



Friends of The Great Swamp



FrOGS
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Judy Kelley-Moberg and Jill Eisenstein, Editors

Welcome Spring!



Illustration by Beth Herr

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TROUT LILY



VIOLET



MARSH MARIGOLD



RED TRILLIUM



JACK-IN-THE-PULPIT

Sketches by Nancy Clark

Get Out!

by Chris Hendershot & Jill Eisenstein

Environmental educators and FrOGS members Chris Hendershot and Jill Eisenstein discuss the benefits of the natural world for children of all ages.

C: One of the main reasons I chose the field of environmental education was my upbringing on a dairy farm and fascination with always learning something new. On any given day I could be out in our woods and see something new!

J: Me, too. I grew up on a 100-acre abandoned farm, exploring the woods and fields in the Adirondack Mountains. Every day there was something to discover and learn and I wanted to introduce others to the incredible wonders of the outdoors.

C: In contrast, many students that I work with talk about organized, structured activities—their sport team or their dance class after school or a lacrosse tournament on the weekend. Rarely do I hear them talk about building forts from tree branches, or walking through fields chasing fireflies. It seems the times of spending an entire summer day outside and only coming in when it was dark are gone...but why?



I can't tell you how many times I've heard, "Boy, when I was a kid we only came inside when it was dark!" or "My folks said go outside, and my friends and I would build forts and pretend we were pirates!" Unfortunately, these comments are mainly coming from parents or grandparents in their late 30's or older.

J: The world has changed drastically in our lifetime. Not only do fewer and fewer people own farms, but parents seem to have a lot more reasons to not allow their children to roam. We have insect-borne diseases and stranger dangers our own parents did not deal with. Parents often can't just send their kids out to play in the park or neighborhood without a watchful eye.

C: Technology has changed us too. On average, children ages 3-12 spend 27 percent of their time each week watching television, and just 1 percent outdoors in some type of structured or unstructured activity.

Technology has given us two problems to face: 1) technological advances give us more time, but we fill the time with organized sports and indoor activities, and 2) technology itself in the form of media distracts us for hours on end. This combination leads us to the ultimate problem: no time left for unstructured activities in the natural world.



All photos by Judy Kelley-Moberg

J: And yet, you and I know what unstructured time in nature did for us. It awakened an unquenchable curiosity, helped us focus, trained our powers of observation, and ultimately helped us with our careers!

C: Allowing children the time to be outdoors has many physical and mental health benefits: it engages students in learning and has been shown to help with attention difficulties, hyperactivity, childhood obesity, and in general, to disconnect from things that are unreal. Nature is real; it is always changing and giving us something new to discover.

J: The natural world teaches life lessons. There are things humans control and things humans do not control. There are seasons, immutable natural laws, food webs, weather events that one can learn about, learn from, but not control. In nature, humans and human-made things are not at the center of everything!

I treasure each moment when I get to see a child connect with the natural world, whether it's an "ah-hah!" experience or a wide-eyed wondering look at a new creature or plant.

C: Many of us have heard of "Nature Deficit Disorder" a term coined in Richard Louv's book



Last Child in the Woods. Many of us know that our children are suffering from it. What are we doing to change it? If the national average of media time (watching TV, listening to music, computer time, and playing video games) is over 7 hours a day for children 8-18 then adults/parents, are allowing or even encouraging it. Are we ignoring their need for outdoor play?

C&J: Given these challenges, how can we help our children experience the joy of discovery found in the natural world? The answer is simple—just open the door and walk out! Leave the smartphone and iPad inside, and take a walk, but not a got-to-get-someplace walk, just a being-out walk. In many places the children of today will need an adult to go with them, but that adult could give them a little leeway to explore...touch the water, look under rocks, peek into holes in tree trunks, crawl on the forest floor and smell the earth and rotting logs or run through a field of flowers, pretend to be in another place or time. There are natural areas, preserves and parks all around us that invite exploration. Make the time and take your time; you are making a huge investment in future generation of explorers who will love and care for the environment. *Go ahead...open the door and GET OUT!*



A New Voice in the Chorus

by John Foley

Six years ago, while doing a frog chorus survey to determine what frogs inhabit Staten Island, Rutgers researcher Jeremy Feinberg heard an unfamiliar call. He realized that instead of the usual snoring sound Leopard frogs make during breeding season, he was hearing a sound more like a single-syllable deep cough.

Jeremy recalled the work of Carl Kauffeld, a naturalist, who back in the 1930's claimed he had discovered a new species of Leopard frog in the coastal Atlantic region of the eastern United States. Kauffeld's assertion, was never fully accepted by his colleagues due to the lack of positive scientific evidence.

Photo by John Foley



Rana kauffeldi?

Armed with today's technological advances, Feinberg decided to take on the arduous task of positively documenting a potentially new species. After years of work and DNA testing, scientists have confirmed that the frog is in fact a new species of Leopard frog, bringing the total number of Leopard frog species worldwide to nineteen. Feinberg decided to name the frog *Rana kauffeldi* after its original discoverer. Its common name is the Atlantic Coast Leopard Frog.

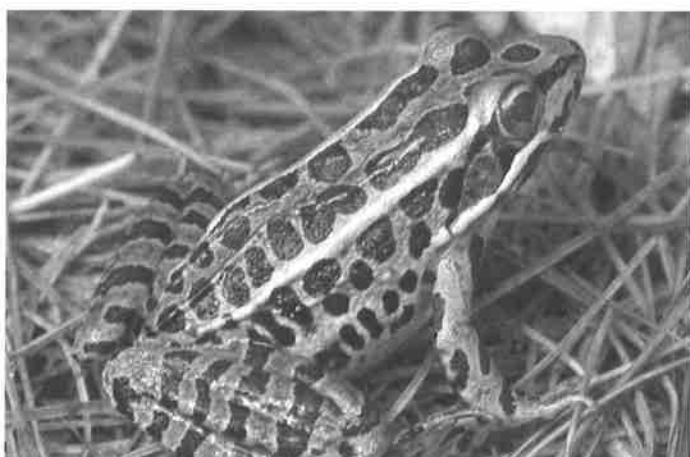
Every year scientists venture into the most remote, inaccessible and sometimes hostile places on earth in hopes of discovering a new form of life. Finding and documenting new species is important not just for medicinal reasons but also for determining environmental health. From animals to plants to bacteria, every organism fills a niche within its community which reflects both why and how life

persists there. The loss of a single species from its natural community may cause the local ecosystem to become dysfunctional, leading to its decline. However, when all the indicator species are present and functioning, the ecosystem will remain intact and balanced, securing its future health. Finding a new species gives scientists another piece of the puzzle, another indicator of the ecological balance within that ecosystem.

The Leopard frog is often confused with the more commonly seen Pickerel frog. Leopard frogs are usually a metallic mint-green color with sporadic dark colored oval shaped spots along their backs, while pickerel frogs are more brownish in color with parallel dark rectangular spots. Both grow to around 3-4" long and can be found occupying the same habitats such as lowland swamps and floodplains. However, Pickerel frogs spend significantly more time out of the water, in the uplands and even backyard gardens.

The Atlantic Coast Leopard Frog has been documented along the I-95 corridor from Connecticut to the Carolinas. The full extent of its range is still being investigated. It has also been found within our Great Swamp, hiding in the thick emergent vegetation and slow moving water of the marshy areas in the Ice Pond corridor. The best time to listen for this frog is from March to April during breeding season. Bring a keen ear, because it's difficult to distinguish the new Leopard frog's deep cough call over the sometimes ear-piercing chorus of its smaller cousins, the spring peepers!

When you listen, imagine...if a brand new species of frog can be found so close to NYC, one of the most populated places on earth, our Great Swamp may hold other living treasures we haven't yet discovered!



The Leopard frog (left) is often confused with the more commonly seen Pickerel frog (right).

Tracking with Susan Morse

by Judy Kelley-Moberg



Sue on a field walk in Dover

Sue Morse is a dedicated naturalist who believes conservation is all about involving people!

For more than 40 years Sue has been monitoring wildlife for organizations like the U. S. Fish and Wildlife Service, universities, The National Science Foundation and the Nature Conservancy. She received the Franklin Fairbanks Award for "...enriching the understanding of the natural world among the residents of New England" and was honored by the Adirondack Council for her decades of conservation work. Her articles and fabulous wildlife photos have been featured in national magazines and she has given workshops and talks to a wide range of audiences including the general public, conservation leaders and professional biologists.

Background

From her early childhood, she was passionate about nature. As a young teen she joined the Sierra Club where she continued to develop her knowledge and skills in the outdoors under the tutelage of professional naturalists and prominent environmentalists like David Brower.

After attending Penn State and the University of Vermont, Sue decided to settle in Vermont where she became increasingly concerned with the lack of information about how development was affecting wildlife habitat, biodiversity and the overall health of the environment. In 1994 she created a nonprofit organization called *Keeping Track*® in order to train citizen scientists to detect, identify, interpret and record the tracks and signs of animals critical to the ecological health of the region.

She hoped this would inform local planning boards of the critical wildlife habitats in their communities. Her Highways and Habitats Program taught highway departments and engineers where to place animal crossing signs in order to protect both animals and people.

In the Great Swamp

Sue trained tracking teams to look for bobcat, otter, mink and bear—umbrella species, indicators of habitat health—as part of the 1999 TNC Great Swamp Study. She has supported FrOGS citizen science programs over the years, and we consider her a valuable friend. From interpreting bear sign, to noting stride and straddle in track patterns, to where and how animals leave messages, a walk in the woods with Sue is one of delight and discovery.

We are pleased that Sue will be back with us on Friday, April 24 to present her newest program "Animals of the North: What Will Global Climate Change Mean for Them?" at 7 PM in the Gardiner Theater at Trinity Pawling School. On Saturday, April 25 she will lead two separate field walks in Pawling and Patterson. Don't miss the show and her awesome photographs of wildlife or the opportunity to be in the field with this exceptional naturalist and renowned tracker who can read and interpret animal behavior from a single sign.



Bobcat © Susan C. Morse

BECOME A CITIZEN SCIENTIST!

FrOGS is looking for volunteers willing to spend a day in the field gathering the samples and data needed to determine the water quality of the streams that feed the Great Swamp. This data added to previous years' will give us a snapshot of the condition of the streams and alert us to changes and trouble spots. For more information, including meeting place, exact date, and time, call Laurie Wallace at (845) 270-0538 or Dr. Jim Utter at (845) 878-0081. (See the Water Quality article for an idea of what we will be doing!)

Sightings in the Swamp

Twelve Traveling Turkeys

by Judy Kelley-Moberg

At dusk, during the coldest week of winter, twelve shadowy forms perched in the branches of the large oak that hangs over the road near my house. Normally the turkeys roosted on the ridge and spent their days up at June Farm eating Ed's feed corn. All that week they excavated the seeps that run down to the wetlands and huddled in the deep snow wells around the base of large trees. School buses and cars had to wait as the turkeys made suicidal runs back and forth across the road. Slamming my car door in the morning elicited a loud chorus of annoyed gobbles from the shadowy occupants of the oak.

In the fall, the same group of turkeys (all young males) had visited the sunny hillside behind my house. An aggressive-looking beady-eyed turkey was always on guard as the rest speared insects in the grass. As they moved across the hill, the iridescent feathers on their hunched bodies flashed and their featherless blue heads, too small for their large bodies, bobbed in time to the measured strides of their long powerful legs. They were clearly the descendants of dinosaurs.

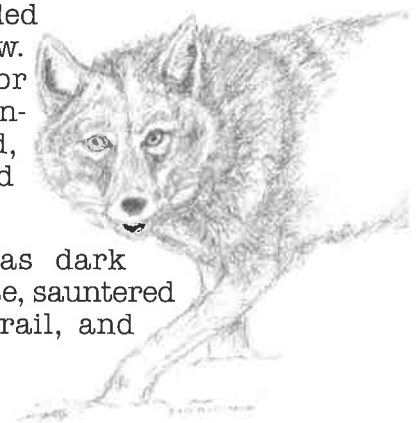


Coyote in the Snow

by Jill Eisenstein

Day after day in February, we watched the deer tromp trails through the ever-deepening snow in the valley behind the house. One late morning, after several nights of much howling going on down there, a large coyote appeared instead of the deer. As he headed off the deer trail into the deep snow, he fell, struggled to his feet, fell again, then disappeared into some shrubs. In the afternoon, I was surprised to see him curled up in the snow out in the open next to a second trail, maybe 20 yards from the first. I peered through the binoculars. Every now and then he lifted his head and looked around, but stayed there curled up in the snow. Was he hurt or even dying? I wondered...he had, after all, struggled earlier...

No, for just as dark descended, he rose, sauntered off down that trail, and disappeared.



Give a Gift of Swamp Preservation!

Our beautiful donation gift cards make a wonderful gift—all year round!

Show someone you care about them and The Great Swamp. Contact Beth Herr at (845) 228-5635 to get yours!

Let the Games Begin

by Diana Lee

On a sunny summer morning, the chatter of the red-winged black birds is drowned out by a sudden ruckus. It's a game of otter chase and tackle. One sleek brown body runs after the other in an all-out bid, grabbing as both go tumbling into the water. They bounce up and bound back. Another otter chooses a rolling, splashy escape rather than suffer the indignity of being caught. I edge closer and watch more rounds as legs, snouts, and tails jumble into an aqueous blur. I can't help but notice this roughhousing seems universal across species. I suddenly feel proud to be a part of a larger family, one that hears the same playful beat. My kayak brushes against grasses. Full stop and curious looks. Even though I know what's going to happen next, I call out silently, "Don't go! Please, please, please."

They're gone.



Surprises in the 2013 Water Quality Report

by Dr. Jim Utter

The quality of our stream water is an important concern for everyone since it impacts all the living things that depend on it. FrOGS is in its fourth year of a long-term project to characterize the Great Swamp's water quality in order to recognize areas of concern and to provide valuable information to local planning boards.

The water quality in a stream depends on the bedrock, surrounding vegetation, and the effects of weather but especially on the materials (pollutants) that are carried in by surface runoff. The numbers and varieties of macro-invertebrates (such as juvenile forms of mayflies and dragonflies) that live on the stream bottom change with changes in the water quality. Species tolerant to the new conditions will replace the earlier species. Scientists have found that changes in specific materials in the water will result in predictable species combinations. This allows us to assess the water quality by comparing the species composition of a sample with the composition expected in a pristine environment at a similar site. The organisms living in the stream reflect what we are most interested in knowing...have conditions changed, and if so, why?

FrOGS has retained Watershed Assessment Associates (WAA) of Schenectady to direct our sampling (done by volunteers), collect additional samples, identify the organisms in the samples, calculate the assessment indices, and prepare a report interpreting the results. We thank Patagonia, Harney Brothers Tea Company, The Plymouth Hill Foundation and FrOGS' members for helping us defray the cost of this major investment in the Great Swamp.

The 2013 Report based on samples collected on July 28, 2013, has just been released (report on www.FrOGS-NY.org). In the North Flow, seven Swamp River sites and three of its tributaries were sampled, while the South Flow survey consisted of two East Branch Croton River sample sites and four tributaries, only two of which (Brady and Stephen's Brook) were sampled previously.

WAA experts identified the species and numbers of macro-invertebrates from the samples and used several indices to calculate the BAP for each site. Our chart lists the sampling site's location, Species' Richness, BAP, and Water Quality Assessment (WQA).

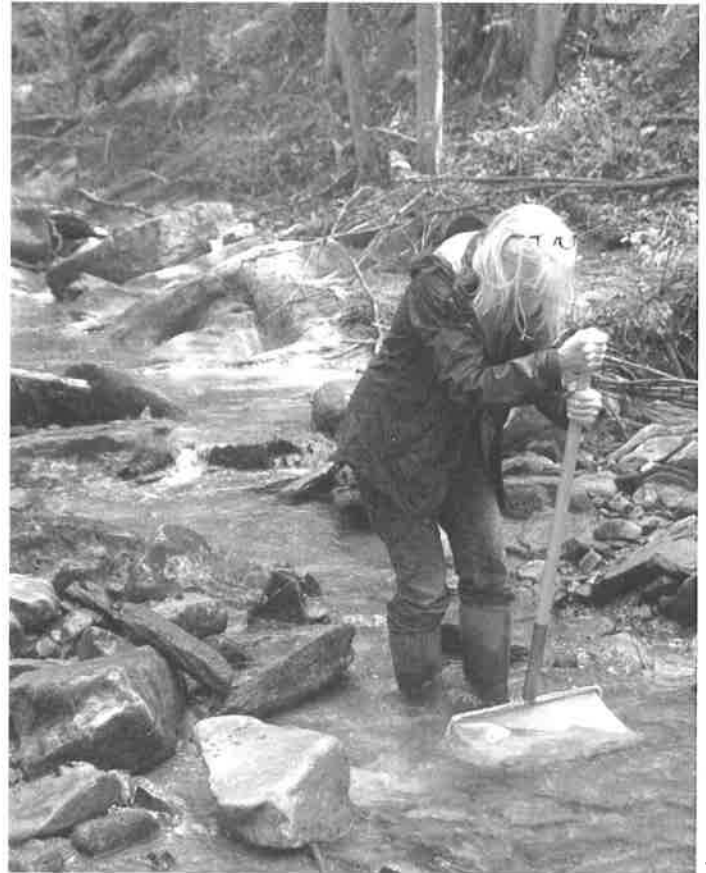


Photo by Judy Kelley-Moberg

Volunteer Theresa Ryan helping with water sampling

The surprises were in the South Flow at the two East Branch Croton River sites. The Patterson Environmental Park (a favorite canoe launch site) had a BAP of 3.2 "moderately impacted" but downstream at the Route 22 Bridge (a favorite fishing spot) the BAP was 1.3 earning it a "Severely Impacted" Water Quality Assessment (WQA) and the lowest BAP score we have recorded in the three years of the project!

New York City's DEP also monitors the East Branch Croton River and were unaware of any major concerns about its water quality. Since these were the first samples FrOGS has taken in this waterway we need more information to determine whether these results are truly characteristic of the river or an aberration. We sampled the same sites in the Croton River in 2014 and are anxious to compare these results to the 2013 study. Concerned with the low numbers, we plan to collect triplicate samples at six sites along the Croton in 2015. Comparing the results from all three studies should give us a more complete picture of the quality of the water in the river.

WATER QUALITY 2013 SAMPLING

	STREAM NAME	SAMPLING LOCATION	SPECIES' RICHNESS	BAP	WQA
NORTH FLOW	Swamp River	W Main St	n/a	6.3	Slight
	Swamp River	Corbin Rd	20	5.3	Slight
	Swamp River	River Rd	22	5.1	Moderate
	Swamp River	Old Pawling Rd	18	4.6	Moderate
	Swamp River	Chippawalla Rd	20	5.3	Slight
	Swamp River	Dover Furnace	21	6.8	Slight
	Swamp River	Old Rte 22	18	7.1	Slight
	W Mountain Brook	River Rd	19	6.3	Slight
	Burton Brook	W Dover Rd at Valley FarmView	22	7.3	Slight
	Burton Brook	Hoag's Corners	20	8.3	Non
SOUTH FLOW	Burton Brook	N of Chippawalla Rd	20	6.4	Slight
	Hiller Brook	Hurds Corners	25	7.1	Slight
	Hiller Brook	Betw Rt 22 & RR	17	4.4	Moderate
	East Branch Croton R	Patterson Env Park	10	3.2	Moderate
	East Branch Croton R	Rte 22 bridge	4	1.3	Severe
	Brady Brook	West of Rt 22	18	5.4	Slight
	Haviland Hollow Br	Brimstone Rd	26	8.6	Non
	Lost Lake Brook	W of Doansburg Rd	19	5.7	Slight
	Stevens Brook	E of Rt 22 at Alpine	25	6.9	Slight

SPECIES' RICHNESS

The number of macro-invertebrate species in the sample. The greater the number of species found in a sample the better the water quality.

Samples from the North Flow sites ranged from 17 to 25 species. In the South Flow the Croton River had only 4 species at the Route 22 site and 10 at the Environmental Park, but its three tributary streams ranged from 18 to 26 species. These were the first samples collected from the East Branch Croton River and they had the lowest *Species' Richness* of any of our samples!

BIOLOGICAL ASSESSMENT PROFILE (BAP)

A summary index that uses a numerical scale to indicate water quality from 10 (pristine or non-impacted) down to 0 (poor or severely impacted).

In the North Flow, the Swamp River sites showed slight to moderate impact, and continue to indicate that the Swamp River gets cleaner as it travels northward through the swamp. The highest water quality in the North Flow was found in Burton Brook at the Hoag's Corners site.

Second Annual Paddle for the Great Swamp: *Together we are making a difference!*

What could be better than paddling in The Great Swamp on a May day? Paddling in The Great Swamp while helping to preserve this haven of life!

Join us on May 16th for the Second Annual Paddle for the Great Swamp. We will be celebrating the Swamp with its scaly, furry and winged species as well as our own species! The Paddle will start at the Patterson Environmental Park and meander seven miles to the take-out at the Green Chimneys pavilion.

Paddlers will enjoy the spring sights and sounds of the Great Swamp and work up an appetite for a barbecue, listen to live music by Second Saturday, win great prizes from EMS, LL Bean, and other supporters, and this year, enjoy free chair massages. We're encouraging our paddlers to get sponsors from friends, family, and places of employment and try to beat Bonnie Jamie—who raised more than \$350 last year and won the Silver Frog award!

Space is limited so sign up today at:
www.frogs-ny.webs.com



Photo by Diana Lee