HUYCK PRESERVE

Autumn 2013

Myosotis Messenger

Letter from the Director of Conservation, Education, and Research

Many people think that the return of students to school and the onset of cool weather and fall foliage marks the end of summer and the beginning of the "off season" at the Huyck Preserve. However, the onset of autumn and eventually winter merely denotes a different season at the Preserve, one that may be a bit slower in pace but still bustling with activity. Come fall, those busy beavers and this season's frequent gusty storms mean our trails often need the most care. Switching from trimming back the unruly forest to clearing away fallen branches and trees and repairing boardwalks, our Buildings and Ground Supervisor, Adam Caprio, is often out and about making repairs with gusto so that everyone can continue to enjoy our lovely trails with ease. Also keep an eye out for Director of Conservation Education and Research, Dawn O'Neal, and Education and Outreach Assistant, Christina McLaughlin, and the annual expeditions in terrestrial ecology by fourth graders from Berne Knox Westerlo, Greenville, and Voorheesville. Students will be surveying biodiversity around Lincoln Pond and taking in the history of Wheeler-Watson and the Race Track trails. What's more, are the hosting duties that come with weekend visits from colleges and universities around New York. This year we have already welcomed an entomology class from Cornell and Siena College's forest conservation course. There are also a multitude of events, highlighted on page 5, going on at the Preserve during these cooler months including Full Moon Night Hikes; the Christmas Bird Count; surveys of hemlock woolly adelgid, and of course our Annual Winter Festival. Finally, the revitalization of the Visitors Center and the Huyck Preserve website continues. Check out page 4-5 for an update on our progress and if you haven't been by recently, please stop in to enjoy the new interactive educational displays now featured in the Visitors Center. Also, don't forget to pop in and say, "Hi," to office staff, Carolyn Barker and Emileigh Tanner hard at work on putting together a presentation highlighting the history of the Preserve and gearing up for our Annual Fund Drive.

Of course we would be remiss if we didn't take a moment as we move into this new season to reminisce about all the fun we had this summer. Check out pages 7-9 for profiles of Huyck Preserve summer programming that over 50 students attended this summer. We also had unbelievable turnouts at our 3rd Annual Mushroom Festival with people attending from as far away as Arizona. A special thanks to George Yager of the Mid-York Mycological Society who acted as our expert this year along with ethnobotanist Justin Wexler leading walks and helping to identify all the mushrooms collected by participants. It is of course with the unfailing support of our members, for which we extend a heartfelt thanks, that we are able to offer such diverse programming. For this reason, we are happy to announce our first annual membership event celebrating and thanking our members. Huyck Preserve Members are invited to join us November 16, at 6pm for a light supper, a presentation of the year in review put together by Huyck Preserve staff, and a moonlit walk of Huyck Preserve trails. No contributions are necessary for this event but an RSVP is needed if you will be joining us for supper. We encourage all of our members to come out and let us thank you personally for everything you do!

Dawn O'Neal, Ph.D.
Director of Conservation Education and Research

Full Moon Hike
Saturday Evening
November 16, 2013
8:00 pm

Members only Event

Be our guest at an

OPEN HOUSE and Light Supper

Saturday, November 16, 2013, 6:00 pm

Preceding the Hike, we are opening our doors to our wonderful members as a thanks for all you do and to show you what the Huyck Preserve has accomplished, and continues to do, thanks to your generous support.

No contributions required, but meal tickets can only be given to those who RSVP by November 13th

Event held at the Eldridge Research Center
284 Pond Hill Road, Rensselaerville, NY

RSVP by phone (518)797-3440 or email info@huyckpreserve.org

Revitalizing the Visitor's Center

Christina McLaughlin
Education and Outreach Assistant

A visitor's center should be inviting, welcoming and informational. A good visitor's center provides the public with answers to their questions about the location, welcomes them to the site, and gives them a reason to return in the future to see what's new. In May of 2013, the Huyck Preserve received a Capacity and Excellence Grant from the New York Environmental Protection Fund and the New York State Conservation Partnership Program, administered by the Land Trust Alliance and the New York State Department of Environmental Conservation to update the Visitor's center as part of an ongoing effort to recruit new members to the Preserve and to educate the public on the history, research, and education programs at the Preserve.

The Hands On Huyck table features specimens from around the Preserve which visitors can touch and hold. The table has been very popular with children of all ages! Also available from the information kiosks are Scavenger hunt sheets to use on your own explorations of the Huyck Preserve trails.

The reorganized Visitor's center from the door. Students from the Natural History Day Program and Wildlife Ecology Research program prepared posters of their research, which are currently on display.

One of my jobs as the SCA Environmental Education and Outreach Intern this year has been to assist with this Visitors Center update. Our goal at the Preserve is to make the Visitors Center someplace people stop and learn about the Preserve, its upcoming events, and something about the natural environment they'll see on the trails. Most often, this means catching people's attention as they head straight for the bathroom!

One of this first steps in this year long revitalization has been to reorganize and rearrange some of the displays already in the building. Our small "gift shop", featuring books, t-shirts, and sweatshirts for purchase is now at the back of the room and we've updated the information kiosk on the back wall adding informational brochures on invasive species, a mushroom guide, and nature scavenger hunts for kids of all ages. The display case of animal specimens has also been "revitalized" with a few examples of species at the preserve, along with their scientific name and some interesting facts about each specimen. It features prominently an American turkey that was donated recently by Virginia Carter.

The new "Hands on Huyck" table provides visitors with a chance to handle antlers, shells, fossils, honey comb, moss, bones, and more items that have been found in and around the Preserve. We have plans to add more interactive exhibits for families to educate them on the wildlife and plants they may see on the trails. These interactive, changing displays and games will keep families coming back to see something new.

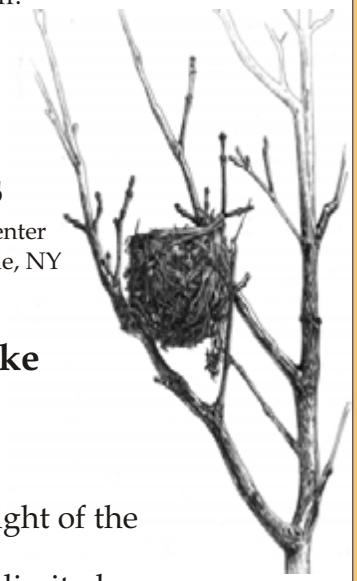
(Contiued on next page)

The specimen display case now features mammals, birds, and insects from the Preserve's along with fun facts about these animals. For example, the Wild turkey (center, donated by Virginia Carter) are omnivorous and prefer hardwood and mixed conifer forests and open fields, like those found at the Preserve. Management efforts to restore their once-decimated populations have been successful, and they can be seen across NY state. The wild turkey was Benjamin Franklin's first choice for the national bird of the US.

A large screen monitor now displays a seasonal slide show of pictures from the Preserve. The animals, insects, plants, and landscapes of the preserve are featured with text identifying them. Slides also advertise upcoming programs and events and feature students and researchers who are active on the Preserve. Most of the pictures have been taken by Chris Schiralli or me. If you have stunning pictures of the Preserve, please send them to us (info@huyckpreserve.org) or share on the Facebook page (www.facebook.com/huyckpreserve) and they might be included in the slideshows.

Several wall panel displays are in development that will showcase the history and ecology of the Preserve. These displays will highlight the Preserve's rich history, introduce visitors to the ecology of the forests and wetlands at Huyck, and educate visitors of the research done at the preserve and its importance as one of the first biological research stations in the US.

If you haven't stopped by the Visitor's center in a while, you should! Come see the new displays and exhibits for yourself.



Winter Events

Meet at the Eldridge Research Center
284 Pond Hill Road, Rensselaerville, NY
unless otherwise noted

Full Moon Night Hike

November 16
February 15
from 8:00 - 9:00 p.m.
Join us for a night hike by the light of the full moon.
Snow permitting, there are a limited number of snowshoes available for adults and children.
To reserve a pair, call 518-797-3440 or E-mail info@huyckpreserve.org.

Christmas Bird Count

December 14 at 8:00 a.m. - 4:00 p.m.
Help us monitor our local winter populations.
Dress warmly and bring binoculars.

Winter Festival

February 1 at 1:00-4:00 p.m.
Join us for a day of fun and winter recreation.

2013 Huyck Grant Recipients

Amy Hruska, M.S. Candidate
West Virginia University
Determining how forest composition and chipmunk behavior influence the dispersal of American Ginseng

Evelien Jongepier, Ph.D. Candidate
and Isabelle Kleeberg
Johannes Gutenberg University, Mainz
Reciprocal adaptations underlying the slave rebellion trait

Andrei Lapenas, Ph.D., Associate Professor, Geography
University at Albany
Snow Manipulations and Dendroclimatological Studies at the Huyck Preserve

Julie Miller, Ph.D. Candidate
Cornell University
Launching raids in slave-making ants: a model for the analysis of collective decision making

Ashley Ozelski, Ph.D. Candidate
CUNY, College of Staten Island
How does habitat quality influence area thresholds in forest breeding passerines?

Laurel Symes, Ph.D. Candidate
Dartmouth College
Evolution of mate choice in Oecanthus tree crickets

Weston Testo, Ph.D. Candidate (begin Fall 2012)
University of Vermont
Long-term study of temperate fern community dynamics

Vivek Venkataraman, Ph.D. Candidate
Dartmouth College
Merging forest structure and acoustic ecology: exploring the mechanistic basis for acoustic adaptation in temperate forests
Bates College

2013 COM.EN.ART Artist-in-Residence

Meg Sodano
Albany, NY
July 19-Aug 4

Oh Deer!: Monitoring the impact of white-tailed deer on forest regeneration

Dawn O'Neal, Ph.D.
Director of Conservation Education and Research

The most common reaction to a sighting of white-tailed deer while waking the trails at the Huyck Preserve is, "Oh! Deer!" often followed by cooing over cute little fawns or later in the season, excitement about seeing a buck with antlers. Many people are simply amazed to see such megafauna up close. Of course not all reactions to deer at the Preserve are filled with glee. Some people can't help but immediately check themselves for ticks while others experience flashbacks of destroyed gardens and near misses on the road. Amongst scientific and conservation communities, increased sightings of deer also elicit less than enthusiastic responses. Multiple studies are now indicating significant negative effects from high densities of deer on natural communities. A healthy forest should have young trees in the understory to replace the canopy trees when they die (regeneration) as well as a diversity of other understory vegetation such as herbs and flowers. This mix of understory plants and community of various aged trees makes a forest more resilient and better able to respond to change. Studies have documented that when densities of deer surpass the carrying capacity of the landscape (overpopulation), there is severe reduction in tree regeneration, loss of diversity of native forest herbs, as well as threats to both the health of deer and other wildlife populations. Though research in other areas has indicated large negative impacts on forest regeneration in other areas, before the Huyck Preserve can begin to consider the effects of deer overabundance we need to know the impact deer are having on the Preserve directly. This summer the Huyck Preserve, in conjunction with the Ecological Monitoring and Management Alliance (EMMA), has begun to monitor the effects of white-tailed deer on our forests. EMMA is funded in part by a grant received by Teatown Lake Reservation from the New York Environmental Protection Fund and the New York State Conservation Partnership Program and administered by the Land Trust Alliance and the New York State Department of Environmental Conservation. EMMA is a partnership between like-minded organizations across the state of New York dedicated to protecting natural systems and developing sustainable stewardship practices through scientific research and public participation. Astheir first project EMMA has come together to monitor deer populations across the Hudson Valley. Using the same methodology across all EMMA sites modeled after long-term deer exclosures set up by the Cary Institute of Ecosystems Studies (also a founding EMMA member), we can compare the results from deer exclosures at the Preserve to the results from other long-term deer exclosures across the Hudson Valley.

To quantify the impact that deer are having, deer exclosures were installed in four forested areas around the Preserve and at other EMMA sites this summer. At each location, a 10 by 10 meter fenced plot (exclosure) is paired with an adjacent 10 by 10 meter unfenced area (unexclosed). Shrubs (0.5 – 2 m tall), saplings (trees between 0.5 – 2 m tall), and trees (trees >2m tall) were sampled in the entire 10 x 10 m plot between June and August and will be continue to be sampled every five years after that for the EMMA data set. The long period of time between sampling happens in part so that we can have measurable differences between samples as trees in the understory often grow quite slowly. The Huyck Preserve, however, will also monitor herbaceous (non-woody) and tree seedlings (woody plants under 0.5 meters tall) in smaller 5m x 5m within our 10 meter plot on a yearly basis so that we can track regeneration of plants that tend to have a faster growing period as well as the recruitment of new plants (i.e. plant number as opposed to plant growth) to the exclosures As with all of our ecological monitoring programs at the Preserve (Christmas Bird Count and monitoring breeding birds) anyone interested in joining this monitoring endeavor is welcome. Volunteers will learn basic forestry and scientific techniques for measuring and monitoring plants and plant identification. We will begin re-sampling plots mid-June and July of next year, although later in the day than our avian monitoring programs! For more information please contact the Director of Conservation Education and Research, Dawn: dawn@huyckpreserve.org .

A Summer in Photos: Summer Education at the Huyck Preserve

Illustrating Nature

Illustrating Nature and Wildlife Family Hour include presentations by Wildlife Rehabilitation Kelly Martin. These programs provide interactive experience with common wildlife found around New York state.

Wildlife Family Hour

This popular Tuesday morning program runs throughout the summer as an engaging introduction to wildlife. It is open to kids of all ages and is free of charge thanks to the generous contributions from our members.

Nature Study

An introduction to nature for elementary school aged children

Students enjoy catching crayfish while discussing stream ecology and invasive species.

Students from Nature Study search for fish and amphibians using dipnets.

2014 Education Program Dates

Wildlife Ecology Research
Session I: July 6-27
Session II: Aug 3-24

Natural History Day Program
Grades 9-10: July 14-18
Grades 6-8: July 21-25

Nature Study
Grades 3-5: July 28-Aug 1
Grades K-2: Aug 4-8

Science Symposium
July 26

Natural History Day Program

Middle School and Junior High program devoted to observation, exploration and research of the natural world

NHDP students participate in bird mistnetting as part of MAPS and learn how to handle birds. Here a student is holding an eastern kingbird.

Above, students from Natural History Day Program along with SCA Intern Christina McGlaughlin check under logs for salamanders during amphibian population survey.

To end the week students went fishing in Lake Myosotis, some learning to fish for the first time.

Residential High School Course where students learn about ecology through hands-on research

Wildlife Ecology Research

Wildlife Ecology Research Students, Session I preparing for a day of stream ecology! (Pictured L-R) Kaija Gahrn, Milani Chatterji-Len, Dawn O'Neal, Jessica Andreone and Van Steinbrenner

Wildlife Ecology Research Students, Session II on a field trip to the Rams Horn Linvingston sanctuary. (Pictured L-R) Justin Wexler, Timothy Golden, Francis Hall, Jeffrey Chiv, William Kessler, Aleah Matthews-Runner and Jaehyun Lee

Session II students Jeffrey Chiv and Aleah Matthews-Runner hard at work on an initial survey of hemlock woolly adelgid at the Preserve.

George Robinson (SUNY-Albany, pictured in olive cap in the background) lead students from session I through concepts in climate change biology. Here students view leaf stomata up close and learn how they can be used to track change in plant Co_2 consumption and O_2 production.

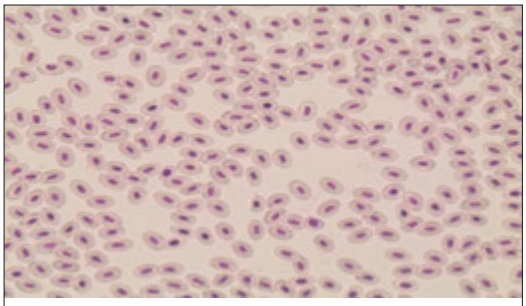
Stream ecology (taught by Siena professor Mary Beth Kolosvary, session II on the left) is always one of the most popular classes for Wildlife Ecology Research students. On the right, the students from session I set up to measure the speed of 10 Mile Creek above Lake Myosotis. On the left, students from session II sort through macroinverts collected in 10 Mile Creek below the lake. In both locations, stream quality was deemed excellent.

In Cold Blood: looking for parasites in the Huyck Preserve

D. James Harris
CIBIO, University of Porto.

For many, the enjoyment of a hike around Myosotis lake might be accentuated by the sighting of particular wildlife – a glimpse of a beaver or an uncommon songbird disappearing through the trees. As a herpetologist, my especial interest is in amphibians and reptiles, and in September 2013 I was not disappointed. Just a short walk around Lincoln Pond was punctuated by splashes of frogs jumping into the muddy waters, while garter snakes were regularly spotted sunning themselves in patches of sunshine on the grassy banks. Turning stones in the shallow streams revealed a myriad of salamanders and newts, along with startled crayfish which jetted away backwards to find new hiding places. Because these animals are large and relatively easily spotted, species lists are excellent and impressive: six snakes, three turtles and over a dozen frogs and salamanders have been recorded within the Preserve. But each of these is host to a varied assortment of other organisms, and these are far less well-known or easy to identify.

Parasites have enormous interest for conservation biologists. For a start, parasites have been implicated in the extinction of many species – the spread of a fungus around the world has been associated with the extinction or reduction of populations of many different amphibians for example. On the other hand, the parasites themselves are part of the overall biodiversity of an ecosystem and need to be identified – many are very host specific, so the extinction of a host may well lead to the extinction of its natural parasite fauna. Also, in many cases parasites are quite benign to their normal hosts. It is often only when they jump to new hosts that severe complications occur. As an example, many bird populations have low levels of the blood parasites which cause malaria. Normally this is not a major concern. However, when humans brought birds, and inadvertently their parasites, to Hawaii it was a catastrophe for the local bird fauna which was naïve to the disease and subsequently was devastated when the parasites jumped host to infect these new bird species.



A blood smear taken from a garter snake collected in the Huyck Preserve, and viewed under the microscope. Each red blood cell is clearly visible, along with the darkly stained central nucleus. The parasites live inside an individual cell, but are difficult to detect normally. DNA sequencing technologies greatly aids their detection.

Clearly, conservation biologists need to know which parasites are normally found in an area, and to characterize them.

Despite this accepted need to determine parasite diversity and distribution, many groups remain poorly studied. In the past this was primarily because they are difficult to identify. The easiest way is to take a drop of blood from a host animal and smear it smoothly across a microscope slide. This is what I did in the Preserve, catching many snakes and other small vertebrates and collecting blood samples. These are then stained, so that blood cells can be easily identified under the microscope. The animals were then released unharmed after being sampled. The parasites that I am currently looking for are intracellular ones, so they live inside a single blood cell. Many types of these parasites are known from snakes, including various Plasmodium species, which cause malaria – although of course it is quite different species which cause malaria in humans or birds. The most commonly found parasites in snakes are Hepatozoon parasites, and these are what I would expect to find.

Although microscopy is a wonderful tool to identify parasites, it is true that they can all look very much the same, making it difficult to assess diversity. Fortunately with the advent of DNA sequencing technologies, it is now possible to extract DNA of the parasites directly from the blood samples examined. This gives the researcher a whole new picture into the species that can be found, and has greatly changed our understanding of these tiny organisms. So far, I have looked at many slides from animals in the Preserve, and some possible parasites have been found. Will they be new species to science? So little is known about these parasites, that certainly they will represent new distribution records and new host records. Only after the DNA has been successfully sequenced will I know for sure. But hopefully using these new techniques will allow biologists to build up species lists not just of the charismatic fauna that can be seen within the Preserve, but also of the many other organisms that also play their small part in the functioning of the ecosystem, but which are all too easily overlooked.

Wildlife Ecology Research

Where students learn ecology through hands-on research

A PROGRAM OF THE HUYCK PRESERVE AND BIOLOGICAL RESEARCH STATION

P.O. Box 189 ~ 5052 Delaware Turnpike ~ Rensselaerville, NY ~ 12147 ~ (518)-797-3440 ~ www.huyckpreserve.org/WER

Wildlife Ecology Research is an intensive 3-week residental course where trained ecologist introduce students to field ecology. Students will learn methods and techniques used in ecological research, build skills identifying and sampling plants and animals, conduct studies designed to emphasize ecological conepts, and develop a research project from hypothesis to final paper.

An excellent program for students looking to prepare for research experiences at the college level or set themselves apart from other college applicants.

Open to rising junior and senior high school students!

2014 Program Dates

Session I: July 6-27

Session II: August 3-24

Scholarships Available!

For more information contact the Program Director, Dawn O'Neal, Ph.D. or visit us online.

518-797-3440 ~ www.huyckpreserve.org/WER ~ dawn@huyckpreserve.org

The Huyck Preserve seeks to recruit an experienced scientist to occupy the position of **Senior Research Fellow** at the biological research station for summer 2014.

The selected candidate will act as the primary mentor for undergraduate students participating in the Preserve's Odum Internship in Field Ecology; provide support for other scientific and educational activities; participate in public outreach and special events; and conduct on-site independent research appropriate to the Preserve's mission and its history of field studies (e.g. research in ecology, evolution, terrestrial and aquatic ecosystems, population dynamics, and animal behavior).

Applicants must have completed a Ph.D. in a natural science related field and have substantial experience in field-research and student mentorship.

Applications due Friday, December 6, 2013.

Contact Director of Conservation, Education and Research Dawn O'Neal at Dawn@huyckpreserve.org

The Huyck Preserve and Biological Research Station is now accepting applications for summer 2014 lifeguards at Lake Mysostis Beach in Rensselaerville, NY.

Multiple part-time ten week positions available (June 23-Labor Day weekend).

Applicants must be at least 16 years of age and have current American Red Cross Lifeguard Certification with Waterfront and current American Red Cross certification in CPR/AED.

Huyck Preserve
& Biological Research Station

2013 Annual Fund Form

Annual Fund donations go to support programs and fulfill our mission

Annual Fund
Suggested Donation Levels

- ❑ $ 50
- ❑ $ 100
- ❑ $ 250
- ❑ $ 500
- ❑ $ 1,000
- ❑ $ 2,500
- ❑ Other $_____

Name_____

Address_____

Annual Fund Donation $ _____

City_____**State**_____**Zip**_____

This gift is given in honor of/in memory of

Phone_____**Cell**_____

_____

Would you like to be added to our e-mail updates?

e-mail_____

Thank You!

The Huyck Preserve is a registered 501(c)3 orgainization and all gifts are deductible to the extent provided by law.

Connecting people to nature through conservation, research, education, and recreation

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Rensselaerville, NY 12147
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