



Friends of The Great Swamp



FrOGS

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www.frogs-ny.org

Judy Kelley-Moberg and Jill Eisenstein, Editors

Ice Pond's Interesting History



Ice Pond is a tear-shaped body of water cradled between two steep knobbed ridges of "tough" metamorphic rocks over 800 feet in elevation. It drains through Muddy Brook which braids its way northward through a hummocky shrub swamp filled with alder, viburnum, winterberry and button bush before curving eastward around the base of Cornwall Hill and entering the East Branch of the Croton River in Patterson. The northeast orientation of the ridges makes Ice Pond a wind tunnel in the winter, but in the spring and fall its extensive shrub swamp turns into a rest stop for thousands of migrating ducks. Spring has arrived when swarms of red-winged blackbirds flow through this corridor followed by iridescent tree swallows skimming over the wetlands.

Ice Pond's first name as spoken by the early people who traveled its ridges and hunted and fished in the valley will probably never be known, but they left behind evidence that they sheltered beneath its rocky outcrops. In the 1740s and 1750s farmers from Cape Cod migrated to what was then part of southern Dutchess County. The Hinkleys settled on the west side of Ice Pond and the Crosbys on the east. Bullet Hole/Ice Pond Road was laid out along the west side of Ice Pond and Farm to Market Road on the east. Both roads connected to major east-west travel routes and Towners, Big Elm, and Dykemans grew up around the crossroads. Ice Pond was called Hinkley's Pond until Samuel and Joshua Mabie bought the entire west

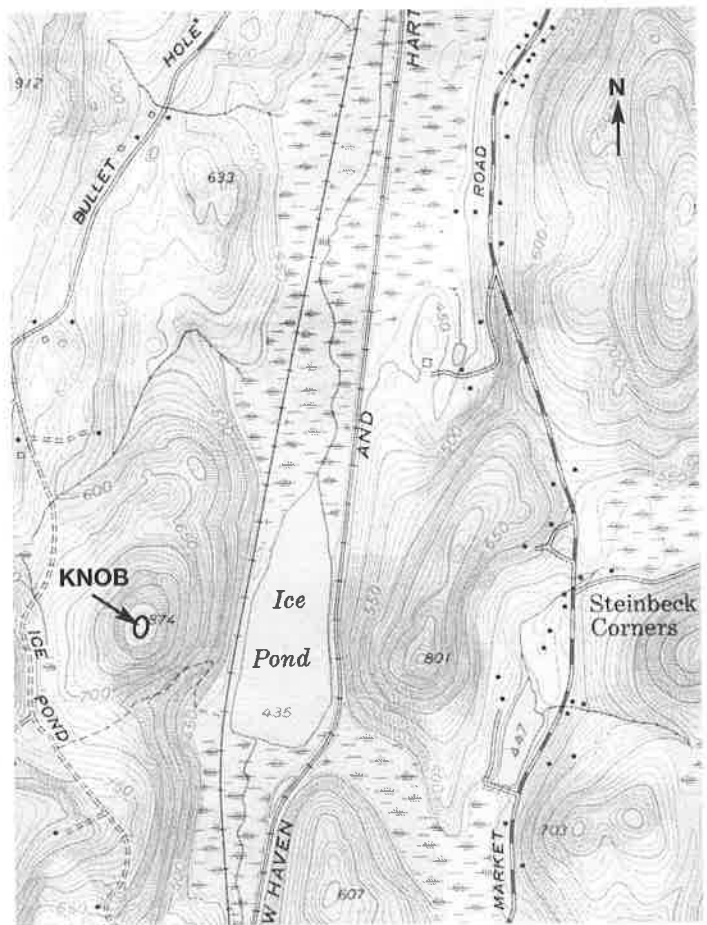
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side in 1813. The Mabies developed the farm, added an ice house on the west shore of Hinkley's Pond now called "Croton Lake" and built "Mabie's Villa". The dressed foundation stones of this once "elegant home" are buried in the brush along Ice Pond Road.

Clay deposits on its eastern bank suggest that Ice Pond was once a much larger body of water for a very long time. William Merritt used the clay to establish a kiln and brickworks there in the mid-1800s. Today, the landscape contains hints of the old roadbeds and buildings as well as an occasional moss-covered molded brick. On a spring night, a flashlight's beam will reflect off the eyes of hundreds of mating wood frogs floating about on the surface of the flooded clay pits.

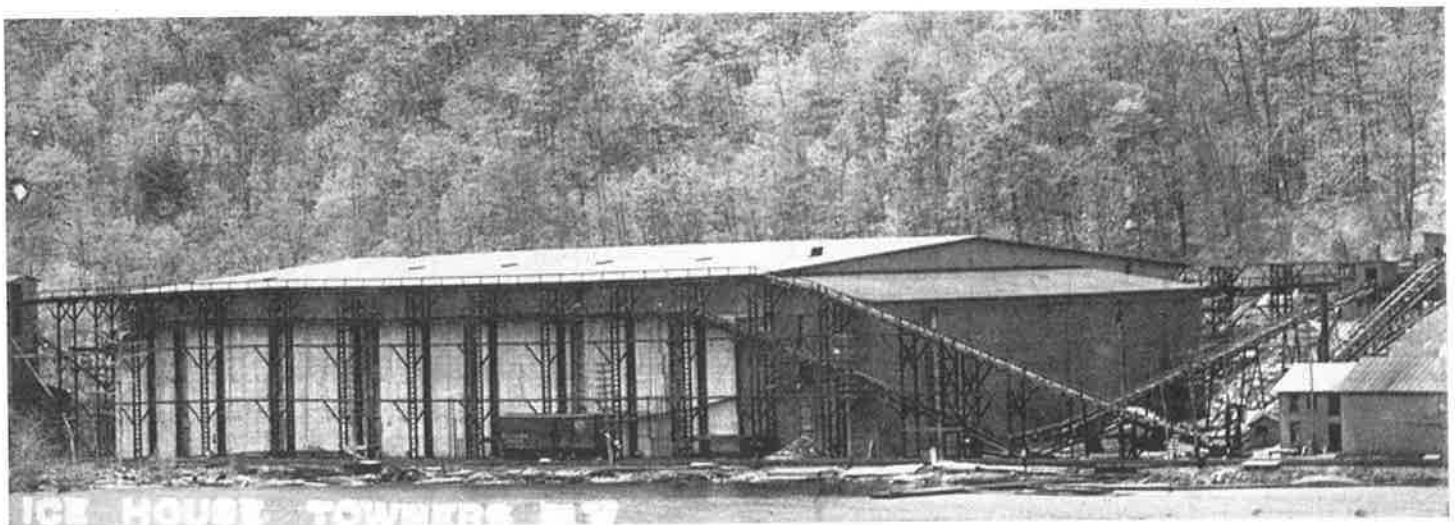
In 1848, the New York and Harlem Railroad, which became the NY Central/Metro-North, completed laying its track from NYC along the western shore of Croton Lake all the way up to Dover. In 1881, the New Haven/Maybrook Line crossed the Hudson River and built an elevated track down the eastern side of Croton Lake to Danbury, passing over the NY Central tracks on a trestle bridge near Route 164 in Towners. In war time, this double track carried military materials back and forth from the west to New England without passing through the metropolitan area. Metro-North continues to increase commuter service on its line but the ground-shaking rumble of the long freights on the Maybrook Line ceased in the early 1990s. Ravens have moved into the old trestle bridge, roosting and building their nests up among the beams. Their harsh "croaking" cries and the



USGS Brewster Quadrangle, 1958

blast of the train horn can be heard at the Towners' crossing. The discontinued track is supposed to be added to the expanding Rail Trail system in Putnam County.

In the 1870s a commercial ice house 300 ft. long by 56 ft. high was built by the National Ice Co. along the Harlem/NY Central tracks. Steam-driven conveyor belts carried ice blocks to the upper sto-



Ice House. © Patterson Historical Society



Trestle Bridge at Towners.

ries of the ice house and also loaded “refrigerator” cars parked on the tracks below. The ice house was torn down in 1925. In the 1960s a sportsmen’s club built a small 2-story fishing cabin on the site (now owned by The Putnam County Land Trust). The footprint of the ice house, the foundations of

a bunk house and the supervisor’s house are still there. The presence and prominence of the ice house turned Hinkley’s Pond/Croton Lake into today’s Ice Pond.

The Ice Pond corridor and its outlet, Muddy Brook, is an important sub-basin in the southern section of The Great Swamp. Studies have shown it to be a rich and diverse habitat for plants and wildlife. Otter fish in the pond, mink hunt along the shoreline, bobcats and even bear find dens among the tumbled boulders on the ridges. The groaning voice of a newly discovered species of leopard frog has been recorded there, and waterfowl that prefer protected wetlands instead of open water have made the shrub swamp a major migratory stopover.

The protection of Ice Pond from ridgeline to ridgeline, as well as the entire wetland corridor along Muddy Brook right up to the East Branch Croton River has been a long term goal. Persistence, and a powerful partnership between the Dextra Baldwin McGonagle Foundation (the major funder), FrOGS, The Putnam County Land Trust, and The Westchester County Land Trust has just protected 115+ acres of wetland and upland forest on the east side of Ice Pond. The ribbon cutting for the new Dextra Baldwin McGonagle Preserve will be held on July 22. Look for more on the celebration and the new preserve in the next newsletter.

Articles & Photos by Judy Kelley-Moberg

Turtle Tracking Update

FrOGS’ Michael Musnick and John Foley were out for hours every night between May 28 and the end of June for turtle nesting season (which started 1-2 weeks later than usual). They discovered 19 Wood turtle nesters and protected 17 with the new predator excluder; they also protected 3 Box turtle nests. At one site, they discovered many juveniles they had never seen before!

The Turtle Room, a website for turtle enthusiasts, recently ran an article by Anthony Pierlioni written after he had gone out in the field

with Michael for a day, tracking Wood and Box turtles. Here is an excerpt from the article:

In my entire life as a turtle fanatic, I have not collectively seen in nature the amount [sic] of endangered turtles as I have seen in this one day. I will be forever grateful for this opportunity, but also for the friendship and guidance I received from Mr. Musnick. The world is a good place, as long as there are people like him still living in it. I look forward to my next opportunity to join him in the field.

by Jill Eisenstein



Climate Change and The Great Swamp

Born in the blazing heat of African deserts, a hot air mass sucks up water vapor from the Atlantic Ocean and as the vapor rises, it cools and condenses, releasing heat energy. Rain falls in buckets. Strong winds swirl around the low pressure, picking up speed and moisture. Thousands of miles away, in the Northeastern United States, no one and nothing is prepared for the violent storm's arrival.

But in the floodplain of New York's Great Swamp, the buckets of rainfall are collected and spread out. The waters rise, but do not rage. Here is a wetland doing what it should.

I have been attending lectures about climate change for a few years. In 2011 and 2012 Tropical

Storms Irene and Lee and Superstorm Sandy gave visceral reality to a previously faceless threat here in the Northeast. The world's climates are changing and part of the new normal will be extreme, unexpected, and/or violent weather events.

Scientists presenting at the Institute for Ecosystem Studies and Cornell University unanimously agreed that despite last winter, we can expect most winters in the Northeast to be milder, with less snow cover, and summers to be hotter, with more days over 90°F. We can expect fewer days of precipitation but more precipitation in each event.

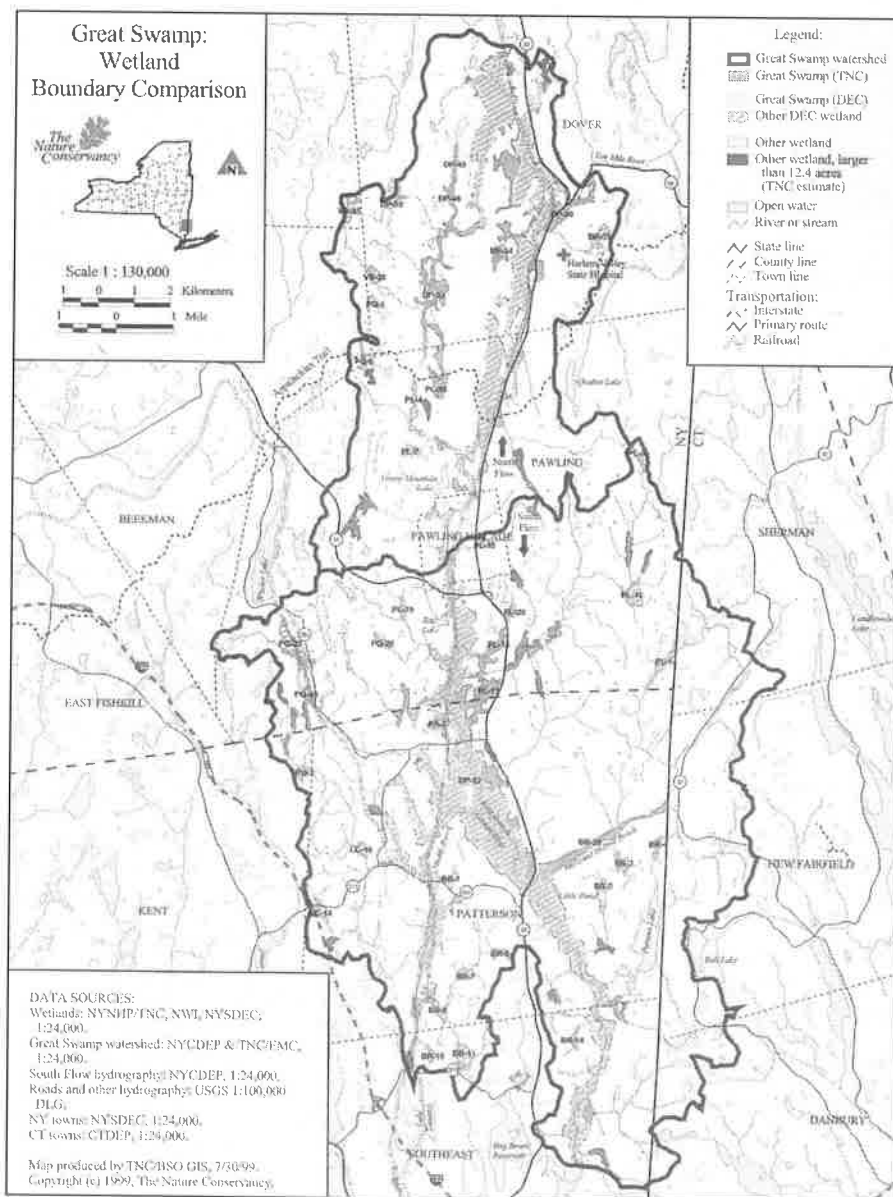
Some of the facts:

- 40-60% of rain in the Northeast comes in downpours from severe storms leading to flooding, runoff and erosion. Heavy downpours, where more than 2 inches of rain falls in 48 hours, have increased 74% since the 1950's.
- Extreme rainfall events have doubled in the last 20 years in New York. The Northeast Regional Climate Center at Cornell readjusted its flood maps not long ago, changing the 100-year 24-hour rainfall event predictions from 7.5 to 10 inches.
- Increased severity and frequency of extreme weather will mean more episodes of drought, flooding and blizzards.

While the information was sobering, even scary, I came away feeling grateful that I live in the watershed of The Great Swamp, the second largest fresh water wetland in New York.

Extreme rainfall events

If a tropical storm is like wringing out a sopping wet sponge, the effect of a wetland is like a thirsty sponge receiving the water. The EPA calculated that a one-acre wetland can store about three feet of water, or one million gallons. The wide flat lowlands, the floodplain, of The Great Swamp spreads



The Great Swamp watershed. Courtesy of TNC.

Calendar of Events—Summer 2014

Ribbon Cutting at the new Dextra Baldwin McGonagle Preserve

Tuesday, July 22

FrOGS at the Putnam County 4-H Fair

Saturday July 26 (10 AM - 4 PM)

Water Quality Study in The Great Swamp

Sunday, July 27 (8:30 AM)

Volunteers are needed to join FrOGS on Great Swamp Stream Sampling Day. Meet at River Road in Pawling at 8:30 AM for training with Kelly Nolan of Watershed Assessment Associates. Learn how to collect samples of the invertebrates that live on the bottom of the stream as well as how to record data at each sampling site. The types of invertebrates, the water chemistry and field observations taken at the same locations and time each year will help develop a baseline for the health of that stream and indicate the source of any pollutants. Following the short training session, teams will be assigned 3-4 tributary streams to sample. Past results can be found at FrOGS-NY.org. It's a lot of fun but bug repellent and water shoes are a must! Contact Judy at 845-878-7740 or Jim Utter at jmutter98@aol.com.

Butterflies of The Great Swamp

Saturday, August 2 (9:30 AM)

Search for butterflies among the summer wildflowers of the Slocum-Mostachetti Preserve with Billy Wallace as part of the Oblong Land Conservancy's "First Saturday" programs. Check www.oblongland.org for information and registration.

FOCUS On The Great Swamp

FrOGS 2014 Great Swamp Celebration will feature a juried photo competition for adults and students. Prizes will be awarded for images that capture the essence of The Great Swamp.

Study the textures and colors in its rivers and the surrounding hills. Illustrate its value to wildlife, biodiversity and the human community within the watershed. Three submissions per photographer will be considered for the show, judges on artistic merit and how they express an aspect of The Great Swamp.

There is a \$15 entry fee for accepted work, and 25% of sales will go to FrOGS. The photos will be featured at The Great Swamp Celebration on October 25th-26th at Christ Church on Quaker Hill.

Registration forms and submission information can be found at www.frogs-ny.org. The deadline for submitting digital images to be juried is October 3rd, 2014.

Adult prizes \$250, \$125, \$175; Students \$150, \$100, \$50, and a \$300 Challenge Prize for *Three Photos with a Common Theme*.

FrOGS Needs Your Help!

The generosity of our members and supporters extends FrOGS reach and effectiveness. Contributions support the efforts of the Education Committee, research and this newsletter.

There are two great ways to help...

Remember your donations are tax deductible! Send yours to:
Friends of The Great Swamp, P.O. Box 373, Pawling, NY 12564

- ☐ Supporter \$25 ☐ Contributor \$50 ☐ Friend \$100
☐ Patron \$250 ☐ Sponsor \$500 ☐ Benefactor \$1,000
☐ Other _____

We can always use another helping hand! Let us know which activities you're interested in helping with. You can pick more than one.

- ☐ Annual Great Swamp Celebration ☐ Canoe Trips ☐ Mailings
☐ Educational Activities ☐ Citizen Science ☐ Studies
☐ Suggest an activity: _____

Friends of The Great Swamp is an organization dedicated to preserving The Great Swamp through educational programs, scientific projects, special events and by making all aware of this wonderful resource in our midst.

So we know whom to thank...

NAME _____

ADDRESS _____

CITY, ST ZIP _____

DAY PHONE _____

EVENING PHONE _____

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Paddling in The Great Swamp? Have You Paddled Elsewhere?

Please Clean Your Boat!

As part of an aggressive effort to prevent invasive species from entering and damaging New York water bodies, the State Department of Environmental Conservation (DEC) recently adopted new regulations that require boaters to remove all visible plant and animal materials from boats, trailers and associated equipment, and to drain boats prior to launching from DEC lands. In keeping with the new requirements, FrOGS and its local partners ask that everyone paddling in The Great Swamp follow these rules: **Check. Clean. Drain. Dry. Disinfect.**

Check: Visually inspect the boat (and anything else that touched the water, such as paddles, shoes, buckets, fishing gear), and remove mud, plants and organisms that might be clinging to it. Dispose of them in the trash far from the launch area.

Drain: any water from the inside of the boat and compartments.

Dry: Completely dry your boat and equipment. Microscopic larval forms of aquatic invasive species such as zebra mussels and spiny waterflea can live in as little as a drop of water. A minimum of 5-7 days drying time is recommended.

The names, descriptions, and cleaning strategies for common invasive plants and animals found in NYS can be found on the DEC website. More cleaning details and disinfection methods are also posted.

UNWELCOME HITCHHIKERS

Sketches by Judy Kelley-Moberg



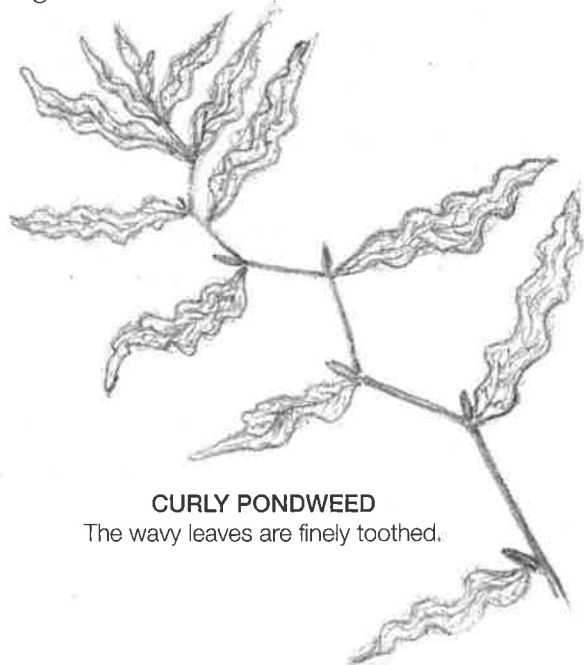
WATER CHESTNUT

Develops a rosette of floating diamond-shaped leaves and a hard dark hulled, spiked nut called a "devil's head" that floats to shore.



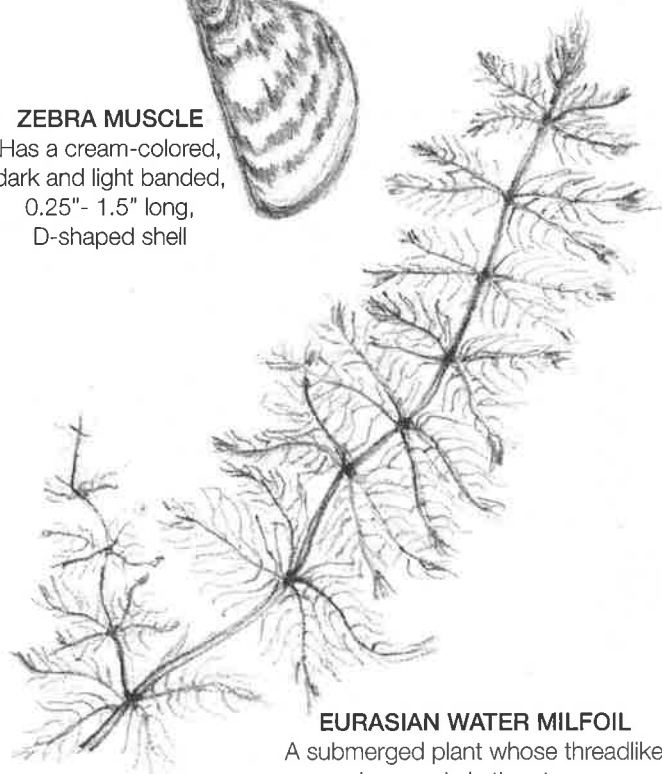
ZEBRA MUSCLE

Has a cream-colored, dark and light banded, 0.25"- 1.5" long, D-shaped shell



CURLY PONDWEED

The wavy leaves are finely toothed.



EURASIAN WATER MILFOIL

A submerged plant whose threadlike leaves circle the stem.

storm water out over an almost 7,000 acre wetland. Do the math to calculate its holding capacity!

In the wider watershed, forested uplands also slow down the flow of rainwater by friction, increasing absorption. Tree roots stabilize hillsides and stream banks, preventing the water from washing away the soil.

Drought

Despite rising temperatures, drought is probably not going to be the biggest story in climate change for the Northeast. Our mean annual precipitation is 51 inches (measured over a 30-year period by NOAA), and scientists predict it will actually increase. But even in the event of drought, The Great Swamp will not dry out as quickly as some bodies of water. It is fed from an underground aquifer, and because it holds and stores rain water, it should help to recharge the ground water.

Conclusion

The severe storms over the past few years have caused many states and municipalities to think about being proactive regarding severe weather. FEMA encourages the use of wetlands for storm water retention because natural hydrology works better and is less expensive than other methods of



Water spreading over the floodplain of The Great Swamp after a rain event.

What is Climate Change?

Climate encompasses weather factors such as temperature, air pressure, humidity, precipitation, and winds, averaged over a long period of time. Different climate zones such as arctic, tropic, and temperate generally correspond to different latitudes on the globe. Climate change refers to shifts in the prevailing data of a particular climate or climates over time.

Scientists have observed a more rapid and steady trend of increasing temperatures in every climate zone since the late 20th century, with more warming occurring at higher latitudes. This trend is attributed to “the greenhouse effect”: a dramatic increase in “greenhouse gases”—including carbon dioxide (CO₂), water vapor, methane, and nitrous oxides—trapping the heat that develops at the Earth’s surface and keeping it from going back out into space.

flood control. People are trying to figure out ways to build or restore wetlands (realizing it costs less to preserve a wetland than to rebuild after a devastating flood).

Globally, rising desert temperatures are setting up the possibility of bigger and more intense storms, and warmer ocean waters will increase the moisture in the air and allow tropical cyclones to track further north. When these storms move over land, there is too much rain water in too short a time for the land to absorb. In Vermont during Tropical Storm Irene, the water rushed over, under and through everything in its wake—taking soil, plants, houses, and bridges along with it. But in the middle of the state, the huge Tinmouth Channel wetland protected local inhabitants by catching the rushing waters in its wide basin.

Wetlands reduce flood risks by storing water and slowly releasing it into the ground or to adjacent streams and water bodies. They can effectively buffer the effects of rising water levels and prevent property damage. Wetlands also hold more moisture in their hydric soils than many other places in the event of drought. Given the prediction of more extreme weather in the future, the services provided by wetlands can only grow in value. This is another reason to take care of and protect The Great Swamp, as it will protect us in the future!

by Jill Eisenstein

The Paddle for The Great Swamp

May 17 dawned sunny and warm after a down pouring rain the night before. The perfect conditions for the First Annual Paddle for The Great Swamp! Volunteer workers and the board members of FrOGS arrived early at the Patterson Recreation Center and Green Chimney's Pavilion. The Patterson Environmental Park bustled with excitement as the first kayaks and canoes began launching into the sweet waters of The Great Swamp.

A chorus of red-winged blackbirds and swamp sparrows filled the spring morning. Each boat glided past yellow flag iris, over beaver dams, and through emergent aquatic plants, stopping periodically to chat with a Swampkeeper.

Paddlers enjoyed pleasant hours of meandering the watery corridor festooned with great blue herons, painted turtles and frogs. Someone even sighted a mink.

At the end (Green Chimney's Pavilion), a tasty feast prepared and served by Ledley Catering of Brewster was waiting and dispatched by hearty appetites. Participants browsed displays explaining the unique aspects of The Great Swamp and the work of FrOGS in protecting it. They also walked across the Boardwalk where they were invited to observe and think about some of the unique creatures of the Swamp, and listened to the live music of the local band "Second Saturday".

Prizes provided by local businesses were given out at the Pavilion. The Golden Frog award, for the person raising the most paddler sponsorship,

went to Bonnie Jame of New Fairfield, CT, who personally raised \$357.00.

Those who participated helped support the efforts of FrOGS to protect The Great Swamp for future generations. A hearty thank you to all! Comments overheard during the course of the day included: "We had so much fun!" "The food was delicious." "Can't wait 'til next year!"

by Diana Lee



Our special frog friend (of secret human identity) added an even more festive air to the day.

PLEASE SUPPORT OUR GENEROUS BUSINESS PARTNERS!

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Paddlers arrive at Green Chimneys.

Four Animals

This year students from the elementary schools in The Great Swamp Watershed have been asked for their interpretation of 4 animals that live in the swamp. Their work will to be shown at The Great Swamp Celebration at Christ Church this October. FrOGS' adult artists also wanted to share their experiences with the Crayfish (Beth Herr), the Water Strider (Judy Kelley-Moberg), and the Great Blue Heron (Nancy Clark). We left the Beaver up to your imagination—it's inside the lodge!

It's underside covered in tiny hairs, it's telson (tail) cupped, it's pointy pincers ready for battle, this crayfish was so interesting up close.



Beth Herr

Found on the road!



*Silent heron—so still,
till you burst into the air
and stop my heart!*

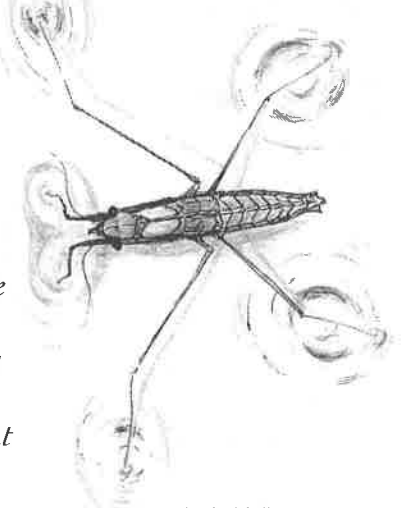
—Nancy Clark



On Catching A Water Strider

I spotted several water striders on the surface of a small pool in the stream near my house. How hard could it be to scoop one up in a plastic bucket? They anticipated every sweep of the pail, shooting out of reach and then resting motionless on the surface. I finally managed to suck one in on a big wave of water. It appeared to have far too many legs. The one was really two.

A smaller strider was clinging to the back of its larger companion and they could not be separated. They moved apart only once and zipped around the surface separately only to reattach again. Later I found the smaller one floating dead in the water. Were they mating and once mating was complete the smaller male separated from the female and died or was it a juvenile clinging to the back of an adult and dying because it was stressed? The remaining large 5/4 inch long strider was dark all over with eyes that looked like two shiny black BB's. It continued to test the limits of its new environment (the plastic pail) until I brought it back to its home pool.



Judy Kelley-Moberg