



# THE LAND STEWARD

Newsletter of the Finger Lakes Land Trust

Vol. 17, No. 1

working to protect the natural integrity of the Finger Lakes Region

Winter 2004-05

## Land Trust Looks To Conserve Key Terrain Within Skaneateles Highlands

Regarded as one of the jewels of the region, Skaneateles Lake is known for its crystal clear waters that serve as a drinking water supply for thousands of Central New York residents. One of the reasons for this clear water is the dense forest cover that characterizes much of the lake's southern watershed. This landscape also contains globally rare wetlands, spectacular waterfalls, and habitat for a variety of wildlife species, including the Cerulean Warbler – a species of special conservation concern.

To ensure the future of this landscape, the Land Trust plans an ambitious effort to conserve important undeveloped lands by securing additions to two existing preserves and promoting the use of conservation easements on other lands within the watershed.

Bear Swamp Creek will be a major focus of the Land Trust's efforts. Located in the southwestern portion of the Skaneateles Lake watershed, the creek is one of the lake's largest tributaries. Designated as a priority for protection in New York State's open space plan, the creek makes its start in the extensive wetlands located within and adjacent to Bear Swamp State Forest, high above the southern end of Skaneateles Lake. The State Forest itself is a popular destination for hikers and cross-country skiers. The forest wetlands include a pristine fen, which harbors plants considered rare in our region. Many waterfowl and river otters are



Bill Hecht

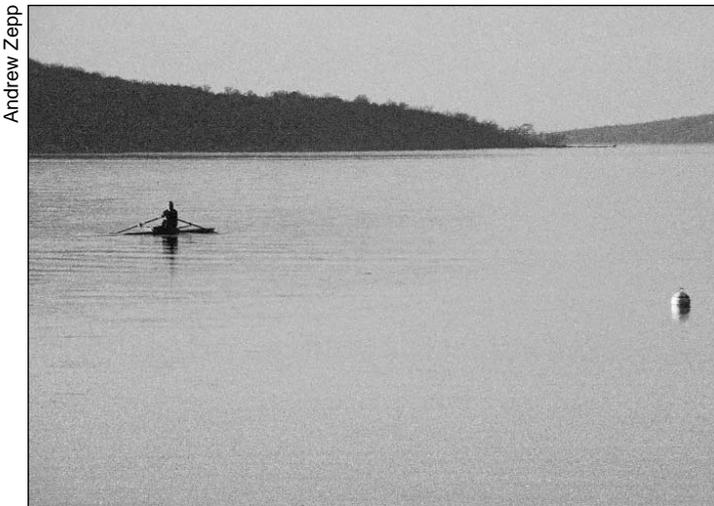
*Aerial view of Skaneateles Lake and the Bear Swamp Creek corridor*

also found there.

As Bear Swamp Creek continues its journey to the lake, it rushes through a deep gorge and an impressive series of waterfalls. In 1998, the Land Trust acquired a portion of the gorge through the establishment of the Bahar Preserve. We've now

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## Cayuga Watershed Project Identifies Critical Lands



Andrew Zepp

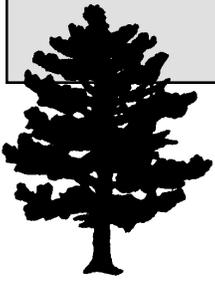
*Cayuga Lake's water quality is directly related to the health of its watershed.*

*Spanning close to 500,000 acres, the Cayuga Lake watershed is the largest in the Finger Lakes region. To prioritize land protection efforts in this vast area, last year the Land Trust embarked on a systematic analysis of the watershed.*

Land Trust staff and volunteers, along with Cornell graduate student Thor Snilsberg, interviewed leading experts, public officials and community leaders. We also collected data and conducted field surveys to assess undeveloped lands within the watershed. As part of the study, a written survey was distributed to every town supervisor and planning board chair within the watershed.

This year-long effort has resulted in a plan for conserving lands that are most important to the integrity of the watershed – for maintaining water quality, wildlife habitat, rare plant and animal species, scenic vistas, recreational greenways and productive farmland.

*continued on page 4*



# PERSPECTIVES

On Election Day, though you may not have heard about it, voters across the country sent a strong message in support of open space conservation. While most of us were focusing on the presidential election, voters in 120 communities in 26 states passed ballot measures resulting in \$3.25 billion for protecting land as parks and open space.

Overall, 120 of 161 measures on the ballot were successful – an impressive rate of 75 percent. In fact, since 1997, 1,000 out of 1,301 conservation ballot measures have been passed in 44 states, raising more than \$25 billion for land conservation!

While none of our local communities

placed conservation funding measures on the ballot this November, the Long Island counties of Nassau and Suffolk approved funding for open space, as did five New York municipalities. Also, the nearby community of Webster, in Monroe County, passed a \$5.9 million bond for open space earlier this year.

The success of these measures highlights the broad support for open space conservation that exists throughout our country. From New York to New Mexico, Connecticut to Colorado, voters have responded favorably. “Voter reaction to the pressures of uncontrolled growth and sprawl is bipartisan,” says Ernest Cook, director of conservation finance for the Trust for Public Land.

Here in the Finger Lakes, we have the opportunity to learn from other communities that have already faced greater

growth pressures and responded by voting to retain a high quality of life by investing in open space protection.

Visiting communities that have passed these measures, I’ve observed that they succeeded not only in conserving their cherished open spaces but also in enhancing their local economies. By protecting open space, voters have taken steps to ensure that their communities will be desirable in the future.

I’ve also learned one lesson above all: the longer you wait, the more you pay.

—Andrew E. Zepp  
Executive Director

## Land Trust Looks To Conserve Key Terrain Within Skaneateles Highlands

*continued from cover*

negotiated a contract to purchase a critical addition to the preserve. This new parcel encompasses several ravines and waterfalls as well as mature forests visible from Skaneateles Lake. Acquisition of the tract will also secure the preserve’s parking area.

The Land Trust has begun exploring conservation relationships with owners of land along the creek as well as owners of

private land around the state forest. One landowner has already expressed interest in protecting his land through the use of a conservation easement.

On the east side of Skaneateles Lake, the Land Trust is also working to conserve additional forest land in the vicinity of its High Vista Preserve. Already spanning 135 acres, High Vista’s dense forest cover provides habitat for resident Cerulean Warblers – a bird of conservation concern whose population has declined at an alarming rate in recent years. These sky-blue, insect-eating birds live high in the canopy of mature hardwood forests such as those found at High Vista.

The preserve also supports numerous springs and seeps that provide water to the lake. Protection of additional lands here will help ensure that these hillside forests continue to supply cool, clean waters to nearby Skaneateles Lake. We recently secured agreements to acquire two additional forest parcels bordering the preserve. By expanding the preserve, we will ensure that visitors, as well as resident warblers, and other wildlife, will continue to enjoy its peaceful forests.

Development pressures are increasing rapidly within the Skaneateles Lake watershed, and the Land Trust must move quickly to be successful in these efforts. Please contact the Ithaca office if you would like to get involved. Look for additional information on this project in upcoming issues of *The Land Steward*.

– Andy Zepp

Andrew Zepp



*Bear Swamp, the headwaters of Bear Swamp Creek, one of Skaneateles Lake’s largest tributaries*

# Skaneateles Lake: Local Natural Wonder

People know it's hard to keep a good thing to themselves, and while the splendors of Skaneateles Lake may once have been mostly appreciated by local folks, that may not hold true much longer. The Finger Lakes are establishing themselves as a major tourist attraction, and with tourism comes development. For this reason, among others, the Land Trust has good reason to focus future conservation plans on the cleanest of the Finger Lakes.

Quite simply, the Skaneateles Lake watershed is special. The lake's blue-green water may more aptly belong in the Caribbean, as if the pure water itself had been transplanted to Central New York and the warm weather and palms were left behind. Bordering Onondaga, Cortland and Cayuga counties, the watershed supplies municipal water for Syracuse and neighboring communities, quenching the thirst of roughly 200,000 people. Furthermore, the lake belongs to a select group of fewer than 10 city water sources in the U.S. that require no filtering, and only minimal basic treatment.

Unusually low levels of algae and other free-floating organic matter contribute to the water's clarity and unusual hue. Nutrients and pollutants that promote algae are scarce in Skaneateles Lake. That's because these nutrients get



Andrew Zepp

*Skaneateles Lake looking east from the Land Trust's Bahar Preserve*

into lakes via runoff that travels across roads and farmlands. But here, a small amount of land makes up the Skaneateles watershed compared to the size of the lake itself. Like a bowl very full with water, there is not a lot of area along the sides of the bowl for flowing water to pick up nutrients and pollutants. The watershed spans close to 59 square miles while the lake itself covers roughly 13 and a half square miles. That makes the ratio of land to lake a little more than four to one, by far the smallest such ratio

of any of the Finger Lakes. Owasco Lake, for example, is a little smaller but has a land to lake ratio of more than 18 to one.

To keep the water pure, the Land Trust has partnered with the City of Syracuse to develop a land protection program that places conservation easements on the areas most vital for protecting the watershed. The Land Trust has worked in the past to educate the public and promote watershed stewardship through a popular three-year talks-and-treks series. The City of Syracuse also reports that 95 percent of the farmlands in the area prescribe to a best management program that reduces a farm's impacts on the watershed.

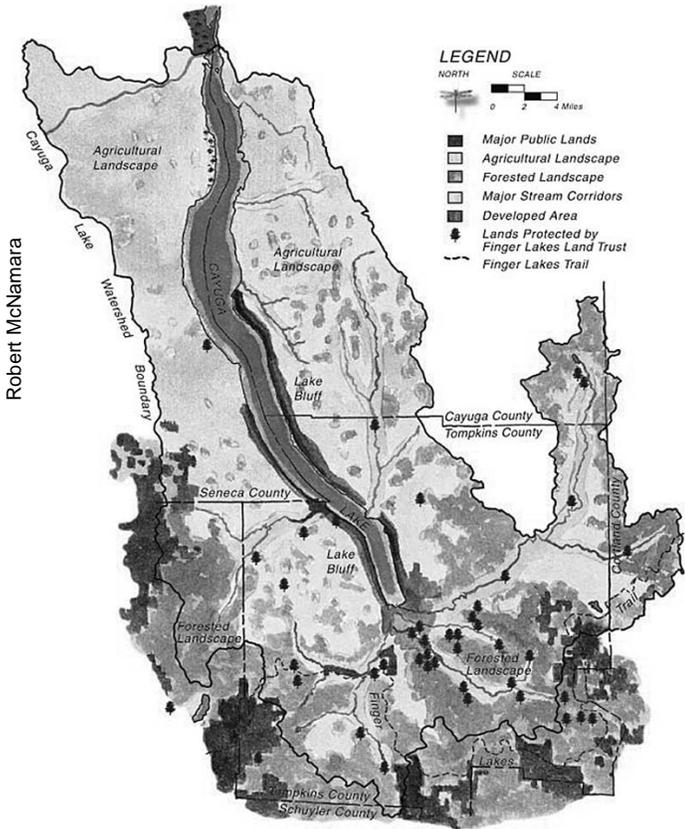
On the southwestern side of the lake, the Land Trust's Bahar Preserve already lies at the mouth of one of the lake's largest tributaries, Bear Swamp Creek. The two other major tributaries include Shotwell Brook and Grout Brook. Along with adding to the Bahar preserve, the Land Trust has further plans to protect lands in the vicinity of the source of Bear Swamp Creek which runs through the gorgeous Bear Swamp State Forest. The state forest boasts beautiful scenery, extensive wetlands, steep valley walls and flat-top ridges. Visitors can enjoy camping, hunting in season, and 15 miles of trails. Local skiers have long known that Bear Swamp offers the first chances to get out among silent snow-covered woods in late fall. The topography and

*continued on page 9*



Emily Eisman

*Autumn at High Vista Nature Preserve above Skaneateles Lake*



Robert McNamara

The study identified six types of land as most significant within the watershed:

**Undeveloped Lakeshore and Lake Bluffs:** Despite 95 miles of total shoreline, fewer than 20 privately owned parcels with 1,000 feet or more of lake frontage remain. In other words, most of the lakeshore is crowded with small, developed lots. Consequently, new development has increasingly shifted to the forested bluffs above the lake that provide spectacular lake views.

Much of this steeply sloping terrain is prone to soil erosion. Inappropriate development has the potential not only to mar some of our most scenic views but also to threaten water quality and wildlife habitat. On the east side of the lake, steep bluffs between Myers Point and the Village of Aurora were identified as a protection priority. On the west side, forested hillsides along State Route 89 – a designated scenic byway – are also important lands for preservation from too much development.

**Primary Stream Corridors:** Of the many streams feeding Cayuga Lake, only four major stream systems within the southern half of the watershed account for fully 79 percent of the surface water entering the lake! These drainages (Fall Creek, Cayuga Inlet, Salmon Creek, Taughannock Creek, and their tributaries) are critically important to the health of the lake. They provide important habitat for fish and wildlife and support people as well. Because many roads are routed close to these major streams, lands along these creeks are particularly vulnerable to clearing and development.

In some areas, our streams pass through gorges and glens that are remarkable for their wildlife habitat diversity. While a number of these sites are already protected, several unprotected sites were

recognized for their particular significance. In the northern portion of the watershed, the Great Gully and Paines Creek drainages contain locally uncommon plants and mature forests.

**Significant Wetlands:** From the rare groundwater fens of the Fall Creek watershed to Canoga’s lakeside cattail marshes, the Cayuga watershed encompasses a variety of wetlands. Fall Creek’s fens are home to the rare spreading globeflower (*Trollius laxis ssp. laxis*) as well as a variety of other unusual species. These wetlands also provide cool, clean groundwater to the creek.

Along the lake itself, marshes at Canoga and within the nearby Montezuma Wetland Complex host extensive flocks of waterfowl and shorebirds that pass through our area. During the spring migration, tens of thousands of these birds can be observed. At Montezuma, resident bald eagles nest and raise their young throughout the year.

**Forested Highlands:** Stretching across the southern portion of the watershed, a crescent of forested hills serves not only as the headwaters for the lake’s major tributaries, but also as a home for a diversity of wildlife, ranging from forest songbirds to black bear. In addition, public lands within this crescent host hikers, cross-country skiers, and others seeking outdoor recreation. From Hammond Hill State Forest in the east to Danby State Forest in the south and Finger Lakes National Forest to the west, an increasing number of local residents and visitors are discovering these lands.

Protection of key tracts adjacent to these and other public lands has the potential to create an unparalleled ecological, educational, and recreational resource for the future. Tracts of land between existing protected areas along state highways are considered some of the most vulnerable lands within this area. Protecting them would mean less fragmentation of the landscape.

**Prime Farmland:** While forested hillsides and deep gorges characterize the southern portion of the watershed, rich farmland, gentle slopes and wide-open vistas typify the northern portion. This area contains some of the richest agricultural soils in the northeast. From large-scale dairies and grain operations to vineyards and vegetable farms, agriculture plays an important role in the watershed. The values of agricultural lands are many. On one hand, agriculture is an important economic activity that supports many local communities within the watershed. On the other hand, within these same farms exist scenic views, wildlife habitat and undeveloped natural areas that also benefit the public.

The changing nature of agriculture makes land protection efforts particularly challenging. Conservation strategies must not only take into account current agricultural practices but also provide for sufficient flexibility to accommodate practices that may be used in the future.

**Recreational Trail Corridors:** From the Finger Lakes Trail to the proposed Black Diamond Rail-Trail, the Cayuga watershed is blessed by a variety of existing and proposed recreational byways offering everything from rugged backcountry hiking trails to groomed bike paths. By ensuring the future of existing trails while also expanding this network, we have the opportunity to make our landscape more accessible to residents and visitors alike.

Land protection priorities associated with trail corridors include securing the trails themselves, as well as adjacent buffer areas. We expect that conservation easements will be the primary

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# Private Land Conservation in U.S. Soars

## *Land Trusts Double Acreage Under Protection*

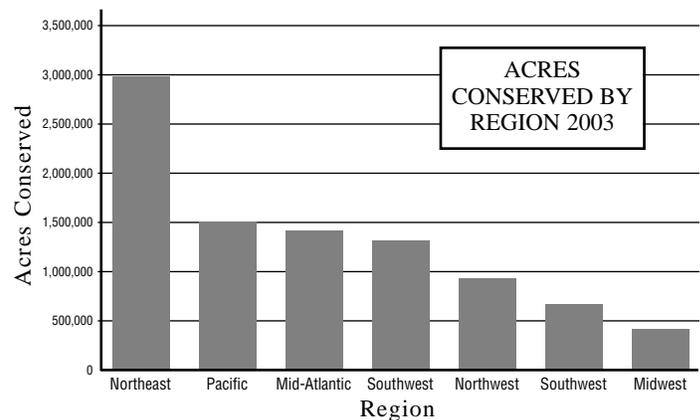
The Land Trust Alliance (LTA), a national association representing land trusts since 1982, recently released its census of progress made by land trusts over the last 5 years. The nation's local and regional land trusts had conserved over 9 million acres as of December 31, 2003, doubling the acreage protected just 5 years ago and creating an "everlasting legacy on the land," according to the LTA President Rand Wentworth.

Wentworth attributes the success of land trusts to their grassroots nature and their entrepreneurial spirit. "These groups—many of them all volunteer—represent the best of community spirit in America, bringing people together to protect some unique piece of land that, for them, helps define what makes their community unique." Wentworth stressed that land trusts work solely through voluntary private transactions, often fulfilling a landowner's wish to keep their land as it is for their children and future generations.

Despite this progress, Wentworth and others in the land conservation community cite cause for alarm. "The current rate of development essentially means that we have at most 20 years to protect our most cherished landscapes before they are lost forever," said Wentworth. "Private land trusts are our last best hope, particularly now that deficits will severely limit the ability of the federal government to conserve new lands. Land trusts are vitally needed to do this work."

The National Land Trust Census, the nation's only tabulation of the achievements of the private, voluntary land conservation movement, describes how people in their own communities are helping to safeguard water quality, preserve working farms and ranches, and protect wildlife habitat and other natural areas. The Land Trust Alliance's Census identified several milestones:

- Local and regional land trusts have now protected 9,361,600 acres of natural areas, an area four times the size of Yellowstone National Park. This is double the 4.7 million acres protected as of 1998. Although this Census tallies data only from local and regional land trusts, national land trusts have



protected an additional 25 million acres.

- A record 5 million acres were protected through voluntary land conservation agreements, more than triple the amount (1.4 million acres) protected just five years ago.

During the last five years, the land trust community has seen growth in many areas. California, Maine and Colorado led the nation in the amount of acreage protected by local and regional land trusts. Land trusts in the Northeast protected a total of 2.9 million acres. Percentage increase in lands protected was highest in the Pacific. In the states of California, Nevada and Hawaii alone, protected lands jumped 147 percent to 1,521,007 acres, up from 614,796 acres protected as of 1998. In second place, the Southeast experienced a 123 percent increase in protected acreage – 648,895 acres in 1998 compared to 291,413 acres five years earlier.

Information for this article was contributed by the Land Trust Alliance. Additional information on the Land Trust Census is available at their website at [www.lta.org](http://www.lta.org).

## Land Trust Convenes Partners to Consider Growing Problem of Invasive Plants

In November, the Land Trust convened representatives of ten public conservation agencies and non-profit organizations to discuss the spread of invasive, non-native plants in the Finger Lakes region. The Land Trust and other conservation groups are increasingly concerned that our native habitats are being degraded by the spread of plants such as garlic mustard (*Alliaria officinalis*) and Japanese knotweed (*Polygonum cuspidatum*).

The purpose of the meeting was to explore common interests in increasing research, monitoring, education, and management activities to address the problem. All present agreed that much more needs to be done. As a first step, those present agreed to meet again to discuss opportunities for collaboration and also support an upcoming educational

workshop that will be held in Ithaca sometime in early May.

The New York State Invasive Plant Council (IPC) and Cornell University are organizing the session. According to Pam Otis, Associate Environmental Analyst for State Parks and an IPC board member, "the workshop will be designed to assist land managers and others involved in invasive plant management, as well as those who are interested in getting involved."

Please contact the Land Trust office if you would like to learn more about this upcoming workshop, as well as opportunities to get involved in invasive plant control efforts on Land Trust preserves.

Special thanks go to the U.S. Fish and Wildlife Service's *Partners for Wildlife* program and Cornell Cooperative Extension of Tompkins County for their support of the recent meeting.

# Scenes' from our Nature Preserves...

Dick Ruswick



*Lower Falls at the Sweedler Preserve at Lick Brook*



Jim Kersting

*Wintertime at Al and Sybil Craig's conservation easement property above Canadice Lake*

Emily Eisman



*Volunteers (l. to r.) Paul Kintner, Peg Strickland, Connie Kintner, Frank Moran and Scott Winkelman after a rainy day's work at the High Vista Nature Preserve*



Abbey Chermela

*Ribbon cutting ceremony during the recent trail dedication at the High Vista Nature Preserve*

Betsy Darlington



*Cayuga Inlet on a sunny early winter morning at the Lindsay-Parsons Biodiversity Preserve*



Emily Eisman

*Volunteer Peg Strickland preparing a new trail at the High Vista Preserve above Skaneateles Lake*

*“The oldest task in human history: to live on a piece of land without spoiling it.”*

– ALDO LEOPOLD

Jim Kersting



*Paddling on Canandaigua Lake at the Hi Tor Paddle Adventure, part of the Land Trust’s 2004 Talks and Treks series*



Betsy Darlington

*Romulus High School Senior, Jared Hoyt, earning his Eagle Scout badge with an interpretive brochure project for the Whitlock Preserve in Romulus*

## VOLUNTEER PROFILE

### Mike and Wendi Cartwright Do More Than Physical Chores for the Land Trust

*“OK! Let’s change positions,” called the canoe trek leader at the Honeoye Inlet. After a moment of startled silence, everyone laughed – everyone except Mike and Wendi Cartwright, who called the leader’s bluff and scrambled past each other in the canoe.*

That’s one example of the high-spirited response to risk and challenge that Mike and Wendi bring to their lives and activities as volunteers in the Western Lakes Chapter of the Land Trust.

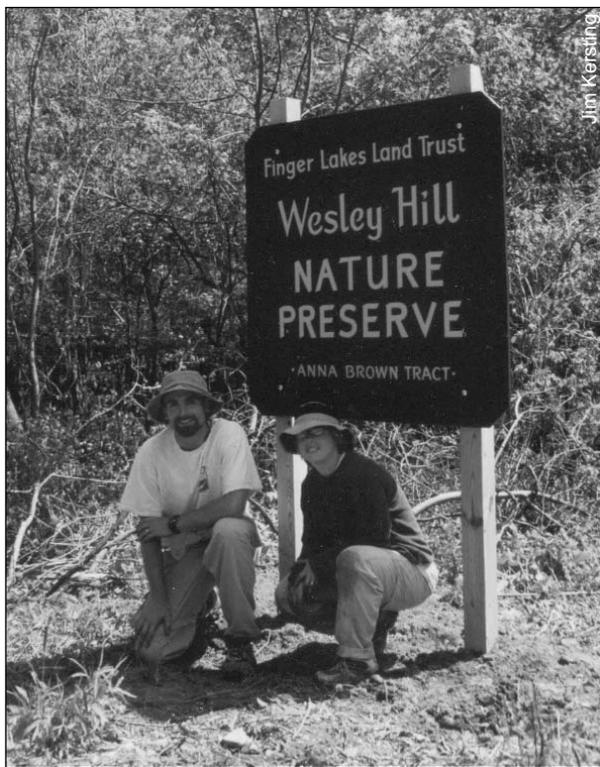
“There’s a photo of Mike hanging up the Finger Lakes Land Trust sign on Main Street in Canandaigua,” recalls Jim Kersting, Land Trust Vice President. “The ladder was a bit short; Mike was really stretched out, probably putting himself at risk, but he had his safety glasses on, drilling into the brick of a 150-year-old facade 15 feet off the ground.”

The couple live about four miles south of the Wesley Hill Nature Preserve on “a dirt road off a dirt road,” as Jim puts it, adding, “Shortly after we acquired that land, Mike and Wendi noticed our cleanup activity and came out on a wet, cold day to help pull down an old cabin.”

Mike is now co-steward of that preserve, hiking the land, maintaining the kiosks, conducting yearly boundary checks, and coordinating trail work and other maintenance activities. He insists the work is easy. “We have so many unofficial stewards helping to keep the preserve in shape,” he says. “The best part of being steward is the pride you feel when you find messages in the trail journal saying how much people enjoy the trails and how they consider the preserve’s natural beauty to be a treasure.”

Wendi has been co-coordinator of the

Western Lakes Chapter Talks and Treks program for the past two years. She helps determine each year’s events, contacts speakers, lines up leaders, prepares literature for each activity, and follows up with



*Mike and Wendi Cartwright taking a brief respite during a hard day’s work at the Wesley Hill Nature Preserve*

thank-you notes to the volunteers.

She and Mike also frequently host these events. They find the series a great way to educate the public about the Land Trust and about the interesting places and people of the region. “We like to explore; being hosts gives us chances to see new places, too,” Wendi says.

Mike is an engineer for General

Motors, developing fuel cell technology for automobiles. Wendi, a part-time accountant, is returning to school for massage therapy.

They grew up in small towns south of Buffalo, enjoying the outdoors. Wendi rode bikes and horses, while Mike was catching crayfish in local creeks, and both went camping with their families. They started backpacking, mountain biking, and cross-country skiing while dating in college.

As adults they’ve made it a point to see new places farther afield and take adventurous vacations at least once a year. Those adventures have so far included more than two weeks exploring Glacier, Teton, Yosemite, and Sequoia national parks, two weeks in Alaska, ten days on a motorcycle trip around Arizona, and a trip to Texas Big Bend National Park last Thanksgiving.

They’ve been married nine years and have two dogs, Sadie and Bernie, and two cats, Merridith and Beta. “We have about 15 wooded acres,” Mike explains, “with many old oaks, a small pond, several gardens, and lots of wildlife, including bears, for our two dogs to harass.”

Fred Remus, another Western Lakes Chapter volunteer, is an admirer. “They grow organic vegetables and make their own wine,” he says. “They work with local progressive politicians, sharing their passion for justice with friends and family. I first met them five years ago doing trail maintenance, and I was impressed that Wendi gave me her beer after working all afternoon. I thought anyone who would give up a cold beer on a hot afternoon must be all right!”

Jim Kersting sums up the Cartwrights’ passionate contribution of time and energy to the Land Trust: “What I appreciate is that they do more than the physical chores,” he says. “Hosting Talks and Treks is time-consuming; they come to chapter meetings and some annual meetings; they feel some ‘ownership’ in the Land Trust.”

– Caissa Willmer

## BUSINESS PARTNER PROFILE

### BorgWarner Morse TEC Inc.

**B**orgWarner Morse TEC is no stranger to the region's landscape. An active business member of the Land Trust for the past 5 years, BorgWarner recently supported our efforts to raise funds for the Lindsay-Parsons Biodiversity Preserve by making a generous donation.

Located on Warren Road in Ithaca, BorgWarner supplies timing systems for automotive engines and drive systems for 4-wheel and front-wheel drive vehicles. The division employs 1500 people in Ithaca and another 200 at a satellite plant in Cortland. One of the first things people notice when visiting the Ithaca campus is its beautiful natural setting. Sitting on 163 acres with a pond, mature trees and abundant wildlife, the campus seems far more in-tune with the environ-

ment than most manufacturing sites.

Cal Organ, BorgWarner Morse TEC's Vice-President of Human Resources, sees a solid link between the Land Trust's mission and the corporation's commitment to good citizenship. "We owe much of our success to engineers and the natural sciences," he says. "Our support of the Land Trust hopefully reinforces awareness that we can't continue to abuse the planet." The company welcomes the growing demand for more environmentally sensible vehicles. "BorgWarner is staying ahead of that curve by investing in the development of products that improve fuel efficiency and reduce emissions," Organ says.

Organ believes the Land Trust's regional footprint distinguishes the organization. "We have employees that

commute here from Syracuse in the north, to Sayre in the south, and similarly far to the east and west," he says. "The Land Trust's regional coverage, in so much as it extends across the entire Finger Lakes region, stands out when we consider the many deserving local causes." He also notes that the Land Trust is one of the few regional organizations that focuses on environmental issues.

"We are fortunate to have business partners like BorgWarner that are able to see the big picture, and recognize that supporting land conservation benefits everyone," says Executive Director Andy Zepp.

Thank you BorgWarner.

— Rich Sheiman

### Land Trust Hires Senior Field Representative for Western Lakes

**T**he Land Trust is pleased to welcome Betsy Landre as its new Senior Field Representative. A resident of Canandaigua, Betsy will assume responsibility for advancing the Land Trust's land protection, outreach and fundraising efforts in the Western Finger Lakes region.

Landre brings a wealth of experience to the position. For the last 12 years, she has served as program coordinator for the Finger Lakes-Lake Ontario Watershed Protection Alliance, a coalition of local governments, watershed groups, academic institutions, and state and federal conservation agencies. She holds an M.S. in Natural Resource Planning and Management from Cornell University and a B.A. in Environmental Studies and Sociology from St. Lawrence University.

On accepting the position, Betsy commented, "I love the Finger Lakes landscape, and look forward to the opportunity to work with residents of the region to preserve the area's finest vistas and unique natural areas."

"We're delighted that Betsy will be joining the Land Trust," says executive director Andy Zepp. "Her experience with the Watershed Protection Alliance will be directly applicable to our efforts in the western Finger Lakes."

Landre will be based in the Land Trust's Canandaigua office. Please join us in welcoming her aboard.



*The Land Trust's  
new Senior Field  
Representative,  
Betsy Landre*

### Skaneateles Lake: Local Natural Wonder

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high elevation pushes moist air up over the ridges where it cools and falls as snow. Along with boasting the first and last snowfalls of the winter, the snow stays heavy through the cold season, creating a true haven for those who love winter.

Although preserving the rich natural beauty of this area remains important, perhaps even more important is the need to protect the lake's clean water and healthy forest habitat. Studies show that when impervious surfaces like asphalt cover more than 8 to 10 percent of a watershed's area, a decline in habitat and water quality inevitably follows. To keep this watershed below that threshold, the city of Syracuse is primarily focusing on protecting the sensitive lands at the north end of the lake from development. In partnership, the Land Trust has embarked on a campaign in the southern end to keep Skaneateles Lake one of the cleanest in the world.

— Krishna Ramanujan

# Cayuga Watershed Project Identifies Critical Lands

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Bill Hecht



With some of the richest agricultural soils in the northeast, farming plays an important role in the Cayuga Lake Watershed

approach used to secure these greenways.

Perhaps the most significant finding of the yearlong study was the consensus that conserving open lands within the watershed should be a high priority. Local officials, researchers, naturalists and agriculturists all agreed on the value of acting now to conserve those lands that play such an important role in maintaining our natural systems as well as our quality of life.

The Land Trust is already working to conserve many of the resource areas highlighted above. By completing this yearlong project, we have been able to further refine our focus. Do we now know everything we need to know? Absolutely not – much work remains to be done to plan for future conservation efforts in these areas, from analyzing wetland buffer areas to researching forest ownership. The Land Trust will pursue these efforts in conjunction with a diversity of partners, from private landowners to local municipalities, county and state agencies, and non-profit organizations such as the Cayuga Lake Watershed Network. At the same time, we will continue to expand our land protection efforts in this area.

A summary of the Cayuga Lake Watershed Critical Areas report is available on the Land Trust's web site (<http://www.flit.org>) or may be obtained by contacting our Ithaca office. Special thanks to the Cayuga Foundation, Community Foundation of Tompkins County, Cornell University, Nelson B. Delavan Foundation, Kenneth Iscol, Nucor Steel, and the Park Foundation for making this project possible.

– Andy Zepp

## Wish List

An attractive table, approx. 48" x 16", for the newly renovated front foyer of the Leopold Center

1-3 copies of the New York State Delorme Atlas & Gazetteer

Our deepest appreciation to David Stern for volunteering his piloting services as well as the use of his plane for aerial photography

Thank you to Cornell's Society for Natural Resources Conservation for donating the proceeds from their Earth Day 5K run.

Our sincere thanks for gifts in celebration of the birthday of:

Paul Grebinger  
From  
Joan and David Brumberg

Our sincere thanks for a gift in honor of:

Sam Cohen  
From  
Kathy McLaren

We are deeply grateful for donations in memory of:

**Rollin Bauer, Jr.**

From  
Fred and Margaret Sibley

**David Creque**

From  
Joan and Edward Ormondroyd

**Charlotte Kersting**

From  
Bill and Valerie Yust

**Homer Morrissey**

From  
Douglas Beech

**Michael Sandritter**

From  
Glove House, Inc.

**"Bobbi" Dorothy Street**

From  
Tom and Doreen Deisenroth

**Carl Strickland**

From  
Union Springs Teachers' Association

**Jonathan W. Thompson**

From  
Robert and Genevieve Thompson

**Robert Thurber**

From  
David Thurber

Our sincere thanks for gifts in celebration of the wedding of:

Alice Scheffer and Paul Mason  
From  
Sandy Bacharach  
Dwight Berreman

# A CLOSER LOOK

## How to Beat the Freeze

We all know the simple strategy some animals and insects use to withstand the winter freeze. Some mice, cluster flies, ladybugs and pine beetles take up residence with us in the nooks and crannies of our cozy homes as soon as October temperatures begin to dip into the 30s. But how do the many year-round residents who live outdoors survive the often brutal winter chill?

Non-hibernating animals, such as deer, foxes, gray squirrels and resident birds, eat all winter long to keep up fat reserves for those snow storms and subzero cold snaps they can sense coming. When temperatures plummet to 10 below, with lake-effect snow, the fox has a relatively warm underground den in which to take refuge, often curled up with kin.

Chickadees, on the other hand, roost in the cold air and must use a different strategy. These pint-sized birds must shiver and quake all night long, even when asleep, just to keep their body temperatures up to normal levels of about 105° F. The colder it gets, the harder they shiver, losing body fat at a greater rate. In extreme cold, shivering alone is not enough for survival, so another strategy is needed. Northern chickadees have, in fact, evolved the ability to lower their sleeping body temperature some twenty degrees so that they don't have to shiver quite so hard to make it through the night. Still, for small birds, like chickadees, titmice, kinglets and nuthatches, each winter day is all about fattening up for the shivering night ahead.

In the snowy fields of the Lindsay-Parsons Biodiversity Preserve in West Danby, meadow voles thrive beneath deep snow. The subnivalian (under-the-snow) world is a curious and contradictory one. Although the ground may be frozen several feet down, and the snow and ice above may lie as deep, just at ground level the temperature is always several degrees above freezing. During raging storms and arctic freezes, meadow voles take advantage of this microclimate beneath the snow, blithely feeding on rootlets and insect larva, mating (frequently), giving birth (as frequently) and feeding many young voles all through the winter.

Beneath the frozen surface of nearby Coleman Lake, painted

turtles hibernate in the mud. When the big freeze comes and a solid layer of ice begins to form over the lake, these lung-breathing animals take a deep breath, so to speak, then submerge and burrow in the muddy bottom for as long as solid ice remains – as much as four months in our area. They are assured of safety from predators and insulated against freezing, yet they have also chosen a nearly oxygen-less environment in which to spend the winter months. Their trick is to adjust their metabolic rate to survive on a miniscule supply of air while gradually consuming fat reserves stored up from autumn foraging. They rarely move, lest they burn more energy than they can afford. Much the same

strategy is used by pond-hibernating frogs at Lindsay-Parsons, such as the northern leopard frog.

The gray tree frog, wood frog and spring peeper have developed an even more intriguing way to beat the cold. They spend their winters away from water, buried only inches deep in leaf litter, where they are exposed to the coldest temperatures of winter. There they quite literally freeze. To all appearances, they are dead for the duration of the winter – with no heartbeat, no breathing, no

blood circulation. They are rock hard to the touch, yet on the first warm days of spring, they revive themselves and begin their search for open water where they can breed.

This strategy is known as freeze tolerance. Cause of death by freezing occurs when razor-sharp ice crystals accumulate in animal tissue and destroy cells by rupturing and collapsing them. As soon as the first ice crystals begin to form on their skin, the frogs begin to change the chemistry of their cell interiors to a heavy glucose solution, which acts as an antifreeze protecting the vital cell structures. Up to 65 percent of the frogs' body-water, contained in the spaces between cells, can thus freeze solid without harming the cells themselves.

Next time you take a winter walk through the woods or fields, or pause for breath during a pond-hockey game, take a moment to consider the extraordinary ways many familiar animals manage to survive our frozen winters.

– Eben McLane



Betsy Darlington

*A recent afternoon at Coleman Lake as the residents of Lindsay-Parsons Biodiversity Preserve ready for winter's onslaught*

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## WINTER 2004-05 CALENDAR

**Saturday, February 19, 10:00 am – Noon**

### **“Winter Outing” at the Wesley Hill Nature Preserve.**

Bring your cross-country skis or snowshoes or hiking boots for a moderately strenuous tour of the 360-acre Wesley Hill Nature Preserve. The tour will include a stop at the circa 1920's Wenrich cabin and a short talk around the camp stove. Meet at the Wesley Road parking lot.

For more information call 585-367-2301.

**Saturday, March 5, 10:00 am**

### **“Late Winter Wander” at the Ellis Hollow Nature Preserve.**

Bring your snowshoes or hiking boots for an outing that will help you gain an appreciation for late winter in the Finger Lakes. Led by Betsy Darlington. Meet at the preserve parking area off Ellis Hollow Creek Road.

*See our website 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 OR VISIT OUR WEBSITE AT WWW.FLLT.ORG FOR DIRECTIONS.