the opossums frequenting the feeder area were not nearly as


cozy with one another. This new behavior was another indication of the approach of spring, even with the ample snow cover and frigid temperatures.

Environmental Study Area Habitat Management Planning Update! The Swamp that Is Becoming a Marsh

An important part of the Center's habitat management planning has involved determining various distinctive habitat areas that we have designated as "habitat management units." We investigated each of these spaces by looking at a series of aerial photographs going back to 1937, combined with "on-the-ground" investigations of flora and fauna, hydrology, and soils. This information will be essential in managing these spaces toward a healthier habitat trajectory in the coming years. One of the units we have identified as "The Swamp that is Becoming a Marsh." Here's an overview of what we have learned about this space, and also some of the habitat management goals we have developed for it: Currently known as "The Swamp," this wetland is located at the northwest corner of the Environmental Study Area. As one of very few remaining floodplain wetlands situated along the Rouge River, it can be considered a high value natural asset to both people and wildlife in our local area.

This wetland has evidently gone through various ecological changes over the last 100 years. Primarily open, marshy wetland in the first half of 20th Century, by the 1960s it had become a wooded swamp dominated by 100+ Black Ash trees. After all the ash trees were killed by the invasive Emerald Ash Borer in the early 2000s, the space was opened up to much more sunlight. In response, it is now returning to marsh.

The earliest known account of this wetland was written in 1912 by Jefferson Butler, who was hired by Henry Ford to do bird surveys on his property. Butler describes the following land conditions:

"The damming of the Rouge backs the water up for about a mile. About a mile above the dam is a swampy spot where the Rouge apparently traveled in former days, but which it deserted in taking a straighter course. The spot had mallard ducks last summer as well as American bitterns, and king rails. Spotted sandpipers

inhabited this region, and also followed along the stream of the south branch. The damming of the stream supplies overflows which have proven attractive to water loving birds ....Mr. Ford had wild rice planted in the above described swampy region last spring..."

There are also additional written accounts from around 1911 which suggest that Henry Ford had the size of this wetland increased to about 30 acres through flood management. His goal was to create more "marshland" for nesting and migrating birds on his property.

This wetland is also changing in terms of how much surface water it has present through the year. Due to extensive ash tree mortality, this wetland has undergone a dramatic decrease in evapotranspiration. As a result, the land experiences more prolonged periods of surface water retention.

The sources of water for this wetland probably consist of a combination of surface runoff from the southwest corner of the Henry Ford Community College campus, groundwater, and occasional flooding from the adjacent Rouge River. Characteristic hydric soils are found throughout.

Various native plant species include some small clumps ofCommon Cattail, Scarlet Smartweed, Waterpepper, Arrow Arum, asters, and Swamp Milkweed.

Invasive plant encroachment has been extensive in this space. About ½ of the wetland consists of a dense, highly congested monoculture of reed canary grass. The southern half of the wetland has a very large, dense population ofYellow Iris. Hybrid Cattail and Common Reed (Phragmites) are also becoming established at the north end. Just a handful of Purple Loosestrife plants have recently been found there.

Unless steps are soon taken to reverse invasive plant encroachment at the site, it appears inevitable that a low quality plant community will take over the entire habitat space within the next 5-10 years.

Fortunately, there is still time for the EIC to manage this space toward a healthy, sustainable marsh habitat that is rich in native species diversity.

Due to the many ecological and historical values associated with this special wetland, including the bird conservation values of Henry Ford, the EIC will be prioritizing habitat management in this unit over the next 5 years. We will plan to

keep you, our newsletter readers, posted on our progress!

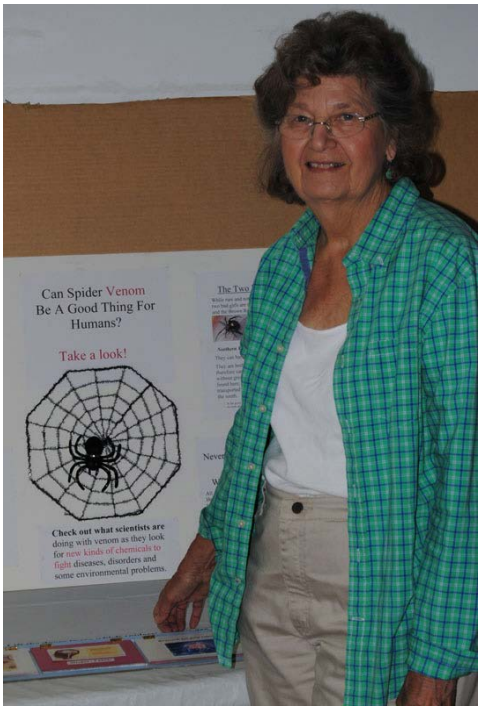
Rick Simek
Natural Areas Manager

Volunteers Needed for Stewardship Saturdays!

Volunteer to keep the habitat improvement momentum in the Environmental Study Area going by taking part in Stewardship Saturdays. This outdoor work activity takes place from 1-4PMon the 3rd Saturday of each month. Bring work gloves and a container of water to drink while out in the field. The Center will provide all the tools needed. Expect moderate physical activity off-trail. Children must be least 10 years old to assist. Hope to see you there!

Volunteer Profile: Sandy Wallace

If you have accompanied children to the Center in the last several years, you may have found that they were drawn to - and likely drew you toward-a corner of the exhibit area that was full of interesting and fun hands-on learning materials. These multi-media, seasonal nature displays are the work of EIC volunteer Sandra (Sandy) Wallace.



I recently sat down with Sandy to talk about what inspires her to put so much mental energy and time into putting together these unique and engaging activities for young learners.

One of the first things Sandy told me in our conversation was that she likes to develop exhibit activities which encourage children to reconsider our relationship to what she calls the "underdogs" of the natural world. According to Sandy, these are creatures which, though often both feared and misunderstood by people, actually have a great deal of redeeming social value. For example, one of "Sandy's corners" fostered an immersion into the importance of native bees as pollinators. In one especially effective and fun activity, children learned about how the native bumble bees "buzz" pollinate flowers. She repurposed a popular children's game that had a buzzer component in it and pockets to hold pollen. She repainted the game with typical bumble bee crop flowers such as blueberries and tomatoes. Now the children could try to retrieve the pollen from the flower pockets and experience both the sound and the sensation of "buzz" pollination. By having this unique sensory experience through an exhibit activity, the children were prompted to learn that bumblebees use buzz pollination to pollinate the flowers of many plants. The interpretive message: Even though bumblebees might be scary sometimes, let's try looking at them in ways that give us reason to better appreciate and protect them.

Sandy's ideas for learning devices have often involved technical challenges which her husband, Doug, and her brother, Henry have both participated in custom designing and assembly. Nothing seems to stop them once they have a concept. For example, to illustrate how young spiders travel from one place to another on a silk strand they send out to catch a breeze (known as "ballooning") Sandy and her technical cohorts tested an assortment of air movement devices: everything from muffin fans to foot pumps. They finally found the solution by disconnecting the heating element of a hair dryer and removing the switching device so the activity set up did not catch fire when operated. Although lasting only seconds, the activity provides a unique and memorable learning tool for the children. I would wager that the children who have already taken part in the activity now recognize "ballooning" when they see it in nature.

Sandy also develops all her exhibit activities to encourage children to apply what they learned to when they go outdoors to explore nature.

Sandy's ideas about her exhibits spring from a deep well of curiosity she carries within her. For instance, she related to me in our conversation that she was recently amazed to find out that Opossums have something in their blood which kills ticks on their body, some of which can carry Lyme Disease. As she said, "Opossum's might look ugly, but they have this

wonderful value. That intrigues me."

Sandy's creative expressions relating to teaching children about nature also includes donning costumes to present interpretive, science-based information which teach about the often-surprising environmental and economic benefits of other animals typically shunned by humans. For example, as one character, Sandy dresses like a European Paper Wasp and uses a clever device to show how these feared insects are being seriously looked at to better detect narcotics and other dangerous items in luggage at airports. She has given several of these well-received presentations at Nankin Mills Nature Center.

Among Sandy's favorite books to read is "Bringing Nature Home" by the ecologist Douglas Tallamy. She likes how Tallamy has shown how insects in the backyard are important to the nesting success of our native songbirds, as the young baby birds need a "soft" diet (like caterpillars or spiders) before they can eat seeds. Here we have yet another under-appreciated group of living things-"backyard bugs"-doing something critically important for the health of our environment.

Sandy brings a great deal of professional expertise to bear in the creation of her interactive exhibits for children at the Center. She has a Master's Degree in Early Childhood Education. She worked for 27 years directing the development and implementation of the curriculum at a preschool which focused on children, families, and staff interacting together in a hands-on learning environment. She created a summer science program for the preschoolers called "For Love of Bugs and Other Small Creatures." Before retiring she was a named Preschool Teacher of the Year for the State of California and was honored by an honorary review of her activities published in the Congressional Record submitted by her local Congressman. Part of that award reads that Sandy "has been a pillar in the lives of families at this popular parent participation school..."

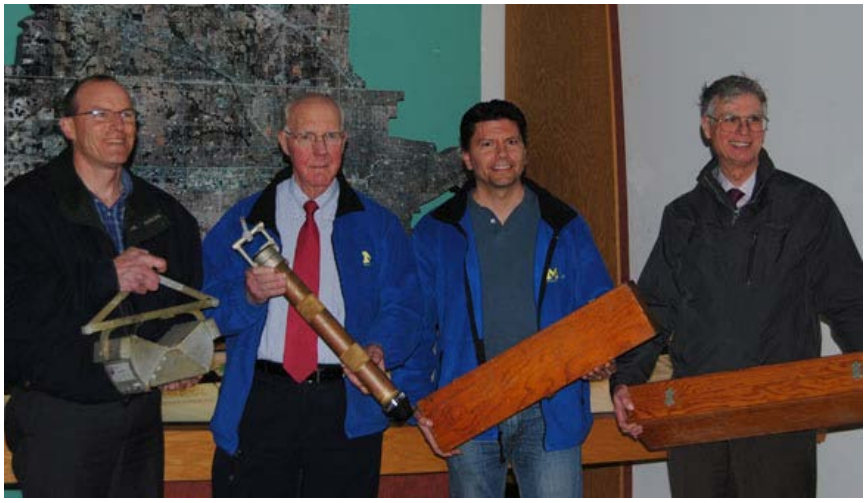
We at the Center, too, quickly came to recognize and appreciate the special skills that Sandy brings to the creation of her Kids Corner exhibits. We are delighted to have her as part of our volunteer team.

Thanks, Sandy!

Rick Simek

Helping to Keep Us Sampling Our Environment

The Environmental Interpretive Center recently welcomed George Rinke, Michael Martin, and Marika Diamond from BASF Corporation to campus. They brought with them two sediment samplers, which BASF graciously donated to the university in support of ongoing field studies in the 300-acre Environmental Study Area.



These pieces of equipment can be used to sample the soils, plants, and invertebrates in the benthic zone at the bottom of our campus lake, as well as in the adjacent Rouge River and other types of aquatic habitats. University courses in ecology, geology, and environmental sciences, as well as environmental research projects and outreach programs at the Center, are all expected to make use of and benefit from these sediment samplers. Both Drs. David Susko and Orin Gelderloos, the current and former Directors of the Center, were on hand to accept the equipment from George and Mike. We thank them for BASF's generosity and commitment to support environmental research on our campus.

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