Rensselaerville Falls

THE EDMUND NILES HUYCK PRESERVE, INC.

P.O. Box 188

RENSSELAERVILLE, NEW YORK 12147

NEWSLETTER

(518) 797-3440

Fall 1984

EDITOR: Laura Stephenson Carter

President's Column

In the early nineteenth century, the hamlet of Rensselaerville was blessed with enough water to power a number of mills, and with vast forests that yielded raw materials for a variety of flourishing local industries. Exploitation quickly took its toll, however, as forest depletion and intensive farming led to a severe drop in the holding capacity of the watershed by the close of the century.

Today the hamlet continues to rely on Lake Myosotis and Ten Mile Creek for its water supply, and residents are concerned about the water's quality and quantity. Our local situation mirrors a worldwide awareness that water holds the key to economic and social well-being. We are told, for example, that the generally more plentiful water of the Northeastern United States may be a crucial resource in winning back the people and jobs that have steadily been migrating to the more arid Sunbelt.

The Preserve's responsibility is clear. Much, but not all, of the Ten Mile Creek watershed above Rensselaerville is bounded by the Huyck Preserve, and **we must do everything possible to protect and increase the community's water supply.** This is a top priority for me as board president.

Our goal should not only be to find solutions to the immediate problems, but to help point the way for effective water management in other communities and — most important of all — to assure that the next generation inherits a watershed of striking beauty and water of sparkling purity.

This is a big task. It touches on all of the activities conducted by the Preserve: research, conservation, education, recreation, and community service. Some of the tools are already at hand. Recent scientific research on the Preserve, for example, has pinpointed how phosphate deposits are stimulating algae growth in the lake, which in turn leads to bad-tasting and potentially unhealthy water. This has to be curtailed. Likewise, we know that forest management and conservation are essential in providing barriers against runoff.

However, more work is needed. Dr. Michael Mackey of McGill University prepared a comprehensive report on issues such as these during the summer of 1984. To translate his report into a specific course of action, I have ap-

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Why Is Lake Myosotis So Green?

By Dr. Clifford A. Siegfried

Billions of minute floating plants bloom in Lake Myosotis each summer turning the water the color of pea green. These plants, known as blue-green algae, can wreak havoc with water systems. Algae, at its worst, can impart tastes and odors to water, form surface scums, and clog filters used in water treatment.

I am investigating the factors influencing the abundance and community composition of the phytoplankton (algae) of Lake Myosotis. My project consists of a number of interrelated studies focusing on water quality, phytoplankton seasonal dynamics, and nutrient limitation. But, to put it simply, I am attempting to answer the question: "Why is Lake Myosotis so green?"

Lake Myosotis is a small *eutrophic* or "well nourished" lake. Algae thrive in such a fertile environment. The fertility of a lake depends on nutrients received from the watershed drainage and on the depth of the lake. *Eutrophic* lakes are usually shallow, phytoplankton communities are dense with blooms being typical, and cold water fish cannot survive, being replaced by warm water communities. By contrast, *oligotrophic* or "nutrient poor" lakes such as the Great Lakes and the Finger Lakes, are deep. Phytoplankton blooms are rare, and cold water fish like lake trout are abundant.

Water Quality Studies

For the past two years, I have measured water temperature, pH, dissolved oxygen concentration, and transparency of the water at a centrally located site in the lake. Water samples were sent to our laboratories where they are analyzed for phosphorus, nitrogen, and silica — nutrients essential to algae — and other trace metals such as iron and manganese. This information provides a background for interpreting seasonal changes in the phytoplankton community.

Phytoplankton Seasonal Dynamics Studies

Samples of the phytoplankton community in Lake Myosotis have been examined under a microscope and 30 species identified. This compares with some 200 species present in Lake George, an *oligotrophic* lake. The relatively small number of species found in Lake Myosotis is typical of *eutrophic* lakes.

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Huyck Hikes

By John Geritz

Labor Day has come and gone and another Rensselaerville summer is immortalized in memory. There were the usual picnics and parties, tennis and teas, swimming and sunning, fireworks and concerts. But in the midst of all this activity, our small group of nature enthusiasts would gather quietly on Sunday afternoons waiting to meet the scientist (a different one each week) who would lead us off into the Preserve for an exciting two hours of discovery.

One Sunday, we were led through the recently acquired property along a section of Ten Mile Creek below the village and discovered an array of beautiful wildflowers, a diversity of wildlife, and even a little pond.

We trekked up past the falls toward the lake one week, looking at and into a variety of birds' nests, and another week, we learned about the fruits eaten by migratory birds such as robins, veerys, and thrushes.

We collected samples of small aquatic (water) creatures from the fast and slow waters of Ten Mile Creek, and from the shallow and deep waters of Lake Myosotis, and even examined some under a microscope. We became acquainted with the crayfish at the lake, only one of the areas where they are found on the Preserve. We climbed down below the dam and were introduced to the gray freshwater sponges — yes sponges — and heard about their life habits. We even paddled out onto the lake to collect fish which we later dissected.

One Sunday, we learned about the algae — microscopic floating plants — that give Lake Myosotis its green color. Another time, we sat on the porch of Lincoln Pond Cottage discussing acidity and alkalinity and the effects of acid rain.

Up beyond the Ordway House, we entered the Red Pine plantation and learned about changes in the chemical balance of the soil there, and we studied intricate root structures under a microscope. Along the falls, we discovered small flowerless plants, each an exquisite gem clinging tenaciously to its piece of stone and sharing the mist. And along the banks of the falls, we found a great variety of fungi — the edible, the toxic, the quaint, the bizzare.

These were just some of the highlights of an entertaining and educational series. We hope you'll join us next year on the Huyck Hikes.

Membership Notice

The Edmund Niles Huyck Preserve is dedicated to preserving the beauty of its nearly 2000 acres, and protecting the birds, wild animals, plants and trees within its boundaries. In its commitment to the furthering of both general and scientific knowledge of nature, the Preserve offers educational programs to the public and supports scientific research at its biological field station.

Your membership support is vital to the continued operation of the Preserve. We welcome new members. Anyone interested in joining or in renewing his or her membership may do so by completing the form on the back of this newsletter.

A Summer's Lesson

By Linda J. Meyers

Appreciation of nature can be learned through books, but nothing can compare to the lessons taught by Mother Nature herself. A simple walk in the great out of doors is always a rewarding experience if one is observant.

My goal this summer as the Preserve's nature study instructor was to teach the children to explore nature's wonders while using all of their senses. Sight is, of course, the sense used most frequently in any search, whereas the other four senses are often ignored. The children learned to listen for the songs of birds and insects. We learned that sumac seeds are sour in taste and can be used to prepare a beverage much like lemonade. Catching slippery frogs and salamanders was enjoyed by all. I took special delight in watching the children's reactions to "pond slime" placed in our Touchy Feely Box. And, of course, we took time to smell the wildflowers.

Something I felt important for the children to learn was that a number of different ecosystems can be found on the Preserve. We explored the forest, ponds, streams, and open fields discovering variations in plant and animal inhabitants.

The Huyck Preserve is a wonderful place to spend the day or the summer — for those of us who are more fortunate. I hope that I was successful in instilling an appreciation for nature in the minds and hearts of the children who participated in this summer's course. A final note to all — take the time to smell the roses. I guarantee you will not regret it.

Linda J. Meyers, coordinator and instructor for children's nature study program, holds a masters degree in Wildlife from South Dakota State University. She was assisted by Kate Storms, Donna Kropp and Susie Holmes, this summer, in the planning and teaching of the classes.

1984 Lake Program

The 1984 swim season is over and we would like to highlight some of its successes. Fifty children passed their swimming lessons and several children participated in the canoe instruction. We also had some very white sand added to a portion of the beach for the children to play in.

We are already looking ahead to next summer when we hope to make a kiddy play area, and improve the picnic area by adding new tables and grills.

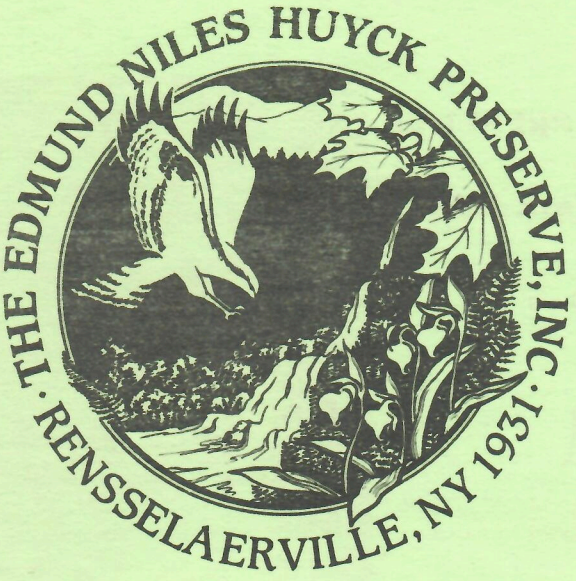
We want to thank everyone who helped to make the 1984 lake program a successful one.

David Bryan, Lake Committee Chairman

Wanted: Unique Photos of Preserve

Preserve needs interesting photographs for its historical files. Also, if you have any stories or bits of history about the Preserve and its buildings, send them along, too. Material cannot be returned, so don't send any negatives, slides, or pictures you can't part with. Send to:

The Edmund Niles Huyck Preserve
P.O. Box 188
Rensselaerville, N.Y. 12147



T-Shirts

The Preserve now has its own T-Shirt with a logo designed by Preston Hollow artist, Carol Clement. The logo features the Rensselaerville Falls, an osprey (bird), maple leaves, ferns, and a rare flower called the Ram's-head Lady's-slipper, all of which can be found on the Preserve. As an interesting side note, the symbol of the Huyck Corporation is a ram's head.

You can order your T-Shirts by mail using the convenient order form in this Newsletter, or you can buy them at the Preserve Office.

(President's Column, *continued from page one)*

pointed a Long-Range Planning Committee of board members chaired by Dr. William Keller and including Mrs. Laura Carter, Mrs. Barbara Dudley, Mr. Peter McChesney and Dr. Vincent Schaefer. In developing its recommendations, the committee will consult with the Rensselaerville community and with experts in water and land management. We are also giving special encouragement to studies that extend our knowledge of this watershed's behavior, and we'll look for additional clues in similar research now underway at other biological field stations in North America.

The Huyck Preserve is fortunate in having unique research and conservation resources to bring to bear on this effort. I invite you to participate, both through your membership support and through your continuing interest and involvement. Future issues of this newsletter will bring updates on our progress toward an improved water supply.

Dr. Martin Sullivan

(Lake Myosotis, *continued from page one)*

The phytoplankton community is influenced by water quality conditions such as the amount of nutrients available for growth. But phytoplankton can also influence water quality. Photosynthesis by the large summertime population of algae results in an increase in the pH of the water (i.e. the water becomes more alkaline) and the decomposition of dead algae uses up most of the dissolved oxygen in the bottom water making it unsuitable for fish.

Nutrient Limitation Studies

Algae require certain ratios of nutrients (phosphorus, nitrogen, trace metals, vitamins, etc.) for growth. I am trying to discover, through laboratory experiments, which nutrient(s) is (are) most important in determining the amount of algae present in Lake Myosotis. My experiments suggest that phosphorus may be this "limiting" nutrient. My findings may eventually serve as a basis for the development of a management strategy to reduce phytoplankton growth in Lake Myosotis.

Dr. Siegfried is with the Biological Survey at the New York State Museum's Science Services Division. His study on the factors limiting phytoplankton production in Lake Myosotis has been funded through the Edmund Niles Huyck Preserve's grant program and the New York State Museum.

T-Shirt Order Form

Please indicate number wanted in appropriate space(s)

Child	Yellow	Teal Blue
XS (2 - 4)	_____	_____
S (6 - 8)	_____	_____
M (10 - 12)	_____	_____
L (14 - 16)	_____	_____

Adult	Yellow	Teal Blue	Green
S (34 - 36)	_____	_____	_____
M (38 - 40)	_____	_____	_____
L (42 - 44)	_____	_____	_____
XL (48)	_____	_____	_____

Prices:	**Preserve Office Pick-up**	**UPS Shipped**
Child	$8.50	$ 9.50
Adult	$9.50	$10.50

Ship To:

Name _____

Street Address _____

City, State & Zip Code _____

Please enclose check for: _____

Mail To:

E.N. Huyck Preserve, P.O. Box 188,
Rensselaerville, NY 12147

HUYCK PRESERVE MAPLE SYRUP,

	Preserve Office Pick-up	**UPS Shipped**
pint	$ 6	$ 9.50
quart	$ 8	$12.00
½ gallon	$13	$18.00
gallon	$23	$29.00

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P.O. Box 188
Rensselaerville, New York 12147

1985 Membership Dues

Junior (17 yrs. or younger)	$5.00	$_____
Active	$10.00	$_____
Supporting	$25.00	$_____
Contributing	$50.00	$_____
Sustaining	$100.00	$_____
Patron	$1000.00	$_____

Name: _____

Address: _____

_____

Please make all checks payable to The E.N. Huyck Preserve, Inc., and mail to the above address. Tax deductable: Annual report is on file and available through the N.Y.S. Department of State, Charities Registration section, or the Preserve.

Thank you.

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