



# FORGET-ME-NOT

## Myosotis Messenger

Autumn 2008

Newsletter of the Edmund Niles Huyck Preserve & Biological Research Station

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## Chad Jemison is Preserve's new Executive Director

We are pleased to welcome Chad Jemison as our new Executive Director. Chad joins the Preserve from the North Country School in Lake Placid, N.Y., where he has been the director of Treetops eXpeditions, a summer program for teens to study ecology and sustainability around the world.

"This is an exciting time for the Huyck Preserve," says Susan Kessler, president of the Board of Directors. "Chad will help us enhance our education programs and strengthen our ties to the community and region."

The Preserve began its search for a new Executive Director last fall to replace Richard Wyman, Ph.D., who had stepped down from that position in late 2006. Rick has continued to conduct research at the Preserve on salamanders and earthworms, as well as on the impact of changes in the decomposer food web on the global carbon cycle.

The Search Committee--led by Laura Stephenson Carter and comprised of a dozen board members--considered nearly 100 applications for the position. Ten candidates were interviewed by phone and five of those were invited for onsite interviews. Three finalists were invited to come back to the Preserve and give presentations to the board and several other Preserve members.

"We were impressed by Chad's energy, enthusiasm, and ideas for a bright future for the Preserve," Laura says. "We are looking forward to working with him."

Chad has more than 10 years of experience in teaching, developing, and directing ecological education programs.



Most recently, he was an educator at the North Country School in Lake Placid, N.Y., a coeducational boarding school for grades 4 through 9, and director of the school's Adirondack Field Ecology and Treetops eXpeditions program. He also developed and directed a course called Adirondack Field Ecology--a collaboration between the school and Paul Smith's College--which allowed high school students to earn college credit for completing a four-week course, taught by college professors, that focused on ecology research. Before that, he was an ecology instructor at the Teton Science Schools in Jackson Hole, Wyoming; an environmental educator for Nature's Classroom in Mentone, Alabama; and a wilderness expedition trip leader in Colorado, Washington, and British Columbia for Longacre Expeditions.

He completed Teton Science School's year-long graduate-level professional residency in ecological education, and will soon have a master's degree in sustainability education and nonprofit administration from Prescott College in Arizona. He holds a bachelor's degree in philosophy and environmental studies from Colgate University.

Chad's wife, Lisa, is equally impressive. She is also an educator and has worked as an interpretive naturalist at the Adirondack Natural History Museum, also

known as the Wild Center, in Tupper Lake, N.Y. Chad and Lisa and their new baby Chloe recently moved to Rensselaerville from their home in Saranac Lake and are now living in Lincoln Pond Cottage on Pond Hill Road.

"I look forward to welcoming new families and naturalists from across the region to discover this hidden gem of a preserve," says Chad. "It is truly a rare opportunity to find a preserve that combines cutting-edge ecological research with an open and welcoming environment for all to come enjoy, as well as learn and connect with the natural world."

*Laura Stephenson Carter*

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## Sense of Place

It is with great joy that I write to you as the new Executive Director of the E.N. Huyck Preserve and Biological Research Station. My family and I have really enjoyed our time here this summer and we are so thankful for the warm welcome that we have received from the community. One of the things that I enjoy most about this

position is the opportunity to both work and live on the Preserve, which helps me to get to know the place much faster than I would otherwise. Meeting people, walking the land, learning the rich history here of research in ecology, and more than anything, hearing people's stories – it all has opened my eyes to what the Preserve means to this community. Clearly, it is a jewel with which I have been entrusted. I have noticed when I meet people they are often eager to share their unique stories about this place. While everyone's stories involve the same 2,000 acres of trails, waterfalls, research plots, and natural beauty, I marvel at how diverse people's personal experiences are — stories of your secret favorite spots, an awe inspiring wildlife encounter, the role the Preserve plays as a safe natural place for your children, how you value it as a place of natural refuge and as a place to “unplug,” even how it has had an impact on your career.

Developing a sense of place takes time, but our formative experiences can be deeply meaningful. One of my early experiences at the Huyck Preserve certainly stands out. The loop around Lincoln Pond was the first trail that I walked at the Preserve. It was an unusually warm day in mid-April and I had just finished my interview with the Board of Directors. Spring felt far away at our home in Saranac Lake, N.Y., where there was still snow on the ground, and so my wife Lisa and I made jokes about heading south to “tropical” Rensselaerville. The spring peepers welcomed the warm weather with their chorus, and we soon noticed a pair of bald eagles circling over the pond. As we crossed a small stream we noticed a figure slowly moving towards the pond. Covered in thick mud was a massive snapping turtle, just emerging from its winter sleep, ambling under logs and over small boulders. I later learned the turtle is nicknamed Scarneck and has lived here for decades — talk about having a sense of place! Lisa and I marveled at our good fortune for all that we saw on that short walk.

Whether you've enjoyed and supported the Preserve for years, or you have only recently discovered us like the folks who became members this summer from Altamont, Delmar, New York City, Cobleskill, Troy and Albany, your generous support of this nonprofit organization makes a real difference in our ability to improve our trails, offer excellent programming, and support innovative work in the study of ecology. Thank you so much! As we enter fall (I can almost smell the cider), join us for our “*Migration Celebration*” bird festival on Saturday September 13<sup>th</sup>, an end of summer wildflower walk the following Saturday, and enjoy the magnificent foliage throughout October. Who knows, maybe you'll see old Scarneck returning upstream to his winter hideout!



View of Lincoln Pond, photo by Chris Schiralli

  
Chad Jemison, Executive Director



# Welcome to Radka Wildova

If you see someone walking through the Preserve and cradling cattails in her arms, chances are you've caught a glimpse of the Preserve's first Scientist-in-Residence, Radka Wildova. A plant ecologist from the Czech Republic, Radka is happy to be at the Preserve and in Rensselaerville this summer.

The Scientist-in-Residence is a new seasonal position that was established this year to oversee scientific activities at the Preserve. Radka is conducting her own research, as well as mentoring graduate students, advising undergraduate interns, consulting with the Executive Director on scientific and educational activities, and participating in public outreach and educational events.

With the help of Audrey Kropp, other staff, and Board member

George Robinson, she helped lead the smashing successful, and well-attended, annual Science Symposium. She's planning to spread the word about the Preserve's research opportunities to other scientists at upcoming professional meetings. And she's also hoping to run a collaborative workshop on invasive species this fall. The workshop would bring together scientists with land managers (from land trusts, government agencies, and other organizations) to brainstorm ways to control invasive species of plants and wildlife.

Radka earned her undergraduate and doctoral degrees at Charles University in the Czech Republic, and is a plant ecologist at the Czech Institute of Botany. For the past few years, she has been in the United States completing a postdoctoral fellowship at the University of Michigan and serving as a visiting scientist at the Institute of Ecosystem Studies in Millbrook, N.Y.

Her research focuses on the ecological and evolutionary consequences of plant invasions, and the population and community biology of clonal plants such as cattails. Her background on two continents has given her an unusual perspective on plant invasions. For example, she's collaborated with Czech researchers on a comparative study of white pine (*Pinus strobus*) in the U.S., where it is native, and in Europe, where it is invasive. Her current research--at the Preserve and elsewhere in the U.S.--is on the interactions of an invasive European cattail with a native, North American species. She has also studied alpine grasslands in Europe and a range of different plant communities in the Canary Islands. At the Preserve she has been studying native and non-native cattails as well as invasive beetles that have begun attacking a shrub called viburnum.

"I am very much looking forward to a productive and enjoyable summer at the Huyck Preserve and Biological Research Station," she says. With the season well under way, she's been keeping herself plenty busy.

*Laura Stephenson Carter*

## Scientist-in-Residence Reflections

Once, when casually observing a field in New England, I had a strange sense of familiarity with it, even though I had never visited it before. Soon I realized that this was because all the plant species that I saw in it were the same as those that commonly occur in meadows in my native Czech Republic, and not only were the species the same but they even occurred in the same relative proportions, replicating a typical European pasture. This was not due to happenstance, but to the fact that many of the early European settlers brought seeds of European pasture plants (e.g. sweet vernal grass, red fescue, shepherd's-purse, sweet-clovers and bedstraw) with them,

so that they would grow here, and provide forage for their herds. These plants ended up being so successful that they have come to dominate the fields, meadows, and roadsides throughout much of the eastern U.S.

Many other plants have been introduced to the North American continent from Europe and Asia some for ornamental purposes (e.g. Japanese knotweed, shrubby honeysuckles, Japanese barberry), some for medicinal uses (e.g. common St. John's-wort, common burdock, common mullein), some to



prevent soil erosion (e.g. tree of heaven, kudzu), and yet others, purely accidentally (e.g. purple loosestrife, common reed, narrowleaf cattail), as botanical stowaways on ships or planes. Of these, a small



percentage has spread aggressively from their points of introduction, and it is these that are known as invasives. Invasive plant species are of great concern to conservationists

because of the likelihood that at least some of them play a role in decreasing the diversity and abundance of native plants, and beyond that, the indirect effects that they might have on other ecosystem components. At the same time, however, they provoke intense interest from theoretical ecologists, as they provide a window into understanding how pre-existing ecological communities of organisms respond when they encounter new species. Do closely related species hybridize with the newcomers? Do the natural enemies (diseases and herbivores) of related species move on to the invasives, eventually limiting their abundance? Does the community as a whole disintegrate, as co-evolved relationships, built over millennia are disrupted? Can evolutionary responses to the invasives be detected?



One of the reasons that I first wished to come to Huyck, to serve as Scientist in Residence, was to continue research into invasive European cattails that I began at the University of Michigan Biological Station. In Michigan, the invasive cattails are both displacing and hybridizing with the native cattails. Additionally, the hybrid is itself, invasive, providing another layer of complex interactions. Both the hybrid and the European species are capable of having profound ecosystem effects, as they change both the physical structure and nutrient availability of their wetland habitat. Because the European invasive has spread westward from the east coast, it is a relative new arrival in Michigan, in contrast to its much longer presence in New York State. By examining the invasives and the native species in both Michigan and New York, and

comparing the effects between the sites, we can see how these effects changed over time, to see if, for example, a stable co-existence between the invasives and natives has been achieved.

Much more than the native and invasive cattail populations, however, what led me here was my desire to pursue my investigations at a biological research station, one of those rare places where scientists can live on-site and enjoy the use of a research facilities, the support of a dedicated and knowledgeable staff, and a collegial environment with other researchers. Moreover, I hoped to be able to share my enthusiasm for my research with the public, as I was well aware of Huyck's dual mission of research coupled with education. On all of these counts, I have been delighted with my experience here, and am grateful and honored for the opportunity I have had to serve this summer as Scientist-in-Residence. Particularly satisfying, since arriving here, I have been inspired to pursue further lines of inquiry, both related to my interest in understanding invasion ecology.

The first came about serendipitously. On one of my days off, I was working with my husband, the ecologist, Jonathan Rosenthal, who does his research at the Vassar Farm Ecological Preserve, in Poughkeepsie. While sampling insects on shrubs, we made the disturbing discovery of finding the first viburnum leaf beetle recorded there. This is an invasive beetle species that was introduced into Ontario in the 1940s, and has been spreading



southward through New York State, killing affected shrubs in 2-3 years. Indeed, the devastation caused by this invasive pest is reminiscent of that caused by others such as the emerald ash borer, Asian longhorn beetle, and many others. Upon returning to Huyck, I noted that the most common wetland shrub species here, *Viburnum dentatum*, commonly known as arrowwood was heavily infested with the beetles, with the result being virtually total defoliation. I discussed this situation with my husband, and we thought that it

would be worthwhile to initiate a uniquely long-term, geographically widespread study, comparing the ecosystem effects of the beetle invasion across sites that had been recently (such as Huyck), further in the past, not at all yet, or were just in the process of first encountering the beetles

past, not at all yet, or were just in the process of first encountering the beetles (such as my husband's research site). Thanks to the support that Huyck provides for research, I was able to begin this project here almost immediately both documenting the plant communities that surround the afflicted plants (and which might replace them if and when they succumb to the infestation), and examining factors that might affect vulnerability to the beetles. This research has been greatly helped by the Huyck's research manager Audrey Kropp and the enthusiastic field work of two young volunteers, Sarah Carter and Mateo Ward.

In addition to observing the invasive beetles, and the damage that they've caused, I also observed a remarkable abundance and diversity of invasive plants here. These include, for example, Oriental bittersweet, several species of honeysuckle, and buckthorn, Japanese barberry, and various members of the rose family, all originally from Eurasia. Rather than detracting from the great and inspiring natural beauty of Huyck, however, in a sense they enhance the value of Huyck as a natural laboratory for studying the ecological effects of invasive plants, especially since they occur closely intermingled with native plants, allowing for comparative studies.

Of course, I excitedly discussed this observation with my husband, and based on this we came up with the idea of Huyck hosting a conference on invasive species, to

honor the legacy of Eugene Odum, the internationally recognized "father of ecosystem ecology," who served as a resident naturalist at Huyck shortly after the Research

Biological Station was established. This conference would be innovative in bringing together researchers at the forefront of theoretical studies of invasives, and resource managers who attempt to limit their presence or effects, in order to establish linkages between these two all too-disparate communities, to the benefit of both.

Such a conference could not only make a significant contribution to our efforts to understand and limit the impacts of species, but also to help shine a light on the role that Huyck has played, and continues to play, in advancing ecological research. Although consideration of this conference is still at its earliest

stage, I have been greatly encouraged by the enthusiastic response I've gotten from all the members of the Huyck community with whom I've had an opportunity to discuss it.

*Radka Wildová, Ph.D.*



Viburnum Project Photos: Assisting on the project - Audrey Kropp & Mateo Ward (top) & Sarah Carter (left); defoliated shrub in mid-summer.

Saturday September 20, 2008 10 a.m.-12 p.m.

# Wildflower Walk

Public Program at the Eldridge Research Center

Members free; non-members \$5; Reservations at 797-3440



Jane Axemethy,  
COM.EN.ART 2001

# Looking Back on 70 years as a Research Station

The Huyck Preserve Biological Research Station is celebrating its 70<sup>th</sup> Anniversary this year, and an anniversary is an excellent time to reflect on the past. I have always been impressed with the prominent people involved at the biological field station throughout its history. With their vision and dedication, these scientists paved the way for the legacy of ground-breaking research that continues today. I thought this year was a great opportunity to share just a little about some of the people involved with the biological station during its early years. The actions of these people so many years ago have impacted the course of history at the Huyck Preserve and the scientific community in general for generations.

The formation of a biological field station at the Huyck Preserve was due in large part to the efforts of a forward-thinking woman - Jessie Van Antwerp Huyck, the principal founder of the Preserve. Despite some resistance to the idea of a biological field station, Jessie and other proponents remained steadfast in promoting the vision to make more of the Preserve. By 1938, the Huyck Preserve Biological Research Station was established, solidifying the Preserve's goal to have a more profound impact on a broader society. The development of a private biological field station during this time period was a revolutionary concept, as there was only one other like it in the state and just a few more in the entire United States. The station may not have seen the light of day, let alone last 70 years, were it not for Jessie Huyck's progressive thinking, foresight, and thoughtful planning. The early steps that were taken during its development helped ensure the field station would not only exist, but be a renowned institution. In 1937, the first step to establish the field station was taken when Dr. William Hamilton, a prominent scientist from Cornell University, was recruited to conduct a general survey of the Preserve and develop a report with recommendations for research.

Dr. Hamilton played an important role in the establishment of the Huyck Preserve Biological Research Station. He brought the professional scientific expertise necessary to properly launch the field station. In addition to being a professor at Cornell and publishing a significant number of scientific papers and books, he conducted research at the American Museum of Natural History, and was president of the American Society of Mammologists and the Ecological Society of America during his long scientific career. Hamilton's expertise was in the ecology of

mammals, birds, reptiles and amphibians, every bit of which he used to conduct his survey of the flora and fauna. Most important, though, was his enthusiasm and support for the field station. He outlined a variety of research areas that might be "profitably studied", including studies on "climax plant communities" (afforded by their presence on the Preserve) and "primary studies of life histories, ecology and the interrelationships of the animals and associated plants involved". Hamilton argued that worthwhile research would come from studies on the "commonplace yet abundant life" the Preserve housed and protected. In hindsight, Hamilton was a visionary to predict that the understanding of biology would require investigations of the connections and relationships species have with other

species. Current biological research often examines how species interact and are affected by the other species they live, compete or cooperate with, those they eat and are eaten by, and those that have been introduced to their environment by humans.

After identifying promising avenues for research, Hamilton proposed how the field station should be structured and administered. Many of his suggestions were put into place and are still in place today. It was actually Hamilton's idea to remodel the barn into the laboratory space that is today part of the Eldridge Research Center.

Hamilton also developed the selection criteria and structured the summer fellowship program now known as the Huyck Grant program. He served on and recruited the members of the first Scientific Advisory Committee, set up to select the recipients and oversee research. The first fellowships at the Huyck Preserve Biological Research Station were awarded in 1939, and the recipients set the high standards for the next 70 years of research.

Donald Griffin, Edward Raney, and Eugene Odum conducted the first research projects at the Huyck Biological Research Station. These budding scientists proved their prowess with their high caliber research and became giants in their fields. Donald Griffin's research involved bats, specifically how they managed to navigate and hunt flying insects in the dark. Upon conclusion of his experiments in 1939, he made a significant discovery that bats bounce sound waves off objects to "see" in complete darkness, a phenomena he termed echolocation. This discovery became the foundation of the military's development of sonar. Edward Raney conducted research



Don Griffin, Eugene Odum, Charlotte and Edward Raney conducted the first research projects at the Huyck Preserve's Biological Field Station in 1939.

comparing the day-time and seasonal movement of frogs. Raney continued his career as a professional ichthyologist and became one of the top scientists in the country in his field. The work Eugene Odum did during his three years at the Huyck Biological Research Station perhaps has had the greatest impact on biological science. Odum is often referred to as the “father of ecosystems ecology”, and his name does not go unmentioned in any biology text book. His work launched a shift in the focus of biological research that reached scientists throughout the world. Previous to his time, much of the biological research was focused on a specific species. Odum theorized that species could be analyzed in a larger context and that much could be understood by examining the interactions of different species and their environment. With this, the subfield of ecosystems studies was born and our knowledge of biology has reached new levels of complexity.

The legacy of research at the Huyck Preserve Biological Research Station has been carried on now for seven decades. Over the years, hundreds of scientists and researchers have held up the high standards set by their predecessors. Nearly 500 publications have been produced at the station. Thousands of research projects have been conducted and even new species have been identified on the Preserve. The creation of the field station 70 years ago has enhanced the Huyck Preserve’s profound and rich history - giving the Preserve a special unique character. As the only field station in the region, the Huyck Preserve

Biological Research Station has served as a pristine site to conduct the long-term studies needed to comprehend the complex questions and issues of today. In the face of global climate change, places dedicated to research and preservation have become more important than ever.

In my tenure here, I have been fortunate to meet and work with many fascinating researchers and have been involved with many projects. The Huyck Preserve’s Biological Research Station is a treasure and boasts an

amazing legacy. I am proud to be involved with the efforts at the Preserve, where dedication to preservation and research are a rare priority, and I look forward to being a part of the continuing research and innovation as we move into our next 70 years.

*Audrey Kropp*



Gene Odum, February 1940.

**L**ong term field research has become a crucial component of studies in the biological sciences. Many scientists investigate complex questions that require years or decades of research and data collection. These studies must be conducted at sites that are protected and buffered from human disturbance. Biological field stations, like the Huyck Preserve, serve as the main resource for scientists conducting long term research. The Huyck Biological Research Station has had a strong history of high quality research spanning the last 70 years. Throughout the years, many of the projects conducted at the Huyck Biological Research Station have been significant long term studies that tackle important and complex questions. Highlighted below are just a few examples of some of the fascinating researchers and long term studies conducted at the field station.

Dr. Susan Beatty began researching forest plant communities over thirty years ago. This ongoing study examines the micro-habitats that are formed when trees tip over called pits and mounds. Dr. Beatty travels from Colorado every year to conduct work on her projects and may be seen in June heading to her study sites, hula-hoop in hand.

Dr. Joan Herbers began researching slave making ants in 1980 beginning a legacy of research in this field. Slave making ant research here has passed through several generations of researchers and even crossed international boundaries. One of Dr. Herber's students, Dr. Susanne Foitzik is continuing to send researchers from Germany to study the evolution and ecology of the slave-maker ants and the host ants.

Dr. George Robinson has conducted a variety of studies on the forest and plant communities of the Huyck Preserve. The main focus his research investigates the ecological impacts of the non-native beech bark disease on the American Beech population. Dr. Robinson also resurveyed the transects that Eugene Odum initially collected data on and developed several other continuous inventory transects and plots in more recently acquired lands of the Huyck Preserve.

Dr. James Runkle conducted research investigating how the newly introduced beech bark disease would affect the native hemlock-beech forests over time. Although this research was initiated in 1978 it has roots in the earliest years of the station. The site used in this project was identified by Dr. Eugene Odum, as the least disturbed representative of hemlock-beech forest on the Preserve in 1943.

Dr. Richard Wyman has been studying salamanders and the forest floor invertebrate community for nearly twenty years. This research has led to many significant findings. One is that salamanders play a key role in regulating the detritus food web and carbon emissions from decomposition. While conducting research on this project Dr. Wyman and his research crew discovered non-native earthworms were invading forests in the region and significantly altering various forest floor characteristics. Dr. Wyman is continuing research to identify the invasion front and investigate the impacts the earthworms are having on the forest floor biodiversity.

## 2008 Huyck Grant Recipients

Omar Eldakar, Ph.D., Michael Dlugos, Ph. D., and David Sloan Wilson, Ph.D., Binghamton University

**The importance of population structure: The evolution of hyper-aggressivity in water striders.**

Dr. Eldakar et.al. have set up experimental indoor pools with varying numbers of aggressive and non-aggressive water striders collected last year. The behavior of the water striders in their respective groups will be analyzed to help understand how the different mating tactics have evolved and persisted over time.

**Craig Frank, Ph.D., Fordham University**  
**Latitudinal variations in the recovery of torpor bouts by populations of a facultative hibernator.**

Dr. Frank will be using specially designed radio collars that record the body temperature of several chipmunks on the preserve throughout the winter. This data will allow him to track when and how long the chipmunks enter torpor (an intermittent state of hibernation). The local weather conditions and ultimate survival of the chipmunks will also be recorded for comparison with hibernation data.

**Christine Andrea Johnson, Ph.D., American Museum of Natural History**  
**Ecology of slave-maker ants and their hosts: The effect of geographic variation in parasite and host range on co-evolutionary trajectories.**

Dr. Johnson is using experimental arenas in a forest site where the ant colonies were located on the preserve. The arenas have been set up with artificial "acorns" or shelters to house the ant colonies. Each arena has a different number of ant colonies placed in them, allowing Dr. Johnson to monitor how varying levels of competition affects ant activities.

**Rebecca Pinder, University at Albany**  
**An assessment of invasive earthworms as a prey resource for streamside salamanders.**

Rebecca will be spending a second season surveying the populations of stream side salamanders and earthworms in several streams on the Preserve. She is also identifying what the different types of salamanders have eaten (specifically if they have eaten earthworms) using a technique called a gastro-lavage. This technique does not harm the salamander. It involves flushing a small amount of water into the salamander causing it to regurgitate stomach contents.

**Sabastian Pohl and Annette Leingartner, Ludwig Maximilians University, Germany**  
**Different fronts in the co-evolutionary arms race of slavemaking ants and their hosts.**

Sabastian and Annette are continuing long term research in Germany on slave-making ants from the Huyck Preserve. They have returned for a second season to investigate how the slavemaking ants choose the colonies they raid. Using ant colonies collected from the Preserve they will be monitoring the behavior of the slavemaking ants when presented with two host colonies. Sabastian and Annette will record and analyze the activities and ultimate decision the slavemaking ants make in order to identify the factors involved in the decision making process.

**Slavemaking ants and their slaves:  
big battles in small acorns**

Annette Leingartner, Matthias Krenn & Sebastian Pohl  
Department Biologie II, University of Munich  
Griffhaldener Str. 2, 82532 Planegg-Martensried, Germany

**Slavemaking ants: they are around you!**

The slavemaker *Protomogile americana* is a small myrmecine ant living in deciduous forests in the northeastern United States and adjacent Canadian regions. It lives in hollow acorns, hickory nuts or cavities in rotten branches on the forest soil. The colonies are small, comprising the queen and a maximum of six slavemaker workers and about 100 slaves. The slavemaker parasitizes three closely related species of the genus *Tenodonto*: *T. longispinus*, *T. umbigatus* and *T. curvispinosus*. At the E. N. Huyck Preserve in Emmadenerville, NY, the slavemakers and the first two slave species can be found quite often.

**Slavemaking ants: who do we want to raid today?**

Scouts of the social parasite looking for host colonies to raid will have to decide whether to attack a host nest or not, or which host nest to raid. They should calculate the risk and the benefit in terms of killed workers and stolen slave pupae before they start a raid. We conducted raiding experiments in the lab to explore the behavior of social parasite scouts. Slavemaker ants were put into Y-shaped arenas and were confronted with two host colonies that differed in the number of either workers or pupae. Unfortunately, slave raids did not take place as frequently as in previous studies, and most of the between-raid activities noticed were performed by the host species. No host nests choices could be observed yet. However, preliminary observations showed that individuals bring on route as scouts in one experiment seemed to explore the arena in following experiments again, indicating a kind of division of labor among slavemaker workers.

**Slavemaking ants: Spartacus in an acorn**

The high prevalence of *P. americana* colonies and their frequent and destructive raids exert strong selection pressures on their host, which should evoke the evolution of host defenses. A recent study revealed that enslaved host workers actively kill social parasite brood instead of caring for it.

Survival rates of the pupae of the social parasite are smaller than those of the hosts ( $p < 0.05$ ). This reduces the worker force and number of raids of the social parasite. The slaves could gain indirect fitness benefits by preventing the destruction of neighboring host colonies.

**Freedom has its troubles, too**

In many ant species workers are able to produce male offspring, but the queen normally monopolizes reproduction. We observed twelve colonies of *Tenodonto longispinus* over 14 days, divided into two treatment groups. In one group the queen was removed, whereas she remained present in the colonies of the other group.

Confirming previous studies, we could show for this species that when the queen is missing, the workers become aggressive and compete with each other for reproduction. Few individuals will become dominant and start producing eggs.

Poster detailing the work conducted by the latest generation of scientists from Ludwig Maximilians University in Germany involved in the slavemaking ant projects begun in 1980 by Joan Herbers.



Salamanders of the Huyck Preserve

Kathryn Jaramillo, September 2008  
COM.EN.ART Artist-in-Residence,

Come Celebrate With Us!

## Bird Festival

Saturday

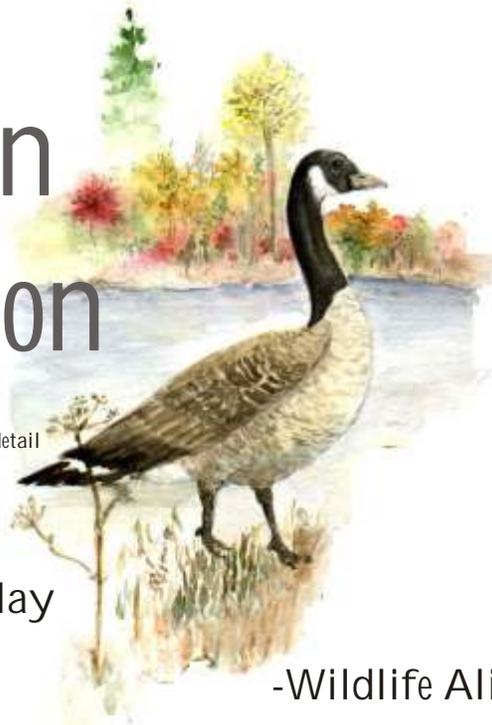
September 13, 2008

11:00 AM-3:00 PM

Eldridge Research Center  
Pond Hill Road, Rensselaerville NY

## Migration Celebration

Sandra Orris, goose detail  
COM.EN.ART 1996



-Live birds on display

-Bird walks by bird experts

-mist-netting, falconry, artwork, and more

-Wildlife Alive! presentations

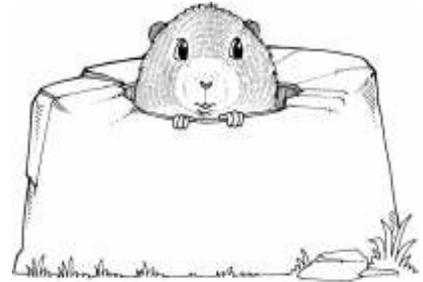
Rich Guthrie will entertain us with his adventures

in pursuit of the Ivory-billed Woodpecker

Call for more information (518) 797-3440 or (518) 797-5172

OR visit us on the web at [www.huyckpreserve.org](http://www.huyckpreserve.org)

## Groundhog Day Winter Carnival



Eldridge Research Center  
& Lincoln Pond

Saturday,

January 31, 2009

11:00 AM-3:00 PM

It's a cabin fever cure  
for the entire family!

\* \* \* \* \*

# The mill that Huyck built

Of the 10 miles of footpaths that weave through the lands of the Edmund Niles Huyck Preserve, perhaps the most traveled and best known is the Falls Trail. The trail begins at the Mill House in the hamlet of Rensselaerville and travels 500 feet along the northern banks of Ten-Mile Creek to just below the 150-foot waterfall that the Preserve and the hamlet have become known for. As the Falls come into view, so does a little red footbridge, a platform from which to admire the majesty of the Falls, and a gateway to the rest of the Preserve's treasures.

Just over the footbridge, to the left of the narrow path, lies an old stone foundation. The building that once stood here a hundred years ago is no more. Moss and lichens have grown over the stones that remain. The small trees, saplings, and the abundant groundcover sprouting from within the foundation, are a living testimony to the ability of nature to reclaim an altered landscape. And, outside the stonework remains, the interested hiker may notice a large rock into which has been drilled a small bronze plaque with an etching of an old building and the words: "100 years serving the paper industry. Site of the original Huyck Felt Mill 1870-1878."

By the end of the 19<sup>th</sup> century, felt making had become an integral part of the papermaking process. Paper was made using big machines--wood pulp was mixed into a slurry, delivered to the continuous paper machines, pressed flat on giant conveyor belts, excess moisture removed, and processed into huge sheets of paper. The early American paper mills typically used rags for the drying process, but these rags were expensive (as many were imported from Europe) and were often in short supply. Some paper mills resorted to petitioning the local ladies, asking them to save their rags and donate them to the papermaking cause.

As the papermaking process became more mechanized during the mid-19<sup>th</sup> century, paper mills began to use drying belts that were made of more durable woolen felts to press out the water from the pulp fibers.

At first, American paper mills imported their felts from Europe, but later American entrepreneurs began to see opportunities for making the papermaking felts themselves.

Among these were the Henry Waterbury and Francis Conkling Huyck partnership, which established the fourth ever felt-making mill in the country--in Rensselaerville, N.Y., in the year 1870.

The Waterbury-Huyck partnership seemed like a natural one. Mr. Waterbury possessed the know-how to successfully manufacture the felts and Mr. Huyck had an abundance of business savvy. They began operating in the old woolen mill that had been built at the turn of the 19<sup>th</sup> century, just below the Falls. The mill's original function was to card wool and finish cloth and return it to local

farmers for their domestic needs. These services were still provided even after Mr. Waterbury and Mr. Huyck began running the mill. From 1870-1878, the mill manufactured papermakers' felts from wool brought from nearby farms and other areas. Each week the felts would be loaded onto wagons and taken to farmers' wives who would join the felts into endless, seamless blankets. Later the felts were returned to the mill for washing, fulling, and finishing. Although the



Huyck Woolen Mill, circa 1923. Historic photo from Barry Kuhar.

company produced a high-quality product, its success was limited by transportation problems--since it was far from the railroad, it encountered difficulty selling and transporting the felts--as well as a lack of workers and raw materials.

In 1879, the partnership was dissolved. Mr. Waterbury decided to try his luck in Oriskany, in central New York, while Mr. Huyck rented an old knitting mill at Kenwood, a suburb of Albany. Soon F.C. Huyck and Sons was successfully manufacturing papermaking felts as well as woolen suits and blankets. Mr. Huyck ran the successful business from Kenwood and later, Rensselaer, N.Y., until his death on July 4, 1907. Shortly afterwards, the company was reorganized with Edmund Niles Huyck as president, John Niles Huyck as vice president and secretary, and Francis Conkling Huyck, Jr., as treasurer. Maintaining the tradition of F.C. Huyck Sr.'s policies and high standards, the company continued to be a leading manufacturer of papermakers' felts in the United States.

Today, that foundation on the trail is all that remains of the Waterbury and Huyck felt mill in Rensselaerville. After the mill closed, all the machinery was removed and the building demolished. Even its accompanying outbuilding is gone, having been removed to the Shufelt farm, just outside the hamlet. Natural succession has since reclaimed this once-bustling business property, and around it has grown the beautiful Preserve that we all treasure and enjoy.

*Katie Barker Caprio*

# Thank You Everyone for your generous support in 2007!!

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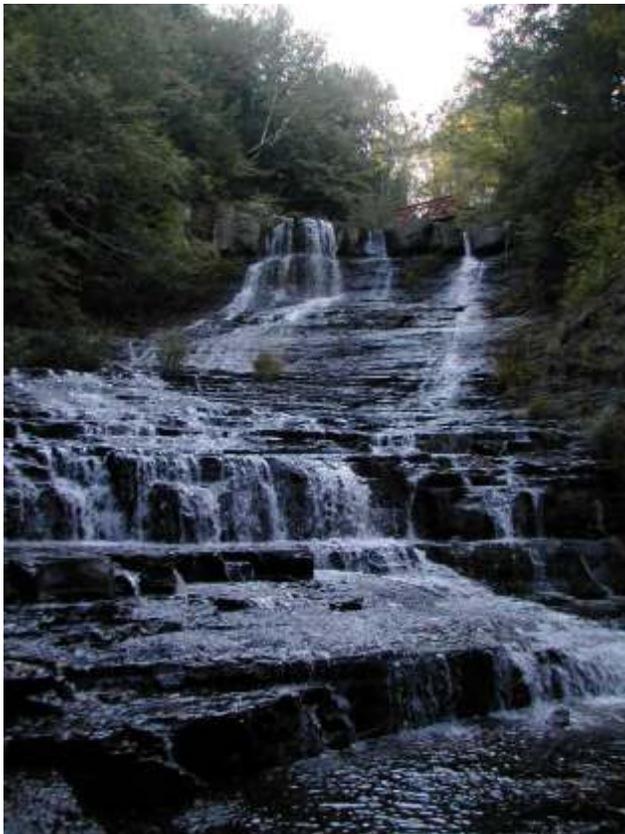
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