

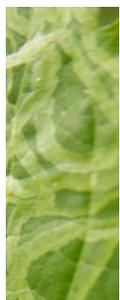


University of Nature: Wonder & Other Survival Skills

By Gail Farmer, Director of Education

On September 27, the Schuylkill Center launches a new program for adults who want to deepen their understanding of the natural world and urban environmental systems. University of Nature is a one-day, intensive learning experience, a mini-conference offering nine great workshops and lectures from leading experts on topics from botany to environmental art.

Columbia University's Ethan Coffel explores the specifics of climate change in our region; Meigs Award winner and veteran botanist Ann Fowler Rhoads walks you through the future of our forests; butterfly expert Jane Ruffin shares her knowledge of these critical—and sadly disappearing—insects. See page 3 for the full schedule.



Understanding how the natural world works is really about understanding ourselves and how the whole world works. People sometimes fail to recognize that the ecological processes that govern the natural world are essentially the same processes that govern cities and the human/built world. Knowledge of the water cycle clarifies why cities like Philadelphia are so prone to flooding. Understanding soil formation and organic decomposition is critical to

The ecological processes that govern the natural world are the same processes that govern cities and the human/built world.

sustainable food production. A deeper understanding of evolution by natural selection helps us develop more effective treatments against viral and bacterial illnesses, and provides us with a context for better understanding our own instincts, fears, and desires.

We can watch butterflies emerge and flit from flower to flower, or notice how water pools after a storm, but wonder compels us to learn more. To observe the house wren and understand what she is up to and why strengthens our connection to the greater world, immersing us in a life so different from ours, and yet so similar. ■

2014 Meigs Award Honors Ann Fowler Rhoads

By Mike Weilbacher, Executive Director

At the inaugural University of Nature conference on September 27, the Schuylkill Center will present its highest honor, the Henry Meigs Environmental Leadership Award, to botanist Ann Fowler Rhoads, one of the region's most distinguished scientists.

Fittingly, the award, named for one of the Center's founders and guiding spirits, will be presented by Henry Meigs's son Binney, a Massachusetts sculptor who has been a long-standing member and past president of our Board of Trustees.

Recently retired after a 36-year career at the Morris Arboretum, Dr. Rhoads is a legend among the region's ecological scientists. A botany professor at Penn, she is co-author with Tim Block of several seminal books, including *The Plants of Pennsylvania*, the Bible of our state's plant life, published in 2007. She has been conducting research on Pennsylvania plants to determine the status of rare and endangered species, to track invasive non-natives, and to document changes in the state's plant community. Over the last 40 years, Ann has inventoried the plant communities of counties, state parks, and innumerable lakes and streams.

Anne is a woman with a driving passion for botany that began with family trips to the woods to see spring wildflowers and



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MISSION STATEMENT: *the Schuylkill Center inspires meaningful connections between people and nature. We use our forests and fields as a living laboratory to foster appreciation, deepen understanding, and encourage stewardship of the environment.*



Director's Cut The Only Constant is...

In 1995, celebrating the 30th anniversary of the Schuylkill Center, founding executive director Dick James wrote that “the one word which best describes [us is] change.” Fast forward 20 years, and change continues. Dick sadly passed away only three years after he wrote these words, and suddenly we are on the cusp of celebrating our golden jubilee in 2015.

And we are still changing.

Oh, there is plenty Dick would recognize: we’re still offering Halloween Hikes and Hayrides, still rehabilitating wild creatures in our clinic, still renting community garden plots, still rowing boats on Wind Dance pond, still introducing students to nature in field trips, still selling the best bird seed in the region.

But so much has changed. In September, we welcome two classes of Nature Preschool – a program even Dick never contemplated – in its second year, a doubling of its size from last year. Our cover story announces our newest adult-learning program, University of Nature, a full day of in-depth information. We started offering environmental art exhibitions in 2000, welcomed a charter school into our building – and said goodbye to that school 10 years later.

And we have changed. Kids spend precious little time outdoors compared to 1995, staying indoors and giving rise to “nature deficit disorder,” an affliction our programming is meant to combat. The climate has changed. Invasive species have changed – Dick wasn’t wrestling with devil’s walking stick and Japanese stilt grass; those came later.

In 2012, when Green Woods Charter School moved away, we began growing back into our building: opening the auditorium, establishing an art gallery, re-inventing our programming. We have a new mission statement, printed on this page, and are growing into a master plan for our property.

The only constant is change. As we move into our 50th anniversary celebrations in 2015 – more on THAT in the next Quill – the mandate is to hold tightly to the best parts of our legacy, and grow in sustainable directions that make us more compelling to you, our friends and members.

Be a part of this change. Visit often, participate in our new programming, and, most importantly, tell us how we are doing.

Mike Weilbacher
Executive Director

Reach Mike at mike@schuylkillcenter.org or @SCEEMike.

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UNIVERSITY OF Nature

Saturday, September 27 | 10 am - 4 pm

\$45 Members | \$50 Non-members

About University of Nature:

The day includes a selection of natural history field workshops and lectures by environmental researchers, philosophers, artists, and historians. Choose workshops and lectures over the course of the day, meet other nature enthusiasts, and gain a deeper understanding of the world in which we live. Option to buy catered lunch. More details and registration online.

Morning Field Workshops | 10:30 am - 12:00 pm (Choose one)

The Future of Our Forests Ann Fowler Rhoads, Ph.D.

Our state is named for its forests, but Penn's Woods are wracked by many ecological issues. Yet somehow our forests persist, even in urban areas, providing habitat and supporting a variety of ecosystem services. On a walk in the forest, Ann shares the stories of our forest, focusing on how systems work above – and below – the ground.

Of Butterflies & Plants Jane Ruffin, Naturalist

Though careful observation, the intersections between plant and insect life emerge. Butterflies and the plants that they live with have evolved remarkable mutually supportive relationships. Jane offers a look into how studying butterflies becomes a study of biodiversity, and how you can support that in your own garden.

Last Chance Café: The Importance of Autumn Wildflowers

Mike Weilbacher, Schuylkill Center

Goldenrod fields are a critically important ecosystem for millions of butterflies, bugs and birds, the last chance for pollen and nectar before winter sets in. On an interpretive walk, Mike will share the life histories and adaptations of these plants and the insects that live in and around them.

Midday Lectures | 12:45 – 1:45 pm (Choose one)

Raptor Migration Ecology Chris Farmer, Ph.D., Ecologist

Why do raptors migrate southward in the fall and northward in the spring? Why do we see so many migrating raptors in southeastern Pennsylvania? Dr. Farmer offers an introduction to raptor migration ecology and hawkwatching.

What We Know About Climate Risks Facing Philadelphia

Ethan Coffel, Columbia University

Get an inside look at climate science. Ethan will give us a local view on the specific effects of climate change on Philadelphia: sea-level rise, strengthening heat-waves, and potential changes in tropical activity and other storms.

Raising Environmental Consciousness through Ecocritical Art

Cristine Larson, University of the Arts

Christine will explore creative works of the twentieth century that reflect changing cultural consciousness of nature in mid-century, and then examine how recent works have interpreted evolving relationships with nature.

Afternoon Field Workshops | 2:00 – 4:00 pm (Choose one)

Raptor Migration Trip to Militia Hill Chris Farmer, Ph.D., Ecologist

Come out and practice your hawk identification skills at the Militia Hill Hawkwatch in Fort Washington. Dr. Farmer will help locate and identify migrating raptors, and will discuss aspects of migration ecology in this companion session.

Intersection of Environment & Technology Leslie Birch, LandLab Resident Artist

The Center's Wind Dance Pond is shrinking and something is changing the course of our streams. Grab your notepad and hike the trails to find the problem. We'll also check out how the tech/DIY movement is changing the way science works.

Field Entomology: Beetles Revealed Dan Duran, Ph.D., Drexel University

They live in the dark and unseen places: beetles. They are fascinating, they are mysterious, and to many, repulsive – but the world would look very different without them. Dan shares his expertise and field know-how to reveal the many lives of beetles and how scientists have unraveled their secrets.

More details and registration information online

Special early-bird discount if you register by September 12

Into the Woods with Monkey Tail Gang

By Elisabeth Zafiris, Manager of Public Programs

Look quickly and see the blur of T-shirts as our Monkey Tail Gang Afterschool program's kids chase each other down the meadow trail playing Antelopes and Wolves, stop to examine a tent caterpillar nest, and then continue into the forest, munching on garlic mustard before climbing that tree. The program, running for over a decade, offers the increasingly important opportunity to get kids outside after school each day, allowing them to play and learn while exploring nature.

It's easy to look at the kids playing and think they're having a respite from the learning and development that happens during the school day. And, certainly, they are. However, the unstructured free play that is the essence of Monkey Tail is also working their brains, helping them develop and build essential skills.

Recent studies show that unstructured, child-driven activities support the development of thought processes that help connect actions to goals, improving

planning, decision-making, self-regulation, and memory. These studies have launched a new style of environmental education nationwide, programs where kids simply play in nature. The Schuylkill Center, through Monkey Tail, Summer and Day-Off Camps, and Nature Preschool, is a leader at the forefront of this important movement.

For kids playing in nature, learning how to independently prioritize when to climb a tree, look for caterpillars, and help friends build a fort teaches them how to plan doing homework, brushing teeth, and helping a sibling. This kind of nature play also has far reaching life-long implications: these skills will stay with the children the rest of their lives.

During a typical Monkey Tail afternoon, kids are running down trails, forming social groups, creating secret hiding places in the brambles, and engaging in intricate make-believe. They have free

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Meigs Award *continued from page 1*

ultimately led her to earning a Ph. D. in botany from Rutgers in 1976 (a time when women were scarce in academia, especially science departments). Through tireless documentation, a specimen collection of 14,000 plants, and sharing her discoveries and expertise in books and articles, she has significantly advanced our understanding of Pennsylvania plant communities. We are so pleased to be honoring her with this award.

ABOUT THE AWARD

Henry Meigs is one of the Center's founders; in the early 1960s he worked closely with his mother Margaret and his aunt, Eleanor Houston Smith, to have the two families donate the land that became our nature center, and guided the Center's growth for a remarkable 40-year run. The family established the award in Henry's name when he passed away in 2005.

Dr. Rhoads is the ninth winner. Past awardees include Governor Ed Rendell (2007), SCEE luminaries John and Cindy Affleck (2008) and Bill Walkup (2010), Clean Air Council's Joe Minott (2012), and pioneering aquatic ecologist Thomas Dolan IV (2013).

Dr. Rhoads will be presented the award on the morning of Saturday, September 27 as the kickoff of University of Nature – our new day-long adult learning event – and will then lead a walking workshop on "The Future of Pennsylvania Forests." Come meet Ann, and enjoy learning from her as part of our University of Nature.

"I'm overwhelmed!" Ann said when notified of the honor. To us, the honor is richly deserved. ■

Naturalist's Notebook

Musings on Mushrooms

By Camila Rivera-Tinsley, Manager of School Programs

A wander through the forest stimulates many of our senses. There are the sounds of birds, sunlight peeking through the canopy and reflecting off mica on the forest floor, stilt grass brushing against ankles. But of all the sensations the forest offers, the one we most overlook is smell and the meaning it carries. The scents are a bit sweet, slightly musty, and rich with the pungent scent of decay. This is the smell of fungi breaking down leaves, limbs, and the remnants of trees.

The mushrooms often seen on logs or dead trees, are merely the fruit of a vastly larger organism that is growing out of sight. Fungi spend most of their lives in a vegetative phase consisting of hair like structures known as hyphae. The hyphae grow through logs or fallen leaves, creating a web-like network that produces enzymes capable of decomposing organic matter. Fungal strains can stay in this phase for as long as necessary, waiting for the right combination of temperature,



moisture, and nutrient availability to produce a mushroom.

Some of these fungi are nutrient recyclers, living on detritus and doing the important work of breaking down the plant fibers that are otherwise indigestible to other creatures and decomposers. Others form unique, mutually beneficial relationships with the trees and plants of the forest. Deep underground these fungi are toiling

Unlocking the Mysteries of Mushrooms

Saturday, October 18, 2 – 4 pm

Unravel the mysteries of fungi with the Mycopolitan Mushroom Company and learn to grow your own mushrooms.

under our feet and building something called mycorrhizal networks. The mycorrhizal networks interact with tree roots, growing in and among the very smallest root hairs to extend the reach of the tree's root system. These networks bring water and nutrients closer through long filaments that are woven through the earth, sometimes covering acres of land and stretching up to three miles. The trees, in turn, provide sugars and carbohydrates to the fungus. Though mostly invisible to us, the result of their interdependent relationship is a beautiful, healthy forest that provides food, water, and shelter to a wide variety of animals.

So remember, the rich earthy smell of soil is a direct effect of the work of our fungal friends. The next time you take a walk in the woods, take a moment to stop and smell the forest floor and ponder the web of life working beneath our feet. ■



Process & Progress Gallery Show Opens in September

By Christina Catanese, Director of Environmental Art

Our upcoming gallery exhibition, opening at University of Nature in September, will be a midway checkpoint for the LandLab residency. LandLab is an environmental art residency program that integrates art, education, and ecological remediation. Our resident artists have been investigating, engaging, and creating since they were named this spring. This gallery exhibition showcases the artistic process, featuring what the artists have done so far, what their early explorations have revealed, and where they intend to push their work. The show will also include past artwork from the LandLab residents that shows the trajectory of their practice in environmental art and contextualizes their current LandLab work.

In environmental art, the process is often as important as the outcome itself; the remedial, social, and educational dimensions are given equal weight to the aesthetics, and the final visual product

is just one component of the entire artistic work. In revealing this process through the gallery show and other LandLab programs, we are able to invite audiences to be more deeply a part of this work. In spring 2015, the Center for Emerging Visual Artist will host a show in their gallery in Center City documenting the completed residencies.

Look out for other upcoming LandLab events, including a soil formation workshop on October 4th. Jake Beckman's LandLab residency explores transformation in the cycle of a forest ecosystem. A biology and chemistry major turned artist, Beckman seeks to understand and shed light on unseen processes. Beckman and soil science experts will be on hand at this event to share knowledge about the many processes happening constantly in soil, yet go mostly unnoticed. ■

Process & Progress Opening

Saturday, September 27, 4 pm

Join us to celebrate this LandLab.



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range to do as they please, allowing them to structure their own time together, allowing them to take controlled risks, challenge themselves in new ways, and learn valuable social skills. With no teacher planning their time for them, Monkey Tail kids figure out what

Monkey Tail Gang Afterschool Program

Flexibility

Register for 1 – 5 days
Monday – Friday until 6 pm
Pickup from 5 – 6 pm

Value

Competitive pricing
Sibling discounts

to do themselves, relying on their imagination. This self-directed time in nature helps children develop a lifetime of creativity. Climbing a tree and having to figure out how to get down is great for problem solving, in a literal and immediate way.

If you're at the Schuylkill Center on a weekday afternoon, look for the Monkey Tail Gang'ers: they'll be the ones laughing and exploring. And if your own child is interested in becoming a Monkey Tail Gang'er, visit our website for all the details. ■



Volunteer Spotlight Preschool Summer Camp Volunteers

By Shannon Dryden, Nature Preschool Manager & Lead Teacher

This summer our preschool summer camp, the Tiny Toadlets, has been thrilled to have two dedicated and kind volunteers: **Seery Devinney** and **Sue Anolik**.

Seery loved the idea of exploration outdoors and has thrived on volunteering here at the Schuylkill Center. While she began with the children in the summer camp, she has taken every opportunity to help out with other programs including visiting groups and hikes along the trails with visiting children. Simply being around Seery brings a smile and sense of enthusiasm to the people and children she interacts with. Every time she arrives Seery is greeted with a chorus of "Miss Seery! Miss Seery!" and accompanying hugs and smiles.



Seery shares that "On the days that I am not with the Tiny Toadlets, I find myself wondering, what are they doing right now? I wonder where they hiked to today." We look forward to Seery joining our Nature Preschool staff this year. Thank you Seery, we can't wait to spend the coming year with you in the classroom! ■



Inspired by a visit by a SCEE educator to the preschool program where she works, Sue Anolik, reached out to the Schuylkill Center to volunteer in her free time this summer. Teaching preschool for many years, Sue always was looking for ways to integrate nature into the activities of their daily routine. She travels from New Jersey and it takes her about an hour to get here, but Sue simply cannot get enough of the beautiful landscape and the time that she shares with the children here. We thank you Sue for all your dedication, time, and spirit with our camp this summer. ■



This is my Schuylkill Center Staff share beloved memories & places

Camila Rivera-Tinsley, Manager of School Programs reflects on her wanderings at the Center. "One of my favorite places is along the stream. I hear the soft splashing rhythms, bubbling and tumbling over sparkling silt beds. Rambling and rushing to fill in the secret spaces between root and rock, it takes my thoughts with it. I wonder how many people walked this path and had the same thoughts as I do. I am constantly amazed and blessed to have the opportunity to share this wonder with SCEE's visitors. The stream still whispers its secrets to me, and its stories never get old or tiresome."

Do you have a beloved memory or favorite place at the Schuylkill Center? Let us know! Email your story to members@schuylkillcenter.org.

Highlights from this Spring

What a summer! We've seen thousands of toadlets, had a blast with hundreds of summer campers, explored the forest for wineberries and searched for shooting stars, and unveiled the first completed LandLab installation.



This year's 335 **Toad Detour** volunteers helped 2,400 adult toads and thousands of little toadlets safely cross the road.



LandLab artist-botanist duo **WE THE WEEDS** led a great morning of invasive vine harvesting in July (left), gathering materials for their installation.

In July, we were thrilled to officially unveil the first of our LandLab installations (right), B. H. Mills, Maggie Mills, and Marguerita Hagan's **Native Pollinator Garden**.



2014 summer camp was a blast. We welcomed over 350 campers for fun from ziplining to canoeing, visits with artists to junior naturalists camp. We were also happy to welcome 1,064 visiting campers and share programs with 680 local students at their camps.



Thanks to our great team of **summer camp counselors** (above) for an awesome summer of fun, learning, and laughter.

Thank you to our interns, **Julia Aguilar** and **Nicole Carey**, who've been helping with stewardship work (pictured below) and **Angel Chow**, who's been doing summer camp communications.



This summer five Philly youths joined us as **Counselors in Training** (above). Thanks to Dante Pon, David Destouet, Julius Stivender, Jonathan Mao, and Imani Farrel (not pictured).



Nature Preschool is growing – welcome to our new staff members!



Elizabeth Vaden (top left) joins us as a Preschool Assistant Teacher. She is currently working on her Master's in Social Work at Bryn Mawr College. Over the past two years, Liz has worked with young children ages 3-5 as an assistant teacher for the Community Education Alliance of West Philadelphia. She brings a passion for environmental education and play-based programming to her position at Nature Preschool.

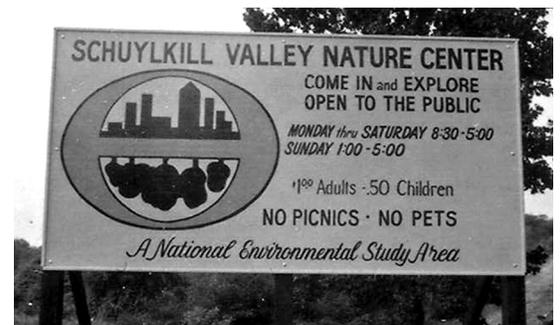


Josie Bonham joins us as a Preschool Part-Time Teacher. She has a certificate in environmental education from Utah State University and has spent much of her time combining her knowledge and experience with the outdoors in programs with children.

Intern **Daphne Churchill** and volunteer **Seery Devinney** will also be joining us as Part-Time Preschool Teachers. ■

The 2015 Golden Jubilee: Celebrating 50 Years!

This 1977 photo shows the large sign that graced our entrance on Hagy's Mill Road. Note the old logo was inspired by the 1970s Earth Day flag, using the Greek letter theta. Theta is first letter of the word *oikos*, Greek for "house," also the root of ecology, the "study of the house." The logo changed to our new version circa 2000. But longtime members remember we used to charge admission to come to the Center—a buck for adults! Prices rarely go down, but ours did: today, we are free. ■



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What can nature tell you?

UNIVERSITY OF
Nature

Find out September 27.

Also on September 27:
Fall plant & bird seed sale
LandLab Gallery opening