

# Network News



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## Bugs Benefit from Fall Leaves

By Sharon Anderson, Watershed Steward

The riotous colors of fall leaves that were a feast for my eyes are already losing their charm as they lie on the forest floor and gather in the creeks. Through the coming winter these fallen leaves will turn brown then disappear as they provide a more literal feast for the stream's inhabitants. Millions of juvenile insect will break down the leaf litter that collects in streams and wet areas, so that once spring arrives, there won't be very much left. Though the streams may be cold from now until spring, these chilly months are when aquatic stages of insects are growing in preparation for spring and summer hatches.

Before the weather gets too cold, go out to a stream and pull up a few leaves. Be brave and dig down in muck a little bit until you get to leaves that are partially decomposed. Then, if you start picking through them carefully, you'll probably find a multitude of crawly insects, known as "macroinvertebrates." If you have a net or strainer, you can hold it against the bottom of the stream and gently disturb the area upstream of it. Nestled amongst the leaves and caught in your strainer will be a collection of insect larva and nymphs – the young stages of adult insects. Some will be common insects such as dragonflies and damselflies more familiar in their adult, airborne stage. After spending one to three years underwater they emerge from the water and take to the air. Many are vulnerable during this transition must to the delight of fish and the fly fishers that head to the streams with artificial flies that mimic whatever insect is hatching.

The leaves form the base of the stream food chain. They leach out nourishment that flows downstream supplying the important building block of carbon. They are colonized by small creatures such as fungi and bacteria that then become the primary food source for bottom-dwelling insects that shred the leaves and for the opportunistic collectors the filter out tiny bits of leaves from the water. Some of the insects will fall prey



Adult dragonfly  
(*Tachopteryx thoreyi*)

Credit: stephenville.tamu.edu

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NRCS

**Sat. November 11, 9:00 a.m. to 12 noon**  
**Cayuga County Soil and Waters Conservation District**  
**7413 County House Road, Auburn**

For outdoor enthusiasts, the farming community and those interested in alternative energy. See back page for details.

Contact [manager@cayugalake.org](mailto:manager@cayugalake.org) or 607-532-4104 to register

# WATERSHED STEWARD'S MESSAGE

By Sharon Anderson, Watershed Steward

## I'll use this space in an unusual way this issue – to clean up some loose ends.

- 1) At Lakefest this year, an umbrella and blue sweater were left behind. Please let us know if one of the items might be yours.
- 2) All of my emails were lost when my hard drive crashed. Anyone who was expecting an email reply from me and did not receive it, please accept my apologies and resend the message ([steward@cayugalake.org](mailto:steward@cayugalake.org)). I especially want to reconnect with a person who suggested someone I might interview about the Canoga Marsh area. 🐦



## AT WORK IN THE WATERSHED

**T**he shorelines of Fall Creek and Salt Point, lakeshore property in Lansing, are cleaner thanks to the efforts of volunteers. Once again a joint effort of the Watershed Network,

Fall Creek Watershed Committee and Trout Unlimited resulted in removal from Fall Creek of just under a ton of trash. The Salt Point Clean-up was done as part of a nation-wide com-

mitment to clean up beaches and shorelines. A unique aspect of this American Littoral Society effort is the recording of litter collected. Knowing how many bottles, jugs, cigarette wrappers, items of clothing, etc. are collected helps with campaigns to stop littering and expand recycling. In the estimated 400 pounds collected on one morning the most interesting items were a set of dishes, firecracker remains, stack of asphalt roof shingles, pile of old vinyl flooring, and a small "camp" in a thicket with mattress, shoes, set of shelves, chair and fire pit.

If you go near the Town Halls of Lansing or Newfield, stop by and look at the dry stalks of flowers in two new demonstration rain gardens. Thank them for their work cleaning storm runoff and stopping some rainwater from reaching the creek where it could contribute to flooding. The two demonstration gardens capture stormwater and model what is possible on nearly every property. See page 6 for related article on rain gardens. 🐦



*Creek and shoreline clean ups are just two of the ways volunteers are making a difference. There are many other volunteer opportunities including serving on committees, helping with restoration projects and tasks customized to your skills and interests. Find out more by contacting Sharon Anderson, Watershed Steward (contact information below.)*

### Cayuga Lake Watershed Network

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# Cayugan Trout and Salmon

by Dr. James Murphy, DC, 1st Place Adult

There is a proud fish mounted on my wall, a brown trout all of 9 pounds when he finally arrived netside that one fine spring day back in '99. *Salmo fario* they like to call him in learned circles, for in the instant I brought him aboard the Owl's Nest, it was clear I had captured a beautiful creature complete with spots both brown and indigo. Feeding on smelt approximately 90 feet down, it was immediately clear that he had been enjoying a frenzied feast...as evidenced by his gorged, swollen midships. An angry onyx eye stared at me as he lay there for here was the finest trout I had ever caught of his kind.

The day progressed and the fishing remained vibrant, filled with surprises. A pink-shaded lure trolled at 50 feet suddenly spasmed against the line and the rod beckoned us to heave to. Frantic is how one describes the behavior of both equipment and angler when nearly any rainbow trout strikes from the depths. *Salmo irideus* is a world-class fighter, an acrobatic leaper - and this finned pugilist was no exception. Breaking the water's surface repeatedly, she then switched tactics - pursuing the fight with lunges to the watery abyss below. Ever so gradually, the trout was coaxed to the surface... with the warm, soft spring sunlight magnifying the exquisite pink stripe on her sides the rainbow trout is so well known for. 'Freedom to fight another day' was the rule at this point, she left us feeling exhilarated and completely awestruck. Like children who just caught their first trout, another fond, vivid memory was gained.

By far the most common trout species in Cayuga Lake are the lake trout (or locally 'lakers'); the morning remained busily filled with our repeated catching and releasing one after another. *Salvelinus namaycush* (the latter meaning 'deep dweller') is an apt description for this bottom-residing trout that makes it a point to reside where the greatest amount of baitfish can be found. Up until the new millennium, the lake trout frequently were boated in the 10-pound class...or greater. They are a thing of beauty, their broad backs giving off shades of black and blue, their white markings offer classic vermiculated ('wormy') appearances. Just before netting them, they have a classic belly-up rolling pattern to their fight....not unlike an alligator or crocodile.

Landlocked salmon close out this exclusive group of noble fish - and indeed, though none were caught that day,

I do remember my initial encounter with *Salmo salar* (aka the Atlantic Salmon) in the late Fall of '97. The uniform hills were adorned with autumn colors and the early morning temperatures hovered in the 40's. Trolling above the 100-foot level, we could easily see the billowing masses of

baitfish above/below this level on the sonar. Nothing but the breeze of the morning air could be felt...the lake surface calm as glass. As fishermen and fisherwomen can often-times attest, one begins to meditate and become imbued in the moment....breathing warm breath into gloved hands, one's mind wanders onto more mundane things.

All hell breaks loose. Anglers have long christened the Atlantic salmon as 'the leaper', a perfect moniker for this particular 8-pound

beauty who repeatedly broke free from the water's surface gazelle-like and filled with grace. So rapt was our attention on her performance that I completely forget temporarily to reel in - but Lady Luck cast a benevolent eye upon me that October morning and within 10 minutes, the salmon was nearly breathless as we. (Later I discovered that the New York State record for this species greater than 11 pounds, giving an even more grand quality to the catch that was made). Silver from tip to tail, she sported black round specks across the side without the colorful halos of her neighbors of the watery depths. She was every bit the warrior I'd heard she would be.

**To kill a trout or salmon is a serious business; one thanks the Spirit for giving us sustenance.**

The world of Cayuga Lake is a fast-changing and dynamic one; with the increase of man-made demands placed upon it, we must strive more diligently to be more watchful of the consequences. Recently, a significant lowering of the baitfish levels in all the Finger Lakes has impacted our trout and salmon populations; with far fewer smelt to feed upon, these creatures take to alewives for a secondary source of feed. Nothing is ever without consequence. The vital ability of ALL living things to utilize minerals and vitamins cannot be overstated; specifically, the fish suffer for it is that smelt that allow them to break down thiamine more readily in their dietary cycle; without this vitamin in adequate supply, the fish suffer growth problems...and fail to multiply

*continued on page 5*



Jim Murphy takes a break from fishing to enjoy Howe Caverns

# Pipher Honored for Dedication and Leadership

For her tireless devoted to the Cayuga Lake Watershed, Judy Pipher of Seneca Falls received the 2006 David Morehouse Award during celebrations at Lakefest. Pipher's accomplishments are many ranging from being a founding Director of the Watershed Network, to keeping our website up to date as webmaster, to being founder and committee chair



*Judy Pipher, whose energy, commitment and follow through has inspired many.*

for the Essay Contest, to outreach committee member and former chair, to organizer of events... the list could go on and on. Since the inception of the Cayuga Lake Watershed Network Pipher has demonstrated her dedication to this watershed through leadership and action. She is always ready with ideas, energy, follow through and criticism when it is warranted.

Nominations for Pipher had these words of praise. "Judy is a watershed activist and a watershed leader. Her actions speak as loud or louder than her words. She does make a difference in our watershed. This is an accomplishment all the more impressive I believe because she first came to the organization as a 'regular' watershed citizen, with no training in environmental science or issues, just a love of the lake and a desire to be part of the movement that will preserve the watershed for generations to come."

"She is always active, always thinking, always questioning, always willing to do anything and everything that is needed to make things happen. If some of us go the extra mile, then Judy goes the extra mile and then



*A surprised Judy Pipher received the David Morehouse Award from Claire Morehouse, whose late-husband's work is memorialized in this award.*

some, always..."

"(Pipher is) a woman whose energy and dedication to the organization and to the Cayuga watershed were immediately evident to me. She inspired me to get involved with the organization right away, and she has been a large part of the reason that I and other watershed citizens remain committed to the Network and everything it tries to do."

If you know of someone deserving of the Morehouse Award, submit a nomination by July 15. Details are available at [www.cayugalake.org/news/Morehouse\\_award.php](http://www.cayugalake.org/news/Morehouse_award.php) and from the Watershed Network office upon request. 🐾

## ANNOUNCEMENTS continued from back cover

water test. Tompkins County residents who attend an educational program will qualify for a 75% discount on bacteria and nitrate tests. Co-sponsored by Cayuga Lake Watershed Network, Tompkins County Health Department and the individual towns.

**Native Water Law and Public Policy: Critical Issues in the Great Lakes and St. Lawrence Watersheds**  
Fri and Sat, Nov. 17-18  
Cornell University Law School, Myron Taylor Hall, Ithaca, New York

This exciting two day event seeks to bring attention to critical water issues facing American Indian communities and their neighbors in the Great Lakes and St. Lawrence Watersheds. Day one will begin with a day devoted to

Native education, law, and water and the lessons and struggles of Native communities in dealing with Great Lakes/St. Lawrence watershed issues. Speakers and participants will include Native water practitioners, planners, and activists from across the continent and particularly from the Great Lakes/St. Lawrence Basin. Day two, as part of the annual Cornell Law School Symposium will focus primarily on contemporary legal issues and strategies in Native water rights and management and will feature nationally recognized academic leaders and legal practitioners as speakers and guests.

Free but registration at [www.aip.cornell.edu/tiwp](http://www.aip.cornell.edu/tiwp) is required. Questions and further information: Kathy Halbig [klh37@cornell.edu](mailto:klh37@cornell.edu) (607) 255-6587. 🐾

# Virus Not Guilty of Summer Fish Kills

Dead fish washed up on Cayuga's shore in unprecedented numbers in early to mid-summer. Fearing the culprit was the viral hemorrhagic septicemia virus (VHSV) recently found in upstate New York, fish were sent for testing to a special diagnostic laboratory. The results were fortunately negative. The virus causes fatal anemia and

hemorrhaging in many fish species but it poses no threat to humans or other animals.

NYS Dept of Environmental Conservation blames the summer die-offs on the rapid rise in water temperature that fish already stressed by the spawning season could not adjust to rapidly enough.

While the virus was found not to

be the cause of death, the virus could spread from other areas in Upstate New York to Cayuga Lake in the future. Anglers and boaters can help slow the spread by thoroughly cleaning fishing equipment, boats, and trailers before using them in a new body of water. Fish, including bait-fish, should not be transferred from one body of water to another. 🐟

## Bugs Benefit from Fall Leaves *continued from cover*

to larger macroinvertebrates such as the hellgrammite (Dobson fly larva) (*Corydalus cornutus*), that are eaten in turn by fish.

Macroinvertebrates have been referred to as "canaries of the stream" because some are very sensitive to degraded water quality. Volunteer who monitors the water quality in Fall and Sixmile Creeks periodically brave the swift waters to sample for macroinvertebrates in a systematic process that provides a good indication of overall stream health. The sensitive stoneflies, mayflies



*Fishing fly tied to mimic a dragonfly nymph*

Credit: bcadventure.com



*Aquatic dragonfly nymph*

Credit: bcadventure.com

and caddisflies cannot survive in polluted waters while finding certain other insect larva would be a sure sign that trouble is brewing.

Even though natural leaf litter in streams is very beneficial, yard wastes (leaves and grass clipping) should not be disposed of in or near shorelines or in roadside drainage ditches where they will be washed into stream. They can add too many nutrients to the streams, can reduce oxygen supplies as they decompose and bury areas of gravel stream bottom that some insects and fish need. 🐟

## Cayugan Trout and Salmon *continued from page 3*

like they did throughout the years beforehand. Slowly, these problems are lessening and we hopefully are seeing a slow reversal of these changes in fortunes. Anything short of a full recovery would be a tragedy.

There is something magical about bringing a fish to net; there is a cadence, a sequence of casting, the fish strikes and thereafter begins a duet and strategy together which one has to use power and finesse at all the right moments. The timeless art of give-and-take endures. In the end, the smell of salmon wafts to the nose, the slime of trout oozes through cold fingers, in the palms one holds writhing and wriggling a wonderfully alive fish. Soon, the feeling floods your conscience. Live and let live. With an uncanny burst of speed, the fish darts back to the safety of the deep - leaving one filled with a feeling of respectful generosity. Such a creature was never an adversary; you may or may not realize this...for now. In the warm glow of the moment, you sense how lucky you are to be truly alive and its all the more meaningful as the October morning Sun crests over



*Atlantic Salmon*



*Brown Trout*

Image credit: NYSDEC

the east shore of Cayuga Lake and warms your face as you drink in the Autumn air.

Nearly as old as Time itself...this lake gives to us what it has if we remember the golden rule...that is to put back. Of ourselves especially. Nothing less will do. 🐟

*Editor's Note: "Cayugan Trout and Salmon" was the 2006 Essay Contest first place winner, Adult category. The theme for the 2007 Essay Contest is "Sustaining Our Precious Water Resources: What Can An Individual Do? What Can Government Do?"*



# Rain Gardens: A Smart Step To Clean Water



*The rain did not deter Newfield residents from planting a rain garden.*

**R**ain gardens are a way we all can help protect one of our most important resources, water.

After a rainstorm, the water goes “away.” But the question is “Where does it go?” With more frequency the answer is downstream where someone’s house or business gets flooded, or a bridge gets washed out.

With a rain garden, “away” instead means soaking into the ground where it will be cleansed and become part of our groundwater. Groundwater is important because between rainstorms it moves underground to replenish our streams, lakes and wetlands and the drinking water wells that quench the thirst of many rural families. Groundwater is also critical to rare communities such as the fens near the headwaters of Fall Creek.

Rain gardens are landscaped depressions that capture rainwater and allow it to soak into the ground. These special and attractive stormwater detention basins collect and absorb runoff from a roof, sidewalk or parking lots, addressing both water quality and quantity concerns. Rain gardens work well with both existing and new homes, blending into more traditional landscaping. They are attractive, appeal to butterflies and songbirds, can be created using only hand tools and fit into a relatively small area.

Once a shallow depression has been created, it is planted with perennials and shrubs that can tolerate both wet and dry conditions. These deep-rooted plants optimize soil infiltration and are more effective than mowed grass in allowing water to infiltrate. Because the design ensures that water infiltrates into the ground within two

days, plants are chosen for their ability to withstand short-term flooding breaking up longer periods of dry conditions. The short duration of standing water ensures it does not become breeding ground for mosquitoes.

Typically a rain garden is 4-8 inches deep with a flat bottom. While any size does some good, they normally are about 1/3 of the size of what is draining to it – usually a roof, yard or driveway. During large rainfall events, excess water is released through an overflow channel. Since the first inch of rain typically carries the majority of the pollutants, early in the storm they have already entered the rain garden where the bio-filtration is underway.

“These shallow, landscaped, mulched gardens manage stormwater through bioretention... The settling of sediments in shallow depressions, the natural processes of plants and microbes, and chemical reactions associated with plants, soils, and organic matter in the top layer utilize and break down nutrients, bacteria, metals, and other compounds. Because more runoff is infiltrated and taken up by the vegetation, less water volume must

be managed in the (streams and stormwater conveyance system). Residential rain gardens generally are 300-500 square feet, located in the lowest elevation, and are shaped to merge with the rest of the property.” ([www.epa.gov](http://www.epa.gov)) Rain gardens can be much smaller since every drop of rain kept on your property is a step towards cleaner water.

Rain gardens do such a good job at improving water quality that Kansas City, Missouri has a goal of 10,000 rain gardens. We’ll explore this in more detail in Part II of this article in the winter issue of Network News.

Next year look for announcements of rain garden trainings and hands-on installations of rain gardens. Contact Sharon Anderson, Watershed Steward if you

know of a group who would like a presentation on rain gardens. Until spring comes, you can start to plan where to put your rain garden by visiting our website, [www.cayualake.org](http://www.cayualake.org), which has links to manuals on how to build a rain garden and the plants best suited for these beautiful workhorses. If a rain garden doesn’t suit your property because the site is too wet or poorly drained, try creating a mini-marsh with instructions from the National Wildlife Federation, also available as a link on our website. 🐾



*Culver's root (Veronicastrum virginicum) and other native plants are ideal for rain gardens.*



*The deep roots of rain garden plants aid infiltration and water clean up.*

# Meet the Board

*We periodically print biographies of members of the Board of Directors so that you can get to know the individuals that the Watershed Network depends on. The public is always welcome at our monthly Board meetings.*

Kevin Zippel is a conservation biologist working for the IUCN/SSC Conservation Breeding Specialist Group (<http://www.cbsg.org>) and the World Association of Zoos and Aquariums (<http://www.waza.org>), specializing in addressing the amphibian extinction crisis. He works from home helping to coordinate amphibian ex situ conservation programs around the world and travels extensively.

Kevin was born and raised in the Cayuga Lake watershed, specifically in Union Springs on the northeast side of Cayuga Lake. Always attracted to aquatic ecosystems, he was disappointed as a boy not to have natural water features on his parents' property, but got into local creeks and the lake whenever he could. Kevin received his B.S. in 1994 in Ecology and Evolutionary Biology from Cornell University, where he was a co-founder of the Cornell Herpetological Society ([www.cuherp.com](http://www.cuherp.com)). He received his Ph.D. in 2000 in Zoology from the University of Florida. Kevin worked for one year (1999) as a curatorial intern in the Department of Herpetology at the Wildlife Conservation Society/Bronx Zoo while he finished his doctorate. There

he was also a founding member of Project Golden Frog (<http://www.projectgoldenfrog.org>), a conservation organization he continues to serve as coordinator. Kevin then went on to work five years as Curator of Amphibians at the Detroit Zoo. With Herp Curator Andy Snider, Kevin oversaw the construction and initial years of operation of the National Amphibian Conservation Center, which won the 2002 American Zoo & Aquarium Association's Exhibit of the Year Award. During his years in Detroit, he developed adjunct associate professor status at Michigan State University and George Mason University.

In 2005, Kevin moved back to the Cayuga Lake Watershed, where he now lives near Montezuma Wildlife Refuge. Together, with his wife Lynn, they manage "Huellita Farms," their 45-acre homestead with a meandering stream, a swamp, and thanks to the USFWS Partners for Fish & Wildlife program (<http://ecos.fws.gov/partners/viewContent.do?viewPage=home>), a series of prairie potholes to support greater biodiversity. Their personal philosophy is to "live wisely and leave a small footprint." Kevin is battling the introduced flora on his property



*Kevin Zippel shares a moment with a boa in the Panamanian rainforest.*

and head-starting native plants to reforest most of his old farm fields. He also had 3 ponds installed on his parents' property back in Union Springs, where he wished they had been when he was a boy. Now he can take his nephews there and show them the amphibians and other wildlife that have colonized the ponds within a year.

Although lacking specific experience with watershed concerns per se, Kevin has a fair bit of experience with water quality testing and maintenance for ex situ systems and hopes to bring this to the Watershed Network along with his passion for helping others understand and soften their impact on the environment. 🐸

## Here are some quotes that Kevin holds dear...

*"We do not inherit the Earth from our ancestors, we borrow it from our children."* — NATIVE AMERICAN PROVERB

*"We have become, by the power of a glorious evolutionary accident called intelligence, the stewards of life's continuity on Earth. We did not ask for this role, but we cannot abjure it. We may not be suited for it, but here we are."*

— BIOLOGIST STEPHEN JAY GOULD

*"We must be the change we wish to see in the world. - Pacifist Mahatma Gandhi  
In the end we will conserve only what we love and respect. We will love and respect only that which we understand.  
We will understand only what we are taught or allowed to experience."*

— SENEGALESE CONSERVATIONIST BABA DIOUM



## ANNOUNCEMENTS

To register for any of these programs, except as noted, please contact the Watershed Network at [manager@cayugalake.org](mailto:manager@cayugalake.org) or 607-532-4104.

### **Grasses for Conservation, Agriculture and Energy**

**Sat., Nov. 11, 9:00 a.m. to 12 noon**

**Cayuga County Soil and Waters Conservation District**

**7413 County House Road, Auburn**

This half-day seminar on grasses that covers topics of interest to both the farming community and outdoor enthusiasts:

- the benefits of grasses for both water quality and wildlife habitat
- the benefits and challenges of grass for grazing and bailing
- grasses as a renewable energy feedstock



*Grasslands are valuable for birds and other wildlife. They protect water resources and new technology and uses can make them profitable.*

Presenters include representatives from NYS Department of Environmental Conservation, Natural Resources Conservation Service, Cooperative Extension, Cornell University, Graze New York, and the agricultural community. Attendees will get a sense of the diverse applications and benefits of grass farming. Free to members of the Watershed Network and \$5 for non-members.

### **After the Flush**

**Wed., Nov. 15 • Enfield Community Center 7-9 pm**

**Thurs., Nov. 30 • Groton Town Hall 7-9 pm**

Learn how conventional and alternative sewage systems work, preventative maintenance and routine care that can save costly repairs while protecting water quality and one's family health. Free and open to all. Attendees of the educational program will receive a coupon for a \$20 discount on septic tank inspection and pump out. Co-sponsored by Cayuga Lake Watershed Network, Tompkins County Health Department and the towns.

### **How Well Is Your Water?**

**Wed., Nov. 15 • Danby Town Hall 7-9 pm**

**Thurs., Nov. 30 Enfield • Community Center 7-9 pm**

Attend one of two free workshops to learn about common sources of water contamination, ways to maintain a well to prevent contamination, the proper way to take a water sample, and how to read the results of the well

*continued on page 4*

**The Mission...** *The Cayuga Lake Watershed Network seeks to protect and improve the ecological health, economic vitality and overall beauty of the watershed through education, communication and leadership.*



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