

# The Land Steward NEWSLETTER OF THE FINGER LAKES LAND TRUST

working to protect the natural integrity of the Finger Lakes Region

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# Forever Farmland: Partnership Protects Second Yates County Family Farm

According to the American Farmland Trust, a New York farm is lost to development every three and a half days.

The Finger Lakes Land Trust and Cornell Cooperative Extension of Yates County (CCE) have recently strengthened an already successful partnership to mitigate this distressing trend.

The initial success of this partnership came in 2009, when the 200-acre Hallpine Farms, owned by Dale and Karen Hallings, was permanently protected by a conservation easement. Now, just one year later, the neighboring James R. Henderson Farms has also been permanently protected thanks to this fruitful partnership.

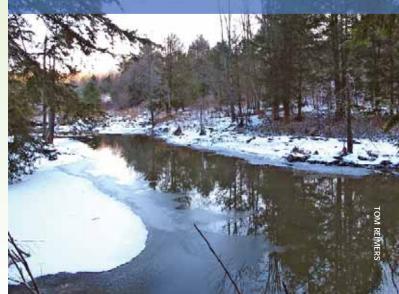
With development pressure doubling between 1995 and 2005 in the town of Milo, where Henderson Farms is located, there was no question that this farm was in need of protection. The Land Trust and CCE worked diligently as a team, resulting in the protection of the 519-acre Henderson Farms property this past fall.

## First Link in Emerald Necklace Completed

The first major link in the Emerald Necklace—a multi-year effort to connect 50,000 acres of protected public land in a contiguous crescent around Ithaca—has now been completed. The Land Trust's acquisition of a 169-acre parcel on Irish Settlement Road in the town of Dryden, purchased from Rex Berntsson and Mary Kay Millier, was completed in November.

The Berntsson/Millier tract serves as the connective tissue between the Hammond Hill and Yellow Barn State Forests, as well as the Land Trust's existing Roy H. Park Preserve. As such, the property provides a wildlife corridor for a variety of mammals traversing through state forest land. In addition, the parcel has more than 6,000 feet of frontage on Six Mile Creek—an important stream in the Cayuga Lake watershed and a crucial water source for the city of Ithaca—and 20 acres of wetlands *continued on page 8*  Six Mile Creek meandering through a wintry landscape on the Berntsson/Millier property as it winds its way to Cayuga Lake

continued on page 4



Jim Henderson's cabbage makes its way to New York residents each autumn through local supermarkets, as well as through his farm stand on Route 14A in Yates County—a stand that the family has operated for 29 years. At Ithaca's farmers market, visitors can purchase a variety of locally grown produce from West Haven Farm—an organic operation located on Ithaca's West Hill. In the Rochester area, local horse farms obtain hay from Don Green's Ontario County farm, now entering its fifth generation of family ownership.

The future of each of these farms is ensured by a Land Trust conservation easement. Other farms in our region provide milk, grain and a variety of other crops. Agriculture is essential to our region, and conservation easements are playing an increasingly vital role in ensuring that family farms will continue to thrive into succeeding generations.

The Land Trust is committed to working with farmers and local communities to ensure that our vibrant and diverse agricultural sector continues to thrive. Our farms do far more than produce food and contribute to our regional economy. They provide the scenic vistas which are admired by so many visitors and residents alike, and they provide thousands and thousands of acres of wildlife habitat, stream buffers and woodlands.

To ensure the future of our Finger Lakes farms, we must continue to expand our efforts to secure farmland through the use of conservation easements. The longterm commitment of private and public funds will be needed if we are to secure the future of agricultural districts and not just individual farms.

Local communities and New York State must also work together to foster a climate that is supportive of local agriculture. Protecting farmland does not ensure that it will be farmed. Government policies must support farm profitability, while also making certain that incompatible land uses do not encroach onto our best agricultural lands.

Ensuring the future of farmland and farming is no easy task. Through our efforts, we can put local food on our tables while securing those farms that are also essential to the character of our region.

--Andy Zepp

## Land Trust Opposes Expansion of Gas Drilling in Region's State Forests



N ew York's state forest system spans over 780,000 acres of public land that supports a variety of wildlife, from wide-ranging mammals such as the Black Bear, to neotropical songbirds that nest in the interior of large blocks of woodland. These forests also provide for sustainably harvested forest products, allow public access for outdoor recreation, and play an important role in maintaining the quality of our watersheds.

In October, the Land Trust learned that the state's proposed strategic plan for its network of forests includes a framework for the expansion of gas drilling and the development of associated infrastructure on these public lands. To date, drilling for gas on state lands has largely been limited to the far western part of the state.

In response to this proposal, the Land Trust submitted comments highlighting its concerns over the potential impacts of gas development on state lands, particularly in light of the possible imminent expansion of gas development on adjacent private lands.

In addition to potential impacts on water resources from the use of hydrofracturing techniques, the Land Trust is also quite concerned about the secondary effects of forest fragmentation through clearing associated with the development of well pads, access roads and pipeline corridors.

The Land Trust recognizes the need

to diversify our energy resources but also firmly believes that the value of maintaining these lands in their current condition far outweighs any value to be gained from using them for energy development.

Thanks to the state's stewardship of these forests, tracts of eroded farmland during the 1930s today host Fishers, Black Bears, Goshawks and Scarlet Tanagers. Springs scattered throughout these woods serve as the source of crystal clear streams that make their course steadily downhill into our Finger Lakes. Hikers can take a few steps down the Finger Lakes Trail and enter a silent realm that transports them far away from the hectic pace of everyday life. These are just a few of the qualities of these little known lands that are at stake.

Regretfully, at year-end the state affirmed its draft plan allowing for an expansion of drilling within the state forest system. Land Trust President Chris Proulx said in response: "We're disappointed that the state of New York is leaving open the option of hydrofracking in its forests, which makes the few large areas of protected open space in the Finger Lakes susceptible to forest fragmentation, and ecological damage. Opportunities for recreation and tourism in the region will also be affected."

The Land Trust will continue to work with our elected officials in an effort to secure these areas from inappropriate development. Canandaigua Lake will benefit from the Land Trust's latest conservation easement securing 74 acres on its western shore.

## Easement Protects Scenic Hillside and Open Vistas on Canandaigua Lake

Seventy-four acres of scenic forestland and fields overlooking Canandaigua Lake will remain open space forever, thanks to the action of two generous landowners who donated a conservation easement to the Finger Lakes Land Trust this fall. The landowners, who wish to remain anonymous, expressed interest in conserving land after witnessing their favorite vistas and the area's rural character diminished by increased residential development around the lake.

The property, located on the west side of Canandaigua Lake in the town of South Bristol, features open fields and a mature hardwood forest, providing significant habitat for diverse native plants and animals. It is also part of a growing greenway of protected lands on the west side of Canandaigua Lake. The easement also helps to preserve a scenic and natural landscape visible from public roads, Canandaigua Lake and areas across the lake.

The property's woodland flanks over 4,000 linear feet of deep, pristine ravine and a tributary to Canandaigua Lake. The forest holds soil and rock in place, and acts as a filter to maintain high water quality in the stream. These forested slopes would be highly susceptible to erosion and accelerated storm water runoff if the trees and other vegetation were removed. Indeed, maintenance of trees along stream corridors and on steep slopes surrounding the lake is a top priority for local communities grappling with year-to-year impacts of soil erosion during storms. "The lake provides drinking water to more than 60,000 area residents," Land Trust Executive Director Andy Zepp noted. "This easement will help protect lake water quality by maintaining a forest buffer along a steep valley stream corridor."

In the terms of the easement, the donors have given up the right to subdivide the property, and there are limitations on building new structures. Part of the property has been reserved for agricultural uses. Timber may be harvested from a portion of the woodland, provided the harvest occurs according to a management plan developed by a qualified forester and approved by the Land Trust. In the sensitive ravine area, removal of vegetation is limited in order to protect fragile soils.

Conservation easements are voluntary legal agreements between a landowner and a land trust in which the owner places restrictions on the use of his or her property, protecting the natural value of the land. The agreements are flexible and tailored to meet the landowner's needs. Donation of a conservation easement protects the land permanently from development while keeping it in private ownership. The land trust holds the easement, but the landowner retains ownership of the property and all rights and privileges for its use, except for uses restricted under the easement. Federal and state tax incentives are available to those who donate a conservation easement to a qualified organization, like the Finger Lakes Land Trust.

Increasing pressure for residential development on hillside properties with views of Canandaigua Lake has led to the division of several large, open parcels into smaller house lots. This easement prevents such a scenario by preserving green space and protecting the watershed resources. –Betsy Landre

## Emerald Necklace Grows Through Gift of Woodland

Thanks to a generous gift from Priscilla Noetzel-Wilson, the Emerald Necklace greenbelt recently grew by 35 acres. The woodlot, located in the town of Danby, Tompkins County, includes a portion of Deputron Hollow, a county-designated Unique Natural Area (UNA).

The Noetzel-Wilson property is located in close proximity to two other properties already protected by Land Trust conservation easements. Though recently logged, the property features a mix of mature hardwoods and coniferous forest.

Based upon prior discussions with the donor, the property will be sold by the Land Trust subject to a conservation easement that will limit the construction of any structures to a defined area located outside of the UNA.

"We're grateful to Priscilla for this wonderful gift," said Land Trust Executive Director Andy Zepp. "By placing a conservation easement on this property, we'll be able to ensure the future of this forest while allowing it to remain in private ownership."

The property will be made available for sale sometime in the spring of 2011. For additional information, contact the Land Trust's Ithaca office.

The Land Trust gratefully acknowledges Attorney Elizabeth Bixler of the law firm of Blumkin Finlay & Bixler, LLP in Ithaca for providing pro bono legal services in support of this project. Jim Henderson and his mother, Margaret Henderson, own the farm. Jim is the third generation to farm the land, with his son Nathaniel working diligently to be the fourth. With owned and leased land combined, Jim farms approximately 1,400 acres, producing cabbage, corn, soy, seed crops and small grains. He and his wife Jill, also grow a seasonal range of garden vegetables for the family vegetable stand located in front of their home on Route 14A. Their vegetable stand has been serving the local community for the past 29 years.

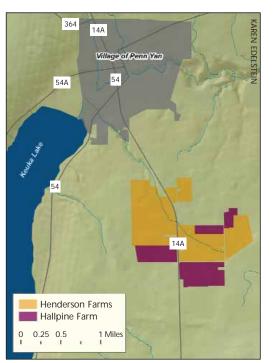
The Henderson farm, alongside the Hallings farm, is part of a Yates Countydesignated protection corridor along State Route 14A, one of the main agritourism routes not just in the county but in the Finger Lakes region as a whole.

The Henderson farmland drains into Keuka Lake and Seneca Lake via the Keuka Lake Outlet. Both lakes are

important public water sources. But the Keuka Lake Outlet is a local treasure, consisting of a seven-mile long linear park corridor recognized for its natural beauty, recreational opportunities and historical significance.

Thanks must be given to the New York State Department of Agriculture and Markets (NYSDAM) Farmland Protection Program. This program awarded both Hallpine and Henderson farms a Farmland Protection and Implementation Grant (F-PIG) that pays 75 percent of the project cost associated with the purchase of development rights. Funding for the project came from New York State's Farmland Protection Program as well as a grant from the Partridge Foundation and the generous donation of 25 percent of the easement's value by the Henderson family.

To be awarded a farmland protection grant in Yates County a farmer must first apply to the Yates County Agriculture and Farmland Protection Board (AFPB). In ranking applicants, the AFPB uses criteria very similar to those employed by NYSDAM, eventually choosing the top-scoring one or two farms to apply for a state-level grant. The AFPB deemed the Henderson farm worthy of protection. Thankfully, in 2007 the Henderson



farm was selected by NYSDAM to receive a Farmland Protection and Implementation Grant that provides cost sharing on the purchase of development rights for this third-generation farm.

The Hendersons have taken an active role to mitigate the impact their farm has on neighboring natural resources. Jim has been an active participant in the New York State Agricultural Environmental Management Program (NYSAEM), and completed a statecertified Comprehensive Nutrient Management Plan. "Farmers need to take responsibility for protecting the land and watersheds," he said. "Participating in the NYSAEM program has not only helped my farm be more efficient...it has also helped minimize the impact my operation has on water guality and the watersheds."

The Land Trust is working on five other farmland protection projects (two of these are with Yates CCE) that have

received funding commitments from the state. Funding is currently limited, however, putting these projects at risk. "The Hendersons are one of more than 60 family farms slated to receive funding though New York's Farmland Protection Program," said David Haight, New York Director for the American Farmland Trust, adding, "unfortunately...one of only a handful that will receive funding from the state this year. We look forward to working with Governor Cuomo and the legislature to make sure that New York takes advantage of the opportunity to make strategic investments in farms that grow the state's economy—both now and for the future."

Farmland is a precious resource that is crucial to provide healthy local food. Partnerships, like the one with Yates CCE, is one of many ways that the Land Trust is striving to protect open space and viable agricultural land.

-Megan Fenton

The Land Trust gratefully acknowledges Attorney Kim Rothman and the law firm of Miller Mayer, LLP in Ithaca for providing pro bono legal services in support of this project.

# Addition to National Forest Completed

IN October, the Land Trust sold a 30acre parcel of land near the town of Hector in Schuyler County to the U.S. Forest Service (USFS). At the request of the USFS, the Land Trust originally purchased the property from the Egan family in the summer of 2008 after it was listed for sale through a local real estate broker. The Land Trust held and maintained the property until federal funding became available for the USFS to acquire it. The property has now

become part of the Finger Lakes National Forest (FLNF).

"We were delighted to work together with the Forest Service to secure this parcel, which was advertised for sale and could have resulted in a subdivision in the heart of New York's only national forest," said Land Trust Executive Director Andrew Zepp.

The Egan property was among a number of "in-holdings," or private properties surrounded by FLNF land. The Land Trust and the USFS have identified in-holdings as a priority to keep open space intact and protect against development. Furthermore, the FLNF serves as the western edge of the Emerald Necklace—a proposed greenbelt linking 50,000 acres of protected land in the forested hills around Ithaca. Such protected land offers natural beauty, recreation, ecosystem services and continuous habitat for birds and other wildlife. *continued on page 10* 

## Southern Tier Land Protection Efforts Expanded

# The upper Susquehanna watershed is an expansive landscape encompassing 46 percent of the Land Trust's service area.

Defined by river courses and steep hills, it is a place where largeness looms, where bears roam and Bald Eagles nest. The watershed provides more than one third of the water flowing into the Chesapeake Bay estuary, the largest estuary in the United States. Steuben County, the sparsely populated heart of New York's Southern Tier with an average density of only 71 people per square mile, is larger than the state of Rhode Island.

Like the rest of the Finger Lakes region, the upper

Susquehanna watershed has been home to people for thousands of years. The rivers defined trade routes for Native Americans and early European settlers. Our modern trade routes—our railroads and highways—trace these river valleys still, while the surrounding hills support agriculture, forestry and recreational uses.

Despite a lack of population growth in the region, however, increased development still threatens the character of our open space resources and the sustainability of our communities.

Until recently, open space conservation was not widely recognized as a priority within the upper Susquehanna watershed. But two issues recently

have awoken many to the importance of working to conserve this area. Natural gas deposits stored in the region's underlying Marcellus Shale may attract heretofore unseen levels of development to rural communities. Also, New York's Southern Tier is the subject of increasing attention as the U. S. Environmental Protection Agency seeks to impose regulations on certain land uses to limit pollution of the Chesapeake Bay.

In response to increasing development pressure, the Land Trust is expanding its work in the Susquehanna watershed. Over the last two decades, the Land Trust has protected 2,000 acres within the watershed, but much work remains to be done. With initial support from the United States Forest Service, the New York State Department of Environmental Conservation and individual Land Trust members, we have established a Southern Tier Field Office in Painted Post.

Initially, we will focus on protecting lands within the Chemung River Greenbelt, a designated priority in New York State's Open Space Plan. Arising in Painted Post, where the Cohocton and Tioga Rivers merge, the Chemung flows downstream through Corning and Elmira before joining the Susquehanna near Sayre, Pennsylvania. Along the way, the river meanders across its broad floodplain and also runs past fluted cliffs known locally as the Palisades. Steege Hill atop the Chemung River Valley





The Land Trust will build upon its accomplishments in the river valley, including the Steege Hill and

Plymouth Woods Nature Preserves, wooded tracts covering nearly 900 acres of hill country located just south of the Chemung River. These lands host an extensive network of hiking trails and provide a home for resident Black Bear, porcupine and a diversity of songbirds.

40 Miles

We will also continue to expand our work within the Emerald Necklace, an arc of public lands that straddles the divide between the Great Lakes and Chesapeake Bay watersheds. Our focus here will be on the protection of forested stream corridors and key parcels that link and buffer existing public lands.

Working from these initial focus areas, we will launch a systematic effort to educate landowners and local officials about conservation easements and other options for protecting significant natural resources. And we will reach out to form new partnerships, refining our own understanding of important places on which we should focus our efforts in the coming years.

The Susquehanna watershed is a vast landscape standing at a crossroad. With support from our membership and guidance from our local volunteers, we will work with partners to ensure that our children and grandchildren continue to call this landscape of clean flowing water, deep green forests, roaming bears and soaring eagles home. —*Kris West* 

# **SCENES** from Around Our Region...



Ithaca College students in Anne Stork's conservation biology class helped reclaim a trail in "Mary's Woods" at the Goetchius Preserve this fall. This trail is now open to the community and offers a short walk to a splendid view of a beautiful wetland.



Finger Lakes Community College students and Land Trust volunteers working on a new trail at the Great Hill Preserve at the south end of Canandaigua Lake.

Aerial view of the south end of Skaneateles Lake

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The winter landscape allows us to see the true connectedness of land and water. The steep, wooded hillsides above Canandaigua Lake help protect the lake's water quality by filtering runoff.



The Land Trust recently partnered with the Upper Susquehanna Coalition to install a 2,500 square foot deer exclosure at the Sweedler Preserve at Lick Brook. Plants inside the exclosure will be inventoried and cataloged so that the effect of deer browse on plant populations can be studied.



Winter sunrise at the Stevenson Forest Preserve in the Town of Enfield, Tompkins County

"Great day for a hike (snow shoes)...deer off red trail. Nothing but the wind through the trees and the sound of my breath." –from the visitors' log, Steege Hill Nature Preserve that host a variety of birds and other wildlife. Beyond the wetlands, the landscape consists largely of mature forests of hemlock, beech and maple.

"As part of our conservation strategy, this property was identified as a key priority for protection," said Ed Marx, commissioner of planning and public works for Tompkins County, which provided some funding for the acquisition. "The area has a high concentration of natural features that we value watershed protection, wildlife habitat, connectivity to existing open space, and public recreation," he added.

In the coming months, the Land

Trust's preserve management committee will work with staff to develop a management plan for the property. The committee includes board members and volunteers, as well as biologists with an interest in land management. The management plan will address issues such as public access, habitat management, and the control of invasive plants. The Land Trust is already planning to accommodate public access at the site through the development of a parking area and the construction of a boardwalk and footbridge over Six Mile Creek that will provide access to the adjacent Hammond Hill State Forest and its 20

miles of multi-use trails. This will be a major project involving a contractor as well as volunteer labor.

The Land Trust has raised approximately two-thirds of the funds necessary to purchase the Berntsson-Millier property. The purchase was completed, thanks to a loan from an internal revolving fund that allows the Land Trust to take advantage of time-sensitive conservation opportunities.

To make a contribution toward this acquisition, please contact Jan Hesbon, the Land Trust's director of development, at the Ithaca office or by e-mail at janhesbon@fllt.org. *–Jeff Tonole* 

# Congress Acts to Enhance Tax Incentive for 2011 Easement Donations



Recent action by Congress and the Obama administration renewed a tax incentive for private landowners—especially working family farmers—who protect their land through the The Land Trust has already worked with 75 families from throughout the Finger Lakes region to secure their land through the donation of a perpetual conservation easement. Easements

donation of a conservation easement. The incentive, which had expired at the end of 2009, will now be extended through December 31, 2011.

According to the Land Trust Alliance, the national organization that provides a voice for land trusts in Washington, the bills to make this incentive permanent had 274 House and 41 Senate cosponsors from 50 states, including majorities of Democrats and Republicans in the House. The legislation was supported by more than 60 national agricultural, sportsmen's, and conservation organizations. Additional information about the enhanced incentive may be found at www.lta.org/easementincentive.

### The enhanced incentive applies to a landowner's federal income tax in the following ways:

- Raises the deduction a donor can take for donating a voluntary conservation agreement from 30% of their income in any year to 50%;
- Allows farmers to deduct up to 100% of their income; and
- Increases the number of years over which a donor can take a deduction from 6 to 16 years.

typically allow for traditional agriculture and forestry uses while limiting future subdivision and development.

Interest in conservation easements has increased during recent years—both through increased understanding of this tool for conservation as well as the expansion of tax incentives associated with an easement donation.

"We anticipate a busy year for conservation easements due to this tax incentive," said the Land Trust's Director of Land Protection, David Diaz. "Any landowner who is interested in completing a conservation easement during 2011 should contact us now as these projects take time to complete."

# **STAFF DEVELOPMENTS**

# We are delighted to welcome new staff member Kris West

n an effort to expand its work in the upper Susquehanna watershed (see article on page 5), the Land Trust has hired Kris to be its Senior Field Representative for the area. As its local representative in the Southern Tier, Kris will work on land protection projects, provide educational programs on conservation easements, and lead the Land Trust's conservation planning efforts there.



Kris will be working from her home in Painted Post, where she lives with her husband Jim, a research scientist at Corning, Inc., and their two children, Megan and Luke, ages 10 and 12.

A native of southern Wisconsin, Kris moved to Painted Post in 1999 by way of Rochester, where she worked for the Nature Conservancy for 7 years, conducting research on songbird migration, stewardship and conservation planning, and then overseeing the Conservancy's Central and Western New York Chapter.

She holds an MS in conservation biology and forestry from the University of Wisconsin at Madison and a BS in animal behavior from Beloit College in southern Wisconsin. Kris enjoys spending time outdoors with her family hiking, camping, and canoeing. She currently sits on the zoning board and parks commission for the Town of Erwin.

# Board and Advisory Council Grow

The Land Trust is pleased to announce the addition of Marti Macinski to its Board of Directors. Marti, together with her husband Tom, are the proud owners of Standing Stone Vineyards in Lodi, a maker of premium wines on the east side of Seneca Lake in the heart of Finger Lakes wine country. Marti has a law degree from the University of North Carolina in Chapel Hill and has practiced law both privately and in the public sector as Assistant Attorney General for the State of New York. "I'm very excited about the work of the Finger Lakes Land Trust, notes Marti. "Here at the winery, watching folks arrive and take in the spectacular views as they make



New Board Member Marti Macinski

New Advisory Council

Member Jim Walsh

their way to the tasting room, is a constant reminder of the need to protect wide expanses of undeveloped land for all to enjoy."

Our newest member of the Land Trust's Advisory Council should need little introduction. Jim Walsh had a long and distinguished career as a Congressman

representing New York's 25th Congressional District in the U.S. House of Representatives from 1989 to 2009. He is currently a government affairs counselor for the law firm of K&L Gates LLP in the firm's Washington, D.C office. A native of Central New York, Jim received his Bachelor of Arts degree in history from St. Bonaventure University. A supporter of conservation and the environment, Jim introduced legislation in the House to authorize the Onondaga Lake cleanup. He has served on many Boards in Central New York including the Oneida Lake Association, Onondaga Anglers Association, the Otisco Lake Association, and he currently sits on the Board of Directors of the Onondaga Environmental Institute.



# Rock'n for Conservation

Two touring rock bands chose to benefit the Finger Lakes Land Trust to the tune of almost \$6,000 when they each played at the Constellation Brands-Marvin Sands Performing Arts Center (CMAC) in Canandaigua last year.

The band Phish donated \$4,200 through their WaterWheel Foundation when they played at CMAC on June 29, and another band, My Morning Jacket, donated another \$1,685 after their concert on Aug. 28.

Phish created the WaterWheel Foundation in 1997 to oversee the band's charitable activities, and ever since they have raised funds for a nonprofit in each community that Phish visits while on tour. After some research, representatives from WaterWheel contacted the Land Trust to say the organization had been chosen as beneficiaries of Phish's Canandaigua show.

WaterWheel donated to the Land Trust 100 percent of the sales of band merchandise sold at the show, including T-shirts, sweatshirts, stickers, posters and artwork, some signed by band members.

"Luckily it was a cold summer night and the sweatshirts sold like crazy and we made over \$4,000," said Megan Fenton, FLLT Land Protection Specialist, who represented the Land Trust at the merchandise table. "I had the chance to talk about the Land Trust with many of the Phish fans who stopped by."

One man bought a poster signed by the band, for \$750, said Fenton. "The selling point for him was that the money was going to an organization that protected Grimes Glen, his favorite local hiking spot," she added.

Similarly, the band My Morning Jacket works through Air Traffic Control (ATC), a non-profit company that advises musicians on philanthropy and activism. Through ATC, the rock group donates \$1 from each ticket to a local organization at each stop, with special consideration given to organizations with environmental interests. ATC chose the Land Trust as a beneficiary when the band played in August.

"It's an amazing role that these bands are playing in creating funds for organizations during tough economic times, money that otherwise would not be around," said Tara Kurland, ATC project manager. –*Krishna Ramanujan* 

## Our sincerest appreciation for gifts in honor of:

Frank and Blythe Baldwin on their 50th anniversary with love from their children.

Patti and Jules Burgevin FROM Peter Burgevin and Margo Alexander

Burch and Louise Craig FROM Erik B. Lundback Todd and Hadley Matarazzo

Betsy Darlington FROM Jean Darlington and Ed Marchena Lois Darlington

Dr. Joseph Doyle FROM Jeff and Jane Doyle

> Corey Flinn FROM Susan Quick

Betsy Landre FROM Eaton Birding Society

David and Donna Lee FROM Kurt and Sorel Gottfried

Lynn Leopold FROM Jean and Carl Gortzig

> Kenneth Osika FROM Marjorie Vitale

Eleanor Becher FROM Peter Dougherty and Dawn Dybowski

John F. Bowen FROM Irene Bowen Ted and Patti Brewer Joe and Nancy Briggs Ruth Dorrough Meg Ewing Mr. and Mrs. Richard Harris Sarah Jackson Meg and Bill Lloyd Judith Nadal Edward and Frieda O'Hanlon Robert and Nancy S. Sands

> Shirley Braun FROM Kathryn Burley

> > FROM FROM Alayne Evans Velmex, Inc.

Sybil Smart Craig FROM Michael and Thomas Altier and Jane Morrison Dave Anderson Nancy Bloomer Stuart and Nancy Bolger Bill Boomer and Sally Fischbeck Doris Braine Bill and Anne Buckingham Michael Cole Sherman and Anne Farnham Suzy and Jack Fitzgerald Beverly and Pete French Carolyn and Roger Friedlander Sara Gilfenbaum

Connie Feissner FROM Patrizia Sione

Our deepest gratitude for thoughtful gifts in memory of:

Milton Green FROM Steven Cinquanti

Julia Hardin

Elizabeth Hardin

Carla Harris FROM Beth Harris

Anthony Jarczewski FROM Joyce Bleiweiss

Dorothy and James Lynaugh FROM Matthew Lynaugh

> Victor Mansfield FROM James Ware

Tim Gill Donald and Marjorie Grinols Marian Griswold Carol Sue Hai Rita Hickey John and Bonnie Hood Thomas and Elisabeth Judson Jim and Sara Kersting Rose-Marie Klipstein Alan and Deborah Lattime John and Alice Leddy Patricia Lein Jeanne Leinen Meg and Bill Lloyd Lee and Staffan Lundback Mark and Kathy Malmendier James and Maryparke Manning

Odell Scott FROM Barbara Scott

Jean Shepard FROM John Henderson and Margaret Shepard

Len Shulman FROM Myra Shulman and James Morin

Klaus Stoscheck FROM Claudia Stoscheck

Robert and Jonathan Thompson FROM Genevieve Thompson

Geoffrey Wetzler FROM Maureen Hanson

Pete and Sara Merrill Sidney Metzger Bill and Kathanne Mitchell Patti Penski Skippy Raines Michael and Nancy Rees Thomas Richards Nancy Robinson George and Joan Ryan Mimi and Len Sauer John and Ann Schaefer Francie and Larry Schenck Staunton Farm Foundation Samuel and Mary Tilton Mike and Beverly Tomaino Jane and Sterling Weaver Marilyn and Wayne Wiswedel

## Addition to National Forest Completed continued from page 4

"We are extremely grateful to the Land Trust and all of our partners that have worked to make this acquisition possible," said Jodie Vanselow, district ranger for the FLNF. "This is one of those situations where acquiring a small parcel of land will have a huge impact on the health and diversity of our forest as a whole."

Vanselow noted that the acquisition of this parcel will help consolidate forest

land, preserve public access, and provide scenic views along the Backbone Trail, a popular trail for hiking, biking, cross-country skiing, horseback riding, and other activities. Moreover, the property contains two old farmstead structures, which contribute to the USFS goal of protecting local and national historic sites. The parcel has easy access from Potomac Road, which eliminates the need for costly right-of-way easements to manage the property.

The transfer of this property to FLNF completes the first-ever partnership between the Land Trust and the USFS. Following in those footsteps, the Cladel family also donated their property in the heart of the FLNF to the Land Trust in late 2009, with the understanding that it would ultimately be sold to the USFS when funding becomes available.

–Jeff Tonole

# A CLOSER LOOK

# Rana sylvatica: Lazarus of the Amphibian World

Winter is a hard time, particularly for those animals that cannot regulate their body temperatures. It is perhaps hardest for amphibians, whose moist skins make them susceptible to freezing. Many aquatic frogs, such as the bullfrog and leopard frog, lie dormant all winter below the ice, breathing through their skins. Terrestrial animals are exposed to far more extreme temperatures. Those that can't avoid freezing temperatures have two ways of making it through the winter: freeze resistance and freeze tolerance.

Freeze-resistant animals rely on a phenomenon known as supercooling. Despite what we've all learned, water doesn't necessarily freeze at 0°C. A small volume of very pure and still water can stay liquid to -42°C; however, the moment this supercooled water contacts an ice crystal, it will freeze solid almost instantly. Smaller animals, including some insects and reptiles, use supercooling to weather brief and relatively mild freezing episodes. Most amphibians cannot use this technique, however, because their skins are highly permeable to water and ice.

The wood frog (*Rana sylvatica*) is one of a handful of North American frogs that is freeze-tolerant. If you search very carefully under the leaf-fall on the upland forest floor, you're likely to find one of these little black-masked fellows sitting motionlessly, perfectly camouflaged, limbs neatly tucked into its body in order to reduce water loss. It will remain there all winter, freezing and thawing along with the soil itself, until spring finally frees it from its state of suspended animation.

Frostbite occurs when ice crystals form within tissues and slice like knives through delicate cell structures, causing irreparable damage. In order for the wood frog to survive winter, it must ensure that the water in its cells does not turn to ice. When the frog first begins to freeze, it saturates its body with glucose. Water that contains dissolved solutes, such as salts or sugars, freezes at a lower temperature than does pure water. In the tiny wood frog, the simple sugar glucose becomes a cryoprotectant, a sort of antifreeze that lowers the amphibian's freezing point well beyond most others of its kind. This little animal is remarkably tough, but it is not invincible; it cannot survive if more than about 65 percent of the water in its body freezes.

As the frog cools further, ice forms in the blood and lymph vessels and the gut, where it can do no damage. The more water that is locked up in ice, the greater the concentration of solutes in the blood and lymph, and the more water that is drawn out from the cells. (Something similar happens when you rub a piece of meat with salt in order to draw out the juices.) The cells shrink but do not collapse because they contain glucose, which reduces water outflow. The tiny amount of water in each dehydrated cell then supercools so that the cell contents remain liquid even when the temperature drops considerably below freezing.

Wood frogs also accumulate the chemical urea in their tissues when they are subjected to dry conditions, such as

those of late fall and early winter. Urea minimizes the amount of water that is lost through the skin. It seems to be an even more effective cryoprotectant than glucose and also has a depressant effect on the frog's metabolism. Both glucose and urea seem to stabilize cell structures and protect them from being damaged by freezing, although no one yet knows how this works.

When the temperature warms, the frog begins to defrost in the opposite direction that it froze—that is, from the inside out. It is in the center

of the

The wood frog is one of a handful of North American frogs that is freeze-tolerant.

frog that blood last circulated and

circulated and the glucose concentration

glucose concentration is highest, and therefore where the melting point is lowest. The heart, which had been encased in ice, begins beating again; the shrunken vital organs and muscles rehydrate and resume functioning after a few hours. If it is spring, and not just a brief thaw (and the frogs seem to know which is which), they will mate just a few days later. Their resurrection is perfectly timed: the warmer weather brings rain to fill the vernal pools in which they will lay their eggs.

—Jacqueline Stuhmiller

# Finger Lakes Land Trust

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## Saturday, April 2, 2:00 PM, Tree Walk at the Lindsay-Parsons Biodiversity Preserve.

Join amateur naturalist and outdoor educator, Akiva Silver for a walk that will cover identification, natural history, wildlife value, the role of invasive plants, as well as survival uses of trees and shrubs. The Lindsay-Parsons Biodiversity Preserve is approximately 8 miles south of Ithaca on Route 34/96.

## Tuesday, April 12, Emerald Necklace Fundraiser.

Maxie's Supper Club in Ithaca is partnering with the Land Trust for a special night of old time music and southern style fried chicken (or tofu!) all while raising money to support the Emerald Necklace project. For every fried chicken or tofu dinner sold on the evening of April 12, Maxie's will donate \$5 to the Land Trust. Join us for a good, old-fashioned party and help support conservation! Visit www.maxies.com for information and menus.

## See our web site for maps and photos of the preserves.

WALKS GO RAIN, SUN OR SNOW. PLEASE BRING SNACKS AND WATER, AND WEAR STURDY SHOES. CALL THE LAND TRUST AT (607) 275-9487 FOR DETAILS.