Summer 1998

FORGET-ME-NOT

Myosotis Messenger

Edmund Niles Huyck Preserve
& Biological Research Station
P.O. Box 189, Rensselaerville, NY 12147
(518) 797-3440

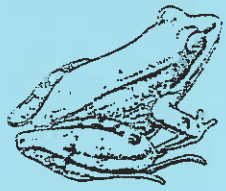
William A. Waldron Retires from Trusteeship

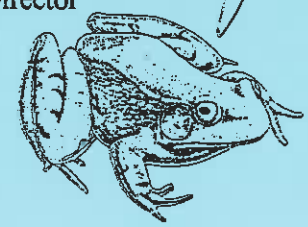
Mr. William A. Waldron recently resigned his trusteeship from the E.N. Huyck Foundation. He has been a trustee since 1959 when his aunt, Jesse Van Antwerp Huyck established the Huyck Foundation in her will, appointing him and Dr. Lewis Eldridge to be trustees. Mr. William Waldron, a lawyer in Cambridge, Massachusetts, has served as a trustee for 38 years. Several years ago he established the Jesse Van Antwerp Huyck Memorial Fund which has been used to support educational programs on the Preserve. He guided the growth of the Preserve during his tenure and was instrumental in making certain the Preserve fulfilled its mission established in its by-laws, "to increase the general and scientific knowledge and love of nature, particularly that of trees and wildlife ... by providing means of increasing and protecting birds, wild animals and fish ... [and] to research, record and preserve the history of said lands."

We want to take this opportunity to thank Bill for his guidance and support over the years. He has appointed Peter McChesney, his cousin, to assume his trusteeship. Peter has been a very active member of our Board of Directors. We welcome his appointment as trustee and look forward to working with him in his new position.

Laura D. Carter
President
for the Board

J. Richard Wyman
Executive Director
for the staff





Our Biological Field Station is 60 Years Old

By Richard L. Wyman

In 1937 noted mammalogist William J. Hamilton from Cornell University came to the Huyck Preserve at the request of Jessie Van Antwerp Huyck to make an inventory of the plants and animals. He was invited here because the Preserve's Board of Directors wondered if the Preserve was suitable to become a biological field station. His reports showed that the Preserve housed many kinds of habitats with thousands of plants and animals and he recommended that a field station be established.

Field stations are facilities where scientists can conduct studies of the flora and fauna in relatively undisturbed and secure settings. They foster a culture of scientific research where informal sharing and exchange of ideas occurs. They provide opportunity for free, open inquiry where political pressure is minimal and creative, non-directed investigations may occur. At older stations, like the Huyck Preserve, historical data and records provide baseline data for future comparisons. Reports and publications document how much change has occurred. Field stations are also the training grounds for the next generation of field scientists. These will be the people to tackle the ever-increasing environmental problems humankind faces. In addition, our education mission is to increase the scientific literacy of our society.

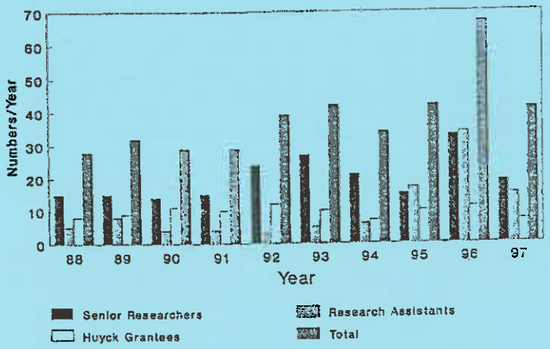
Following W.J. Hamilton's initial surveys, in 1938 the Huyck Preserve's field station was organized. In that year three young scientists arrived to quietly begin a legacy of ecological research. Eugene Odum (founder of ecosystem ecology), Donald Griffin (echolocation), and Edward Raney (founder of one of the first ecological consulting firms) spent the summer of 1938 building a basic understanding of the ecology of the Preserve. Since then work has enlarged into ecological theories and processes, long-term environmental change (El Nino/SO,

global climate change, acid deposition), ecosystem experiments and management, environmental toxicology, biomedical research, exotic species assessment, and conservation biology.

In 1988 I summarized and published available information on the history of scientific usage of the Preserve from 1938 to 1987. Within this publication several milestones were listed. During this 50-year period more than 155 scientists conducted 250 research projects and published 170 papers in peer-reviewed journals. With the last ten years we have had 243 scientists with 65 assistants, representing 84 institutions (colleges, universities; local, state and federal governments) from 26 states and 7 countries (Figure 1). Amongst these scientists, 33 received Huyck Research Grants to help them with their work here. Also 12 students completed their Ph.D. dissertation research here and 9 masters.

As near as I can tell, we have just submitted our 270th paper for publication. I think we should be proud of our accomplishments. This work could not be done without the commitment of the Huyck Preserve's Board of Directors, our Scientific Advisory Committee, our members, volunteers and staff. Thank you all and happy 60th birthday to our field station.

Scientists Working on the Huyck Preserve



A Bald Eagle Flies over Lake Myosotis

By Richard L. Wyman

Last Friday night I saw a bald eagle fly over Lake Myosotis and shortly thereafter I heard a loon call. Both of these animals are rare but are well known to most people in the northeastern United States, although seldom seen. These can be thought of as umbrella species for when we protect them we also protect all the other creatures in the ecosystems that support the eagles and loons.

Less often thought about are the millions of small things that help to regulate the functions of ecosystems and upon which we all depend. I have written about the red-backed salamander (the most abundant terrestrial vertebrate in the northeastern United States) many times in this newsletter trying to communicate how knowledge about ecosystem function can be obtained and also about how important the little things we hardly ever see or think about can be. I can't help myself but to do so again.

On the Huyck Preserve there are more than 5000 red-backed salamanders per hectare (2083 per acre) in mature beech-maple-hemlock forests. They consume large numbers of forest floor invertebrates (e.g. worms, beetle and fly larvae) and in so doing they appear to reduce the rate of decomposition probably by consuming organisms that fragment leaves. This in turn reduces the surface area of leaf particles that then slows colonization by bacteria and fungi of leaf surfaces. Finally this reduces the rate of consumption of leaf material by bacteria and fungi. What is the significance of this change in decomposition?

I have calculated that a small decrease in the rate of decomposition (say 4%) can result in huge reductions in the amount of carbon dioxide entering the atmosphere. Remember that when bacteria and fungi consume leaves they convert the carbon in the leaf into carbon dioxide, the same way you convert your lunch into CO_2. Remember also that CO_2 is the principal greenhouse gas, and that all the nations on Earth have now agreed we need to control the release of this gas. It appears that in New York State alone, the presence of salamanders in forests may mean that as much as 0.1 gigatons of CO_2 per year will be held in the forest floor (as undigested leaves, humus and soil organic matter) whereas in their absence this gas would be released and would contribute to greenhouse warming of the Earth.

Should other predators (e.g. frogs, toads, snakes, forest floor gleaning birds, spiders, centipedes) perform a similar function in other ecosystems (rainforests, grasslands, tundra, deserts) then these kinds of animals may be helping to regulate the carbon cycle. They also may be helping to keep the Earth a good place to live.

We seek a sustainable relationship with ecosystems of Earth because we need those systems to survive. They make our oxygen, use our CO_2, regulate the water cycle, build our soil, and they feed us.

The lands of the Huyck Preserve not only support the eagle and the loon, two wonderful animals, but they also support an example of the Earth's life support system made up of billions of small things upon which the eagle, the loon, and we all depend. When the eagle flew over the Huyck Preserve's 2000 acres, he flew over 4,166,666 red-backed salamanders (probably less than that). Under those salamanders for instance in the hemlock forest, there are 600,000 mites per meter square the eagle flew over 5 trillion mites. There are some 1000 larger insects per meter square so the eagle flew over 8.3 billion large insects.

Next we need to know how much of the land area needs to be more or less natural so that the life support functions of these ecosystems will continue to do their jobs. For instance, we know (approximately) that 10 acres of forests can consume the CO_2 produced by the average car during one year. Hence if there are 150 million cars in the United States we need 1.5 billion acres just to stabilize CO_2 due to driving. Then there is the CO_2 your furnace produces (another 10 acres) and the CO_2 the power plant produces for your lights – the list goes on. The point is that natural systems can use this CO_2 but only up to a point. It is clear that we need very large areas of semi-natural ecosystems with all of its biological diversity, to continue to keep the planet a good place to live.

The Preserve's Biological Research Station is important because it allowed for these understandings to develop and these questions to be asked.

Huyck Preserve Honored by USPS

The Edmund Niles Huyck Preserve was honored by the United State Postal Service on Earth Day, April 22, 1998 for "studies and contributions towards the sustenance of life on Earth". Rensselaerville Postmaster Patricia Scoons presented the Preserve with a beautifully framed enlarged stamp of Naturalist, John Muir in a ceremony at the Mill House. Several community members were in attendance. The commemorative stamp, one of the stamps in the *Celebrate the Century* collector series, is on display in the Eldridge Research Center.

Huyck Preserve Web Sites

It is now possible to visit the Preserve on the worldwide web, thanks to staff member Kelly MacWatters, who did a wonderful job designing pages for both the Preserve and the International Organization of Biological Field Stations (IOBFS). The Huyck Preserve page can be reached at:

www.capital.net/com/huyck

and IOBFS at:

www.capital.net/com/iobfs

Next time you are on the Net stop by and visit us.

Science Symposium

The Preserve will hold its annual Science Symposium on Saturday, August 8th from 10:30 - 2:00 pm at the Eldridge Research Center on Lincoln Pond, Pond Hill Road. Tree diseases, earthworms, salamanders, house wrens, fireflies, and forestry practices are among this year's topics. Everyone is welcome to attend. Lunch will be available for a donation.

1998 Huyck Research Grant Recipients

Every year the Preserve awards research grants to scientists to study the flora and fauna of the Preserve. This year the Huyck Preserve Scientific Advisory Committee awarded 10 Research Grants to:

Gregory M. Bole, SUNY-Stony Brook; Continuing investigation into the role of sexual selection in the speciation of *Photinus* fireflies

Dr. Grant Brown, Union College; Investigation into whether fathead minnows use visible social cues to reduce local predation risk

Jennifer Frank, SUNY-Albany; The effects of earthworms on decomposition in the presence and absence of an amphibian predator

Geoffrey Gardner, SUNY-Albany; Beech scale dynamics and spatial distribution of American beech in an aftermath forest

Michael Messere, SUNY-Albany; Effect of gap size on densities of *Plethodon cinereus* in selectively cut forests

Stacy Morris, SUNY-Albany; Diurnal abundance of litter invertebrates across seasons and among different temperate forest types

Dr. George Robinson, SUNY-Albany; Ecosystem effects of disease-driven decline in American beech

Isabella Scheiber, SUNY-Albany; Female choice and the mating system of a population of house wrens (*Troglodytes aedon*), a monomorphic passerine

Dr. Conrad Vispo, A field guide to ecological history of the Catskill/Hudson/Berkshire region

Nicole Wright, SUNY-Albany; Land-use history, population structure and small-scale spatial pattern in beech bark disease

COMENART Artists Again at Preserve

The E.N. Huyck Preserve is happy to be hosting six more artists this summer from the COMENART Natural History Artist-in-Residency Program. This program allows natural history artists to work closely

with scientists at the biological field station throughout the research season and enrich their skills and talents working in nature as a living laboratory. Community programs will be led by our visiting artists during their two-week stay with us, which will focus on hands-on workshops, spending time looking at the natural world through an artist's eyes and making a leap into the mind of a scientist. We are delighted to welcome Mary Ellen Didion (May 18-31), Wade Neumeister (June 1-14), Craig Furlong (June 15-29), Susan Caumont Escher (July 31- August 15), Carlin Moyers (September 7-19), and Karen Allaben-Confers (September 28-October 12) to this year's program. Look for posters and notices in the Library newsletter for community workshop dates and times.

Preserve Participates in Mill Cottage Gallery Exhibition Opening

As part of Mill Cottage Gallery's special arts and crafts exhibition, *Birds of a Feather*, Tom Alworth of the Preserve gave a talk on April 25th about the relationship between art and science. His talk emphasized how much natural history artists and scientists have in common, such as the reliance of both disciplines on highly developed observational skills. Tom, an expert on birds of this area, has been researching the nest building behavior of house wrens for the past seven years. He has also been instrumental in helping to make the COMENART Artists-in-Residence program at the Preserve a success. Tom ended his talk with a walk to the Rensselaerville Falls. The Preserve was pleased to participate in this community event and we wish Sharon Costello great success. *Birds of a Feather* runs through May 17th at Mill Cottage Gallery, Main Street, Rensselaerville, NY.

Happy Trails!

The Huyck Preserve has for decades provided approximately 10 miles of trails for use by the general public. The two main trails follow the shorelines of Lake Myosotis (beginning at the office in town) and Lincoln Pond to the north. As many as 4000 people walk the trails annually to enjoy the pristine character of these two bodies of water.

Maintaining trails however is a formidable task. Trails are dynamic and can change from day to day due to many factors including tree falls, erosion, beaver cuttings, human footsteps, understory growth, and flooding. Trails near water systems such as the Preserve are especially susceptible to these factors.

Recently the Huyck Preserve, with the help of Adirondack Mountain Club (ADK) member John Eldridge, invited ADK to visit the Preserve. Through its outreach programs, ADK is committed to trail maintenance and design not just in the Adirondacks, but throughout New York State. Bill Brosseau, operations director at ADK and trail design expert, visited in April of this year to walk the trails and comment on their condition and design. Bill was very impressed with the beauty of the Preserve and felt that ADK would consider providing the Preserve with new trail design options and a long-term maintenance plan. The focus of their work will be on the section of trail that traverses the waterfalls because this trail is particularly susceptible to erosion and because of its beauty, is a popular place to hike.

Although the help of experts is invaluable to improving our trails, ADK emphasized that volunteerism is the saving grace for most all trail systems. Participation in trail maintenance by those who use the trails is paramount to their survival for future generations. Call the Preserve to volunteer to help out.

Founder's Day Activities Focus on Trails

Hiking and trails have been a part of life in the hamlet of Rensselaerville even before the Preserve came into being. In honor of Founders day the Preserve will be holding two special activities. In the morning Preserve staff will be reinitiating a community trail-clearing day that many long-time community members have commented on and remember fondly. We will be meeting at Jessie Huyck Center and plan to clear trails around the Lake from 10:00 am to noon. Please bring gloves and other tools such as shovels, clippers, limb saws, etc.

Later that afternoon from 3:00 to 4:30 pm Wade Neumeister, COMENART artist-in-residence, will lead a fieldsketching workshop that focuses on how to document the things you see along the trails in a hiking journal. This workshop will meet at the Preserve office and use the Ten-Mile Creek/Rensselaerville Falls trail.

Everyone is welcome to participate in either or both events. See you there!

Beach Party Fundraiser

The Preserve is hosting its Beach Party Fundraiser Saturday evening on June 20th from 5:00 - 8:00 pm. at Lake Myosotis to celebrate the beginning of the beach season. A bonfire at dusk is planned. Suggested donation $20/Family ($15/Member Family), $10/ Individual ($5/ Member Individual). A picnic dinner will be for sale. Everyone is welcome!

Swimming Lessons and Nature Study

As a benefit of membership at the Family Level ($40) the Preserve offers swimming lessons for children at Lake Myosotis and Nature Study classes for children. These programs run for six weeks beginning the second week in July.

Swim classes meet Mondays, Wednesdays and Fridays (July 8 - August 14) from 1:00-3:00 pm. Classes are Red Cross affiliated and will be taught by Barbara Bolster Barrett.

Nature Study meets at the Jessie Huyck Center on Tuesdays (July 7-August 11) for grades K-2 and on Thursdays (July 9 - August 13) for grades 3-6 from 10:00 am to noon. This year in honor of our field station's 60th anniversary, Nature Study will focus on biological field stations as places where scientists do detective work. Much of what science is about involves a systematic approach of analyzing pieces of information that allow us to draw conclusions or develop a hypothesis. Like detective work, often field scientists use observational skills and ponder evidence. They then work backwards to solve a mystery. Students will also learn about tools that scientists use as sleuths.

Registration will be held on the first day of class. Students may be pre-registered by contacting the Preserve office.

Celebrating Water Week

A series of stream monitoring Workshops will be held on May 18th again this year to celebrate Water Week. Last spring the Preserve participated with Scott M. Ellis (Greenville) fifth grade classes. The students investigated the Basic Creek close to their school and recorded information such as pH, dissolved oxygen, and water clarity and identified stream organisms that can indicate pollution or good water quality. As part of a regional "test the Waters Day" effort, many schools duplicate this effort using common data sheets to get a "snapshot" of regional water quality and an awareness of the importance of monitoring local water bodies. Richard Parisio (DEC) will be collecting the data again this year and will present a report to participating schools.

1997 Huyck Hike and Summer Activities Schedule

Huyck Hikes* meet at Lincoln Pond at 2:00 pm

May		
24	Nicole Wright* (*SUNY – Albany*)	Land-use history, population structure and small-scale spatial pattern in beech bark disease
June		
6	Founders Day	Trail clearing around Lake Myosotis, 10:00-noon, meet at Jessie Huyck Ctr. Fieldsketching Workshop with Wade Neumeister, 3:00 pm, meet at Mill Hse.
7	Gregory Bole* (*SUNY-Stony Brook*)	The role of sexual selection in speciation of fireflies
14	Michael Messere* (*SUNY-Albany*)	The effect of gap size on the densities of red-backed salamanders in selectively cut forests
20	Lake Myosotis Beach opens (noon)	**Beach Party Fundraiser** 5:00 – 8:00 pm
21	George Robinson* (*SUNY-Albany*)	The effects of disease-driven decline of American beech on its ecosystem
27	Annual Membership Meeting	Eldridge Lab, 4:00 pm
28	Stacy Morris* (*SUNY-Albany*)	Diurnal abundance of litter invertebrates across seasons and among different temperate forest types
July		
5	Isabella Scheiber* (*SUNY-Albany*)	Female choice and the mating system of a population of house wrens (*Troglodytes aedon*), a monomorphic passerine
12	Grant Brown* (*Union College*)	Do fathead minnows use visible social cues to reduce the risk of local predators?
26	Geoffrey Gardner* (*SUNY-Albany*)	Beech scale dynamics and spatial distribution of American beech in an aftermath forest
August		
8	Science Symposium	Eldridge Lab, 10:30 am
16	Jennifer Frank* (*SUNY-Albany*)	The effects of earthworms on decomposition in the presence and absence of an amphibian predator
23	Richard Wyman	Amphibians and the carbon cycle
September		
7	Lake Myosotis closes	

1998 MEMBERSHIP FORM

Name_____

Address_____

_____

Membership Level (Circle One)

Student $10	Individual $30/ Sr. Individual $20		Family $40
Senior Family $30	Contributing $100		Sustaining $250
Patron $500	Benefactor $1000	KHE Fund (Endowment) $_____	Lab Fund $_____

Please make checks payable to E.N. Huyck Preserve, PO Box 189, Rensselaerville, NY 12147. Your contribution is tax deductible.

The Edmund Niles Huyck Preserve
PO Box 189
Rensselaerville, NY 12147