

The Lake Reporter



Feb 2015 | Volume 15 | Issue 1

Hemlocks in the Watershed: A Threat and Treatments

They hold the gullies together, and their loss would lead to unprecedented erosion.



Signs of a Hemlock infested with Hemlock Woolly Adelgid: Fuzzy, white "woolly" masses attached to the base of needles.

Photo Courtesy of New York Invasive Species Clearinghouse

Anyone who's spent much time in the Finger Lakes will love hemlocks, whether they know the trees specifically or not. At some time, out walking, they've found a silent grove of huge evergreen trees that seems just right for sitting and thinking. Chances are good these are hemlocks. Often they are found in gullies, where they contribute to the shade, cool air and good smell.

Eastern Hemlocks (*Tsuga canadensis*) have been occupying Canandaigua Lake's gullies for more than ten thousand years, since the last glaciers moved off. Because they like moisture and tolerate shade, hemlocks are considered a "foundation plant." They hold the gullies together. They keep the water cooler with their shade, benefitting the trout. They survive where other trees cannot and foster a whole constellation of other plants such as ferns, mosses and lichens that favor the gully conditions.

If you say, "I don't know if I've ever seen a hemlock," think a minute about looking across the lake, especially at the south end, when the leaves are off. Those green stripes you see ranging up and down the grey hillsides are mostly hemlocks.

Continued on page 6

Congratulations to Middlesex

Steep Slopes Law passes unanimously

On December 11, 2014, the Middlesex Town Board unanimously passed "A Local Law for the Protection of Steep Slopes in the Town Middlesex," as an amendment to its Zoning Law.

The law itself had been seven years in the making, with numerous hearings at the county and local level, and had undergone changes to streamline its effect on Middlesex laws and to balance the rights of private property owners with the needs to protect neighbors, streams and the lake.

CLWA has been a long-time proponent of the law as a rational means of controlling erosion from development sites. CLWA also favored the law's method of graduated restrictions on three ranges of slope (15-25%, 25-40% and greater than 25%). The new law expands needed engineering studies and erosion control methods before the development of steep slopes can begin.

CLWA congratulates the Town of Middlesex for finding the time and energy to promote this local law. Supervisor Robert Multer and Planning Board Chairman Marty DeVinney are especially praised for their fortitude.

Continued on page 3

From the Chair: Winter 2015

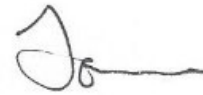
This past month there has been disturbing evidence of Hemlock Woolley Adelgid in the gullies that convey watershed runoff into the south end of Canandaigua Lake. (See the articles on p.1&6). We saw evidence of the infestation during a presentation by Mark Whitmore, an entomologist at Cornell University, in the form of recent trimmings from Hemlocks in these gullies. The evidence was gathered by board member Wade Sarkis and his two boys, while they were hiking some of the gullies at the south end of the lake, the weekend before the CLWA Board meeting. This wasn't their first hike into the gullies, but it was the first since hearing that Woolley Adelgid might indeed have found its way into the Canandaigua Lake Watershed.

The story of the Sarkis' hike reminded me of hikes I used to take with young friends, back in the 1950's, in the steep sloped gully east of the Shore Haven and Orchard Rest Cottage Rental Complexes. The gully runs along the upper portion of Turner Road, then heads northwest, ultimately discharging into the lake at what we called Case's Point (the Case Family had a cottage at the outflow point). The lower portion of the gully was a popular springtime smelting area. As kids we hiked up Turner Road and entered the gully there, traversing the steep southerly bank down to the stream at the bottom. Back in the day we carried a dip net with us and a metal minnow bucket. If we were lucky we took home a couple dozen or more 2-3 inch minnows for bass fishing. No DEC required receipts necessary! To this day there is a little bait shop on Turner Road west of our entry point.

Only once, that I can remember sixty years later, did we take a full afternoon and hike down the gully to East Lake Rd and then down to the lake and back to Orchard Rest. I was eleven that year and my folks bought the cottage just a

few hundred feet north of the outflow point that fall. There were only a couple of cottages where the stream entered the lake and great fishing out front where on a clear day we could see bottom and all kinds of fish among the weeds. The following summer Dad bought an old (leaky) green flat bottomed wooden row boat from the McCormacks, who owned Orchard Rest at the time, and that became the family boat for a couple of years. That old boat had a range of about a half mile north and a half mile south of the cottage, about all a growing boy's arms could manage. Mom would about have a heart attack when we went past the line of site in either direction. But we stayed close to shore, not more than a couple hundred feet from the lakefront docks. I can recall at least once when we strayed too far and got caught in a late afternoon thunderstorm that blew us ashore and we had to walk home and retrieve the boat the next day!

Dad replaced the leaky green monster (it weighed as much as a 12 foot section of old fashion wooden dock), a few years later. It then became the neighborhood sand box. Eventually, probably while I was rowing crew at Cornell, or maybe later when doing docking maneuvers in a three hundred foot long Navy vessel, that green rowboat, where I learned the rules of navigation, how to survive severe storms and a love for rowing, bit the dust ending up as kindling wood. It went up in smoke – the memories live on.



Share the Memories, Live the Legacy, Do No Harm.

Canandaigua Lake Watershed Association

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The Lake Reporter is published quarterly and distributed free to members and supporters. We invite submissions. Please send via postal mail or email to:
lindsaym@canandaigualakeassoc.org

A special thank you to **Lyons National Bank** in Canandaigua for hosting the CLWA Board meetings. Meetings are held the first Monday of each month.

Congratulations to Middlesex Continued from page 1

Town Board members Wayne Dunton, Allan Button, Peter Gerbic, and Leon Button and Planning Board members Bruce St. Lawrence, John Gilbert, Lynn Lersch, and Bob Mincer are thanked for their efforts. Former Town Board member Dan Paddock also worked tirelessly for the passage of the law. Kevin Olvany's role in providing Middlesex with crucial information about details and impact of the law was significant to its passage.

We anticipate that Middlesex Steep Slope Law will become a model in New York State for effective legislation to protect natural resources.

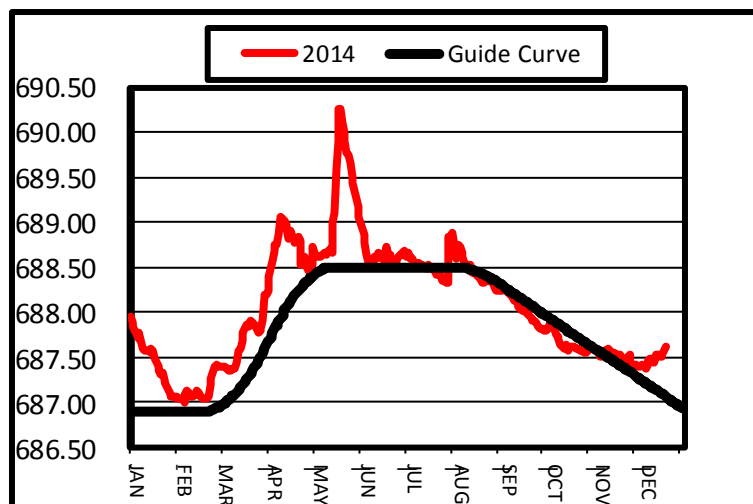
Early Winter Lake Levels

By Stephen Lewandowski, with thanks to Will Clark

Canandaigua Lake has been very well-behaved since mid-August. Its level has followed the Guide Curve with few excursions. At present (December 22), due to some rain and snow melt, the lake's level is 687.61 feet above mean sea level, or about seven inches above the Guide Curve.

There is little evaporative loss this time of year so it's likely the control gates will be opened in the near future. An attempt is made to keep the lake at about 686.9 through the winter so that the heavier spring runoff in February and March can fill the lake without causing flooding.

The chart to the right expresses Canandaigua Lake levels in 2014 compared to the guide curve.



Editor's Note

Clarification on CLWA's position letter: Proposed South Bristol Development

In the October 2014 edition of The Lake Reporter, CLWA printed a position letter that was sent by the Association to the Town of South Bristol in response to the spot zoning request made by the developers of the proposed Everwilde Planned Development Unit (Volume 14, Issue #4, page 3).

We have received several comments from our members that expressed concern over the wording in the letter. CLWA acknowledges that there was room for misinterpretation in the letter, in the below clause:

"The request for relief from the Town of South Bristol's Zoning Regulations by the developers of the pro-

posed Everwilde Planned Unit Development, by rezoning 45.7 acres for 20 parcels plus additional commercial development in a present 3-acre-minimum residential district, is of particular concern to CLWA."

CLWA would like to clarify this statement, as the Association fully understands that the Everwilde proposed development is in lieu of the 20 parcels, **not** in addition to. CLWA would like to publicly clarify that our organization recognizes that the hotel, spa, and banquet facility is a standalone development project.

We apologize for the miscommunication. We had no intent to misstate Everwilde's plans for this development.

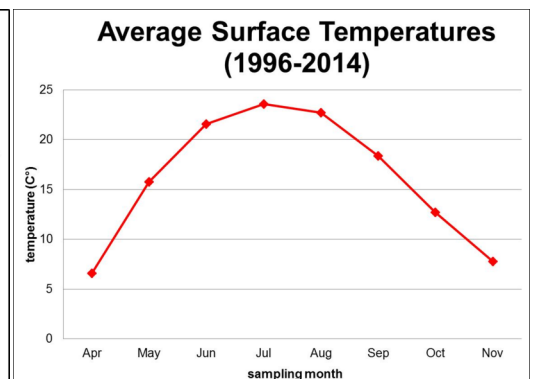
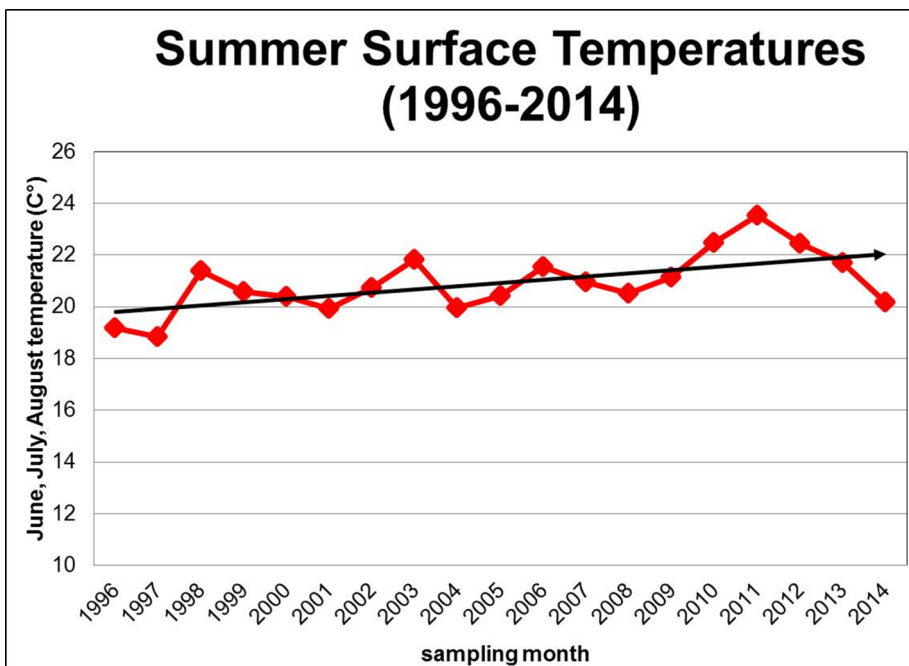
18 Year Trend in Summer Surface Water Temperatures (°C) in Canandaigua Lake

Bruce Gilman
 Department of Environmental Conservation and Horticulture
 Finger Lakes Community College
 3325 Marvin Sands Drive, Canandaigua, New York 14424

Kevin Olvany
 Watershed Program Manager
 Canandaigua Lake Watershed Council
 205 Saltonstall Street, Canandaigua, New York 14424

Perhaps no other factor has as strong an influence on the limnology of Canandaigua Lake as water temperature. Nutrient solubility, water density, water circulation patterns, photosynthesis and biological respiration are all directly regulated by water temperature regime. Monthly temperature profiles through the water column have been collected April to November at two mid-lake monitoring stations since 1996. These depth profiles track the change from nearly isothermal conditions in late April, to periods of strong summer stratification, then a return to isothermal conditions in late November produced by the fall turnover event typical of this warm, monomictic lake.

Summer surface water temperatures from the top of these depth profiles may be a good indicator of long-term atmospheric temperature tendencies due to the high specific heat of water. Simply put, lakes are less susceptible to the daily fluctuations reported from terrestrial weather monitoring stations because lakes buffer atmospheric temperature extremes. Average summer surface water temperatures, calculated as the mean of surface water temperatures during the end of June, July and August at the Deep Run and Seneca Point mid-lake stations, document a variable but gradual increase over the 18 years of record. A trend line fit to the mean temperature data indicates a 2.2°C increase since 1996 thus providing information on the extent of recent climate change in western New York. The correlation value between the years of record and the trend line falls just below the $\alpha = .05$ level of significance ($R^2 = 0.3880$). Excluding the cooler summer conditions in 2014 as an anomaly because it followed a severely cold winter, then $R^2 = 0.5377$. Collection of future temperature profiles should clarify the relationship between variability in annual summer surface water temperatures and long term climate trends. On-going data collection will also be critical for lake managers as warmer summer surface waters likely alter biological relationships among lake organisms and may, in part, contribute to dominance by blue-green algae within the phytoplankton community.



Field assistance was provided by Finger Lakes Community College conservation students and Watershed Council interns.



Agricultural Management Practices in the Watershed

With thanks to Edith Davey

Notes from a Fall presentation to the CLWA Board of Directors by Tom Eskildsen (Yates County Soil and Water Conservation District) and Kerry Haeefe (former staff of Ontario County Soil and Water Conservation District).

The goal of all Best Management Practices recommended and initiated by SWCD programs in the Canandaigua Lake Watershed area is to reduce soil erosion and protect water quality while maintaining the economic viability of farms.

Farms in the Canandaigua Lake Watershed:

9	Dairy Farms (this number is increasing as Mennonite farms expand)
14	Livestock farms (beef, poultry, sheep, horses)
32	Crop farms
14	Vineyards
5	Active farms of undetermined type

Dairy farms must handle approximately **15 gallons of manure per cow/day**. Other waste includes bedding, milkhouse waste and silage leachate. The average dairy herd in the watershed is about 40 cows, although some are larger.

The only CAFO (Concentrated Animal Feeding Operation) regulated dairy is in the far southern end of the watershed. CAFO criteria is based on animal numbers/1000 lbs of weight. Regulations apply for 200 dairy cows, 300 beef cows, 300 veal calves, etc.

A dairy cow will consume the products of 0.5 acre of corn and 0.5 acre of hay per year. It will require 18,250 gallons of drinking water. Soybean meal and mineral supplements are usually purchased from off-farm sources.

Liquid dairy barn manure is typically stored either in (lined) earthen pits or concrete pits. A few utilize above-ground storage structures. These are usually emptied twice a year in spring and fall. Land spreading may be accomplished by spraying manure on fields. Knifing in manure requires specialized equipment but eliminates odors. Storage pits/facilities create anaerobic conditions in the liquid manure, leading to strong odors when spreading occurs. Bedding packs are more solid (typically, straw/sawdust) and can be allowed to accumulate in the barns until spreading time is available. Side-slinger or conventional manure spreaders are used for bedding waste.

Application in unfavorable weather conditions, on unfavorable soils or steep slopes can lead to problems. Shallow, gravelly or bedrock soils or those with high water tables are poor sites for application and can limit capturing the nutrients (nitrogen and phosphorus) present in the manure. Concentrating too much spreading in areas close to the barns results in over application and leaching of nutrients to groundwater.

CAFO farms or those receiving state or federal grant funds must follow USDA guidelines for manure management. 100' setbacks from streams or wetlands are required, but may be reduced to 35' if there is a vegetated buffer between the field and water source or to 15' if incorporated into the soil within 24 hours. Manure can't be spread in areas of concentrated flows or frequently flooded areas. Spreaders should be calibrated to deliver manure in accordance with Cornell University's nutrient guidelines for the soils and crops. The decision to spread should be done on a check of the 48 hour weather forecast. Other farms are encouraged to follow the guidelines on a voluntary basis.

There are no specific plowdown rule for fields not adjacent to water bodies or wetlands unless the field/soil analysis indicates it is necessary. Setbacks, filter strips, windbreaks and buffers allow nutrient takeup and protect water quality. However, they also represent yield reductions and loss of revenue for farmers.

The goal of the Best Management Practices recommended and initiated by SWCD programs in the Canandaigua Lake Watershed area is to reduce soil erosion and protect water quality. Installations (e.g. manure storages, leachate containment, detention ponds) must be designed and built to NRCS (Natural Resources Conservation Service) standards with a design life of 10 years. Hydrologic analysis of practices are based on 10 and 25 year storm events.

Several projects were highlighted. It was noted that convoys of manure handling/spreading trucks come through the area twice a year, contracting emptying manure pits. A sudden storm caused an unwanted manure flow. An emergency diversion conveyance and storage pond (WASCOB) was dug to contain the manure.

WASCOB stands for Water And Sediment Control Basin, a structural sediment erosion control practice eligible for incentive payment under the USDA-NRCS Environmental Quality Incentive Program (EQIP). Buffer areas are also eligible for incentive payments from USDA-NRCS Conservation Reserve Program. Unfortunately, the level of payment is below what a farmer could expect to gain through cropping the same area. Supplementing that payment could provide incentive for farmers to install more such detention ponds.

Haeefe noted that uphill detention ponds can likewise reduce flows to road culverts, helping to protect municipal infrastructure and reduce sediment movement toward the lake. SWCDs provide nearly all services to farmers, private residents, businesses and municipalities free of charge. Districts are not regulatory and have no enforcement powers. Cost-share funding for Agricultural Environmental Management projects is applied for by the Districts annually.

For more information, visit the Ontario County Soil and Conservation District's website at: ontswcd.com.

Hemlocks in the Watershed

Continued from page 1

Veteran Forester Joseph Illick said the hemlock was “one of the most attractive, if not the most attractive, of our coniferous ever-green trees.” Another forester added, “Hemlocks are like Indians; they will not stand civilization.”

The Threat

The Hemlock Woolly Adelgid (*Adelges tsugae*) was accidentally introduced into the United States from Japan in the 1950s and was first found in the eastern states near Richmond, VA in the early 1950s. The scale-like insect pest which is fatal to Eastern Hemlocks is now established in eleven eastern states from Georgia to Massachusetts. In the Finger Lakes, HWA appeared several years ago on the shores of Cayuga, Seneca, Keuka, Hemlock, Skaneateles and Owasco lakes. In the fall of 2014 it was found near Canandaigua Lake.

The HWA is tiny but can be identified by its egg masses which resemble tufts of cotton on the needle axil. HWA can reproduce twice per year asexually. It is not very mobile, with larvae emerging in the spring and being spread by wind, birds and mammals.

The Hemlock Woolly Adelgid was discovered in the Canandaigua Lake watershed by Zach Sarkis and confirmed by Dr. Bruce Gilman of FLCC and Dr. Mark Whitmore of Cornell University. Searches since Sarkis’ discovery have found infestations in Barnes, Seneca Point, Long’s Point, Coye Point, Menteth, Parish (Conklin), Flint Hill Road, and Deep Run Gullies. The search is currently incomplete but Tannery Creek, Grimes Glen and Clark Gully were searched and found uninfested.

In most cases the infestations were light, seeming to indicate a recent occurrence. In some gullies, hemlocks a hundred feet from infested trees were clean of HWA. But the history of HWA suggests it will spread to all hemlocks of the Canandaigua Lake watershed, with fatal consequences.

Treatments

At present there are two pesticide treatments for HWA licensed for use on individual trees: imidacloprid and dinetofuran. Only licensed pesticide applicators can buy and use these materials. The former is used more as a prophylactic and the latter for heavily infested trees. Both are sprayed on the lower bark of the trees or can be buried as capsules in the ground.

There is no treatment that could currently be used on a watershed or landscape basis. A predatory beetle has, however, shown promise as a biological control agent for HWA: *Laricobius nigrinus*, a native to the Western United States feeds heavily on HWA eggs and has significantly reduced HWA populations in five months in other locations. Though this biological control appears to give positive results, it has thus far only been used experimentally.

Sources of information and help

- Dr. Mark Whitmore of Cornell University (mcw42@cornell.edu) has a website (nyis.info) which offers advice and help on HWA. He needs funding to develop the biological controls that could be deployed to protect the watershed, especially the gullies, of Canandaigua Lake.
- Mr. James Engel, proprietor of White Oak Nursery in Geneva and Canandaigua has a website (whiteoaknursery.biz) with excellent information on HWA and its treatment, including rates.
- Volunteers could help CLWA to fight HWA in several ways: monitoring for HWA, planting hemlocks, creating hemlock hedges that would be used to raise and distribute *Laricobius nigrinus*, and monitoring their efficacy. Call our office at 394-5030 to volunteer.

Interested in planting Hemlock trees?

Hemlocks are one of the most beautiful of the evergreens, and can be maintained in an attractive hedge. Prefers moist, well drained soil.

Ontario County Soil & Water Conservation District is currently running its Annual Tree and Shrub sale. Eastern Hemlock is readily available, along with many other native trees and shrubs. Check out their website (www.ontswcd.com) for more information on ordering.

Join us for a workshop!

Cornell Cooperative Extension, Finger Lakes PRISM, and CLWA will be hosting a public forum on HWA in the Canandaigua Lake Watershed on Wednesday, February 25th from 6-8 PM at the Cornell Cooperative Extension of Ontario County office. Contact Emily Staychock at 315-536-5123 ext 4127 to register.

Hemlock Woolly Adelgid in the watershed



Though the Hemlock Woolly Adelgid was detected in the Finger Lakes Region in 2008, it has only been recently discovered in our own watershed. Detecting new HWA infestations at the leading edge of its range is critically important for slowing the spread of HWA. Canandaigua Lake Watershed Association asks you to join with us in the detection of HWA in our area.

Identification Tips

- **Best Time for detection is between January and May**
- **Check underside of branches near the ground, and examine branches that fall to the ground after a storm**
- **Looks like a tiny ball of cotton attached to twigs and the base of needles on Hemlock trees**
- **Examine bark of tree for tell tale wisps of the waxy wool**
- **When examining trees from afar, look for a gray foliage tint**
- **Compare with the photo here, and others on the New York Invasive Species Clearinghouse website: www.nyis.info**

Why are Hemlocks so important to the Lake?

HWA poses a serious threat to watershed health as hemlocks act as a keystone species in this community. Hemlocks typically grow in gullies where their roots hold the soil in place on steep slopes. When hemlocks in these locations die, the slopes are more susceptible to soil erosion, which can lead to water quality issues. Soils hold nutrients such as phosphorus and nitrogen, and excessive nutrients in a lake can result in unwanted algal blooms, aquatic ecosystem damage, and poor water quality. Without hemlock to protect the integrity of the ecological community, areas become easily degraded.

If you suspect Hemlock trees on your property may be infected with HWA, call the CLWA office at (585) 394-5030, or send us an email at:

info@canandaiguallakeassoc.org

Your early detection will help us gain a clearer picture of HWA coverage in our watershed.

Identifying Eastern Hemlock (*Tsuga canadensis*)



A line drawing from *Pennsylvania Trees*,
By Joseph S. Illick 1928

The Eastern Hemlock (*Tsuga canadensis*) is not common overall in the Finger Lakes but grows in very strategic locations, such as ravines and gullies. Hemlocks like moisture and tolerate shade so they have grown up in gullies where other trees and shrubs can't. There are few groves of hemlock left within the reach of nineteenth century loggers who harvested them first for tanneries and later for durable lumber.

Slow growing Eastern Hemlocks but can reach one hundred feet tall at maturity after 250-300 years or growth. They are pyramidal in shape and have drooping branches. Their needles are flat and rather blunt. The needles are arranged in pairs on two sides of a twig, glossy green on top and pale green underneath with two white lines on the underside of each needle. Hemlocks have the smallest cones, less than an inch in length, of any local evergreen. They often grow in association with Eastern White Pine (*Pinus strobus*) and Eastern Red Cedar (*Juniperus virginiana*) but are totally different in structure from either.

Hemlocks have been part of the Finger Lakes landscape for over 10,000 years, since the retreat of the last glaciers from this area.



BARK

- The bark of the Hemlock starts out flaky or scaly on young trees; then transitions to deep furrows with irregular ridges on mature trees.
- Bark can range from grayish-brown to reddish-brown.
- Freshly cut bark shows purplish streaks.

A Geologists Report on Squaw Island

By Stephen Lewandowski

Squaw Island is one of only two islands in the Finger Lakes and is owned and managed by New York State. It lies at the north end of the lake and is readily visible from the City Pier.

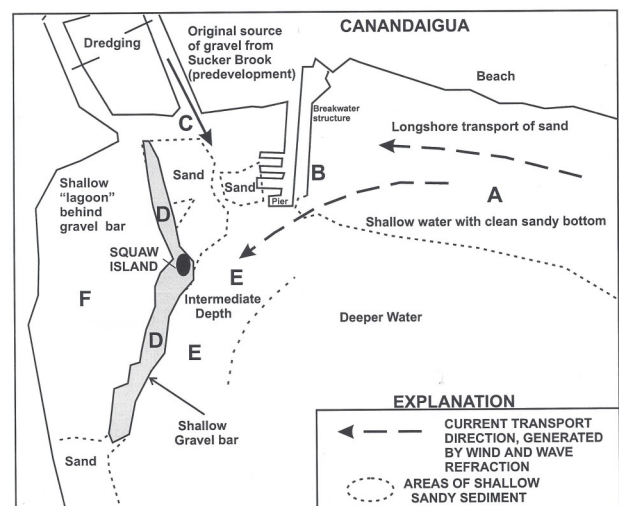
Sixteen years ago, attention was focused on the "shrinking Squaw Island" in Canandaigua Lake. Nineteenth century paintings and photographs of the island show a larger expanse and many more trees. A "Squaw Island Preservation Society" was formed by lakeshore resident Paul Hudson to encourage additional protection efforts that had begun years before with Clifford and Robert Murphy, local businessmen.

Geologist Dr. Richard Young of SUNY Geneseo was asked by the City of Canandaigua for an opinion on the island's geologic origin and modifications. I assisted his research. In December of 1998, he reported to City Council. He spoke of Squaw Island as "a remnant of a larger, emergent island formed on a sand and gravel bar, which was created by the counterclockwise longshore currents interacting with delta deposits of Sucker Brook."

As for the reduced size of the island, Young pointed to:

1. interruption of the transport of the longshore sand and gravel supply by the City Pier construction
2. periodic dredging, deepening and widening of the mouth of Sucker Brook in 1950s, eliminating the source of material that built Squaw Island over the last 11,000 years
3. narrowing of the protective sand shelf on the east and south sides of the island thus exposing it to more wave erosion
4. installation of gates to maintain the lake at a higher level relative to the island's elevation, leading to slumping of the island's material.

Young's conclusion emphasized that the island is an "ephemeral feature that cannot naturally survive" under the permanently changed current conditions without "brut force" engineering structures. Consequently, the Squaw Island Preservation Society and New York State dedicated about \$140,000 to purchase cribs, logs, and large and small stone for a remedy supposed to last for a hundred years.



Explanation of longshore sand migration and generated features associated with the north end.

Squaw Island Geology

From *Squaw Island Canandaigua Lake : Geologic Origin and Modification* By Richard A. Young, PhD.

Dr. Richard Young reports that an important aspect of Squaw Island geology is the gravel component of the sandbar. The postglacial history of the Finger Lakes Region is known to include a late glacial phase (14,000 to 12,000 years ago) when all the Finger Lakes basins were filled with much deeper lakes dammed by the retreating glaciers to the north. Under these circumstances the youngest sediments found in most of the lake basins and valleys are thick layers of fine silts, clays, and sands, which cover over glacial deposits. Erosion of valley sides by streams and waves introduces coarser alluvial materials through time. Gravel deposits in the present bar most likely are derived from wave erosion of low bluffs or banks along the shore, and from delta gravels introduced by the tributary streams such as nearby Sucker Brook. The delta gravels seem a more likely source for much of this bar because of the proximity of Sucker Brook, the distance of the bar out in the lake, and the prevailing westward longshore current direction.

Dr. Richard Young is a Distinguished Service Professor of Geologic Sciences, State University of New York at Geneseo. He presented at the CLWA Fall Viewpoints event on the Geologic History of Canandaigua Lake. Visit the CLWA website (www.canandaigualakeassoc.org) for more information on Dr. Young's research, including a power point of his recent Viewpoints presentation, as well as several other of his geologic reports pertaining to the Genesee Valley Region.

Conservation Easement Protects 181 Acres Adjacent to High Tor State Wildlife Management Area

In January, the Finger Lakes Land Trust announced that it had accepted a donation of a conservation easement on 181 wooded acres in the Town of Italy, Yates County, from Philip Cusick, a resident of Connecticut and a seasonal visitor to the Finger Lakes.

Conservation easements are legal agreements that limit future development while allowing land to remain in private ownership and on the tax rolls. Landowners who donate conservation easements may be eligible for both state and federal tax benefits.

The protected property shares 2,385 feet of boundary with New York State's High Tor Wildlife Management Area, an area comprising 6,100 acres of public conservation land. High Tor spans portions of Ontario and Yates Counties and is recognized by National Audubon as one of New York's Important Bird Areas. This area is also recognized as a priority project within New York State's Open Space Plan.

The conservation easement will ensure the integrity of a parcel that is uniquely situated within both the Canandaigua Lake Watershed and the Upper Flint Creek Watershed. The property encompasses a diverse mix of mature woodlands, meadows, and brush land. The land provides habitat for a variety of wildlife including wide ranging species such as Black Bear.

The easement agreement will prohibit subdivision of the land while allowing for the construction of a single home on the property as well as agricultural use and the selective harvest of timber.

Philip Cusick bought the property in 2006 from his sister, Carol Cusick Fenton and brother-in-law, Thomas P. Fenton, who had owned the property since the 1970s. Carol and Tom planted trees, created open spaces and hiking trails, and for many years enjoyed the ever-evolving beauty of their hill-top property. Philip decided to undertake the easement in honor of Carol and Tom, naming it the "Fenton Easement".

The Fenton conservation easement marks the 114th easement held by the Land Trust and adds to the more than 16,000 acres already protected by the organization. "This is a wonderful gift," says Land Trust Executive Director Andrew Zepp. "Protection of this land will secure a large contiguous block of wildlife habitat while also helping ensure Canandaigua Lake's water quality,"

The completion of this project is the Land Trust's tenth in the vicinity of the High Tor Wildlife Management Area. Earlier accomplishments include the acquisition of the northern half of Conklin Gully – a popular destination for hikers, the acquisition of frontage on the West River – a destination for fishers and paddlers, and its partnership with the Town of South Bristol to establish Carolabarb Park – well known for its scenic overlook just west of the wildlife management area.



Photo courtesy of Nigel Kent



Photo courtesy of Nigel Kent

The Finger Lakes Land Trust is a member supported non-profit conservation organization that works cooperatively with landowners and local communities to permanently protect those lands that are vital to the character of the Finger Lakes Region. To date, the Land Trust has worked with partners to secure more than 16,000 acres of the region's undeveloped shoreline, scenic farmland, rugged gorges, and majestic forest. The organization today owns and manages 35 conservation areas that are accessible to the public and holds conservation easements on more than 100 properties that remain in private ownership.

Additional information on the Land Trust may be found at www.flit.org.

Join the conversation March 11th



Urban Forestry in the Finger Lakes:

Presented by Dr. Christopher J. Luley

Join Christopher J. Luley, Ph.D as he presents on his experience in Urban Forestry in the Finger Lakes Region. Dr. Luley will cover the history of the urban forestry movement, the environmental benefits of urban trees, and urban forest management ideas for the Finger Lakes.

Prior to joining Urban Forestry LLC in 2004, Dr. Luley was a technical advisor and urban forestry consultant for 14 years with two major northeast tree care and consulting companies. He was also a State Forest Pathologist for Missouri and managed the Plant Diagnostics Clinic for Iowa State University. He specializes in urban forest and pest management, and diagnosis of wood decay in urban trees.

Dr. Luley has over 50 technical publications on urban tree topics and three books in publication, one on the decay of fungi common to urban living trees in the Northeast and Central United States, a second on pest management in the landscape, and a third on pruning young and small urban trees.

www.urbanforestryllc.com



Christopher J. Luley, Ph.D.

Vice President /
Pathologist
Urban Forestry, LLC

Chris Luley holds graduate degrees in forest pathology from SUNY College of Environmental Science and Forestry at Syracuse, and Iowa State University.

He is Vice President of Urban Forestry, LLC in Naples, which offers customized forest management services to homeowners, municipalities, engineering firms, and arboricultural service providers.

Event Details

WHEN:

Wednesday March 11th, 2015
From 6:30 pm to 8:00 pm

WHERE:

FLCC Stage 14
3325 Marvin Sands Drive
Canandaigua, NY 14424

RSVP:

By Monday, March 9th
394-5030 or
info@canandaigualakeassoc.org

Viewpoints

Seminar Series

Presented by CLWA

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From the Watershed Education Program

By Beth Altemus

October was a very active month for the education program. Sharon Radak and Beth Altemus visited the sixth graders at Canandaigua Middle School to present a two day lab investigating aquatic macro-invertebrates and how their varying sensitivities to pollution make them effective bioindicators of water quality. During the lab, students in Mrs. Welch's, Mrs. Joroloman's and Mrs. Farnsworth's classes spent the first day identifying macroinvertebrates according to their preferred habitats and pollution tolerance levels. They then found appropriate "homes" for the bugs on a large mural representing stream and pond habitats located in a variety of settings, from completely wild to very developed.

On the second day of the lab, the sixth graders got their hands dirty (and wet!) looking at living samples of aquatic macroinvertebrates. The samples were collected from two different streams, Naples Creek and Sucker Brook. Naples Creek is a very clean stream flowing through a rural area, while Sucker Brook picks up more pollution from the urban areas through which it flows. The students were to first identify each macroinvertebrate in their sample and then decide whether their sample came from Naples Creek or Sucker Brook, based on the dominant sensitivity range of their bugs. This reinforced the concept of macroinvertebrates as bioindicators of water quality. Everyone did a great job and had a lot of fun!

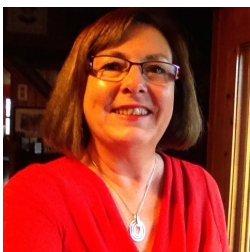
In addition to the sixth grade lessons, Sharon and Beth also visited the pre-schoolers at Naples Little Bunch. They brought in macroinvertebrates collected from Naples Creek and gave the students a chance to observe the bugs with bug boxes and hand lenses and explore their differences in size, shape, color and movement. They also read "Rain Drop Splash", by Alvin Tresselt, which follows the journey of a raindrop as it travels from a daisy's face all the way to the ocean.

The coming winter months will bring a flurry of activity and learning for students throughout the Canandaigua Lake Watershed. Third, fourth, fifth and sixth graders from Marcus Whitman, Naples and Canandaigua will all get to participate in different lessons about how watersheds function and how people impact the quality of the water within them. It promises to be another successful and fulfilling season!



Sampling site at Sucker Brook

CLWA Welcomes our Newest Board Member



The Canandaigua Lake Watershed Association is pleased to welcome **Cecelia Danahar** to our Board of Directors. Cecelia holds a BA in History from the State University of New York at Oswego, and a JA from Albany Law School. She practiced law for 16 years primarily in the areas of residential and commercial real estate development and personal injury litigation. Cecelia brings experience in fundraising and educational development to the CLWA Board, as well as her involvement in a wide array of community and volunteer activities.

Cecelia and her husband reside in South Bristol where they enjoy an amazing view of the hills and the lake. "I believe that we should give back to our communities. I personally enjoy boating, fishing and hiking and would hate to see any of these activities diminished because we did not protect the watershed. I think that given my background in law and education I can assist the Canandaigua Lake Watershed Association in its mission to protect the lake and surrounding watershed. In particular, I think that my experience with zoning and real estate development should be an asset to the CLWA. While I am not opposed to development, it is vital that it be done in a manner that does not have a negative impact on the watershed. I have also served on various boards and organizations, such as the Red Cross and The United Way where I was involved with fundraising campaigns. I look forward to serving on the CLWA board and doing what I can to further its mission to protect the water quality and overall environment of the Canandaigua Lake Watershed."



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The Canandaigua Lake Watershed Association has a strong base of supporters and a long history of protecting Canandaigua Lake and its watershed. Because of many complex and escalating challenges to the health of the watershed, we need YOUR support.

Please choose your tax-deductible level of support.

- _____ \$ 45 Guardian
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- _____ \$ 100 Lake Leader
- _____ \$ 250 Watershed Steward
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- _____ \$ BUSINESS MEMBER (Business Memberships start at \$100 and include a special listing in an upcoming issue of ***The Lake Reporter***)

Membership year will begin with receipt of your application and extend to December 31, 2015. All information you provide will be used for the sole purpose of communicating with you. We will not share it with others.

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