

The Lyme Land Conservation Trust

2014 Summer Newsletter

Lyme's Preserves Help Keep Eastern LI Sound From Turning Into "Dead Zone"

The Universe is a continuous web. Touch it at any point and the whole web quivers. -- Stanley Kunitz, Poet

By Wendolyn Hill

Lyme is fortunate that most of us who live here are committed to preserving its beautiful open spaces. Most Lyme residents recognize that preserves provide us with many ways to appreciate the natural world.

However, maintaining this undeveloped land, especially wetlands and natural vegetated buffers along the waterways, serves an important function in protecting the long-term health of a much larger ecosystem well beyond Lyme's town lines and even out into the coastal waters of the North Atlantic.

Lyme's forests, fields and wetlands help remediate the serious problem of nutrient pollution entering the Connecticut River and flowing downstream to contribute to a huge "dead zone" in Long Island Sound every summer.



Image: Robert Simmon, NASA Earth Observatory

70% of the fresh water flowing into LI Sound comes from the Connecticut River. This satellite photo after 2011 Hurricane Irene shows how storm runoff from the River impacts the Sound. Nutrient pollution is an excess of nitrogen and phosphorus in any body of water. It's created by everyday human activity that we often don't realize may be causing harm.

Much of the nutrient pollution is caused by fertilizers and partially treated sewage that are washed downstream from the concentrated residential development in the Connecticut and New York watersheds surrounding Long Island Sound.

In the case of fertilizers, when it rains, loose soil particles and chemicals are washed off the land into streams and then carried on to larger bodies of water. If nothing prevents it, an excess of silt and chemicals from the lawns and farms in upstream Connecticut eventually end up in Long Island Sound and beyond.

The nutrients nitrogen and phosphorus are not harmful in proper quantities. They occur naturally when released by the breakdown of soil particles. They are essential elements for the growth of plant life, which is why they are the primary ingredients in fertilizers for agriculture, lawns and landscape maintenance.

The overuse of fertilizers -- particularly on lawns and gardens in areas of concentrated residential development -- is a major contributor of nutrient pollution.

As pointed out by Patrick J. Lynch, speaker at the Lyme Land Conservation Trust Annual Meeting in June and author of *Connecticut Coast & Long Island Sound* (available on iTunes), the maintenance of private lawns can use ten times per acre more fertilizer than a typical farm.

Other sources of nitrogen and phosphorus are human and animal waste, some



"Dead Zones" in Long Island Sound can kill lobsters in traps & shell fish such as oysters that can't escape to areas with more oxygen.

cleaning agents, and nitrous oxide emissions from vehicles.

Algae and aquatic plants, the basic food source for many of the larger organisms in the water, depend upon nitrogen and phosphorus to thrive.

However when there is too much of these elements in the water, the algae and plants grow faster than they can be consumed, causing an overgrowth.

Every summer this phenomena is evident in Rogers Lake in Lyme and Old Lyme as the lake weeds grow to such an extent that they become a nuisance.

The most devastating effect of nutrient runoff is its contribution to the formation of harmful algal blooms in rivers, lakes, and large bodies of water. The algal blooms can create thick, green unattractive slime on the water, which impacts human recreation and property values.

Algal blooms may release toxins that can kill or sicken fish, oysters, and other shellfish. The toxic effect can move up the food chain to larger animals such as turtles,

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dolphins, birds, seals, and humans. Some algal blooms are directly harmful to humans who become sick if they come into contact with the polluted water or drink contaminated water. Even non-toxic algal blooms can cause problems by blocking sunlight and clogging the gills of fish.

Massive algal blooms can trigger a deadly marine condition called "hypoxia," in which the oxygen content of water declines to the point it cannot support any living organisms. Hypoxia typically develops in late summer when bacteria decompose the excessive plant material stimulated by the nitrogen and phosphorus. Bacteria consume oxygen as they feed on the dead and dying algae.

This creates "dead zones"– areas of water that no longer have enough oxygen to support life. Plants die, and if the fish and aquatic animals cannot leave the area (such as shell fish), they also die.

Every summer, episodes of hypoxia and dead zones have been occurring in Long Island Sound. It has been estimated that the Sound is receiving 400 times the nitrogen today than it did before colonial times.

As is evident by the map (above), the worst hypoxia is in the western part of the Sound where intense urbanization and development during the last 75 years have impacted much of the natural coastline.

Natural buffer lands along waterways and coastlines that once filtered nutrients from storm runoff have been developed and



Frequency of Hypoxia In LI Sound Map by CTDEEP, Lucy Reading-Ikkanda; Source: Frequency of Hypoxia map, CTDEEP

paved. When it rains, nutrient-laden storm water is prevented from soaking into the soil. Where there is soil, there is not enough vegetation to keep the soil from eroding along with the chemicals that have been added to it. It all washes unimpeded into local waterways.

The rivers that enter that part of the Sound carry polluted water from all the towns along the way. On the coast the wetlands and protective vegetation are gone. Much of the land has been covered by hard impermeable surfaces, such as blacktop, cement and roofs.

The most intense hypoxic episodes occur in the western Sound, but Lynch reports in his book that University of Connecticut researchers have found hypoxic conditions in some coves and bays along the Connecticut coast in eastern sections of the Sound.

There is good news to report, however. First, the amount of nitrogen entering the Sound has declined almost 40 percent in the last decade, according to the state Department of Energy & Environmental Protection.

Second, upstream watershed conservation in Lyme and surrounding communities plays an important role in the health of the Sound by recycling and absorbing nutrients in storm water.

Forests, meadows and wetlands that have been protected from the type of development in the New York suburbs -- like those in Lyme and many surrounding communities -- act as a sponge to absorb many of the soil particles and nutrients in storm runoff.

Large undeveloped tracts of upstream wetlands and vegetation, such as the Eightmile River Wild & Scenic Watershed in Lyme, East Haddam and Salem are particularly valuable in their ability to filter nutrients from storm water before it reaches local waterways on its way to the Sound.

But this natural protection can only do so much in the face of overuse of these nutrients by people.

There are several ways that individuals can help to reduce nutrient pollution by altering practices on their private landscapes. A few suggestions: minimize the size of your lawn, reduce the use of fertilizers on private landscaping, plant a rain garden, plant buffer zones of native vegetation along waterways, and avoid the installation of impervious surfaces such as blacktop and cement. For more info, go to: http://www.ctenvironment.org/savethe-sound/take-the-long-island-soundpledge.cfm

Name The Network Of Preserves And Trails In Northeast Lyme & Win A Coveted Land Trust Baseball Hat

By Lisa Niccolai

The Land Trust and the Town of Lyme have experienced great success protecting the northeast corner of Lyme along Gungy Road. Through a coordinated effort with the Town, the



network of trails in the area now stretches south from the Town's Hartman Park through the Land Trust's Walbridge Woodlands and into the the Town's Philip E. Young Preserve for greatly expanded year round recreational enjoyment.

The Land Trust and Town are working on a map of the trails on the combined properties, and we need a name for this area of combined preserves and the network of trails.

We already have the *River to Ridgetop* map showing the network of trails on the preserves in the Mount Archer area, which is made up of the Town's Mount Archer Woods and Jewett preserves, the Land Trust's Chauncey Eno and Pickwick preserves, and The Nature Conservancy's Pleasant Valley Preserve.

We'd like your suggestions on what we should call this combined network of trails and preserves along Gungy Road.

Take a hike and get inspired or check out the Land Trust webpage for maps and information about each of the properties along Gungy Road. Email your suggestions to:

info@LymeLandTrust.org. The winner will receive a limited edition Lyme Land Trust baseball cap & our sincere appreciation.

The Lyme Land Conservation Trust Newsletter

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Would You Like to Support the Lyme Land Conservation Trust?

Use the convenient envelope bound into this newsletter to mail in your donation today.

Land Trust Elects Four New Members To Its Board of Directors

Four new members have been elected to the Lyme Land Conservation Trust, Inc., Board of Directors.

At its annual meeting in June, Land Trust members elected three new directors to the Board:

- **Brantley Buerger**, currently the manager of the Yankee Atomic Power site on Haddam Neck. He lives on Mount Archer and has been the steward for the Town of Lyme Mount Archer Woods Preserve for the past four years.
- **Geoffrey Thompson**, a retired banker who moved to Lyme two years ago. He currently also serves on the boards of the Woods Hole Oceanographic Institution and the U.S. Naval War College Foundation.
- **Kristina White**, who grew up in the Lymes, has hiked all of the Trust's trails and volunteered both with the Trust and High Hopes Therapeutic Riding. She is a member of the Lyme Volunteer Fire Department and serves as office manager for Musical Masterworks.

In July the Board voted to appoint as a Director:

• Anthony Irving, who served as a Director from 1994 to 2005 and as Land Trust President from 1995 to 2004. He has also been vice chairman of the Lyme Inland Wetland Commission and is currently the Chairman of the Eighmile River Wild and Scenic Coordinating Committee. Tony was elected by the board to fill the unexpired term of Kiernan Wholean, who resigned in late June. He will assume Kiernan's post as Chairman of the Trust's Preservation Committee.



Photo by Humphrey Tyler New Lyme Land Trust Directors : From Left, Jeff Thompson, Anthony Irving, Kristina White & Brantley Buerger.



Land Trust's 2014 Tour de Lyme Draws 600 Riders To Celebrate Lyme's Bucolic Beauty







By George Moore Executive Director

The endless planning was over. Our many volunteers were ready. The riders came, and came, and kept coming—nearly 600 in all, to Ashlawn Farm for the second annual Tour de Lyme on May 18. The weather was glorious, the setting iconic.

Tour de Lyme, fast becoming a premier spring cycling event in southeast Connecticut, appeals to riders because of lightly travelled roads, beautiful scenery and a great picnic courtesy of our corporate sponsors. Riders enjoyed an extra measure of safety because of the presence of the Lyme Ambulance and the Lyme Fire Company.

Did everyone have fun? Indeed. Did the Land Trust make money? Yes we did. Will we do it again? Mark your calendar. Next year's Tour de Lyme will be May 17, 2015.

Photos by Lisa Niccolai, Joe Standart, & Humphrey Tyler

















Wild Turkeys Thrive in Lyme's Forests & Fields

By Mary Guitar

One morning recently I watched from an upstairs window as a young female turkey ate breakfast under our birdfeeder.

She was intent on her task, but watchful. I knew she wouldn't linger long if a car went by or the squirrels crowded her. I tried to move slowly, but when I reached to pull the curtain back, she tilted one eye up at me, pierced me for a few moments with her intent gaze, and went back to eating.

I felt like I had passed an important test of trustworthiness.

The wild turkey has eyesight just slightly better than humans, yet its field of vision is 300 degrees. It can detect movement at 50 yards and a mere flicker of movement at that distance if it is overhead, a useful ability for tracking marauding raptors.

Wild turkeys have more complex social organization than most birds, and display varying personalities, as Joe Hutto noted in his highly enjoyable book *Illumination in the Flatwoods* (and in the PBS documentary based on it, *My Life as a Turkey*) about a season he spent acting as parent to a group of imprinted wild turkey poults. He described the young turkeys he parented as intelligent, affectionate, energetic, and communicative.

The eastern wild turkey, *Meagris gallopavo silvestris* (the subspecies found in Connecticut), ranges from northern Florida to southern Maine, and from Texas to South Dakota. Although wild turkeys were abundant in the state when the first European settlers arrived early in the seventeenth century, they had vanished by the early nineteenth century due to a combination of habitat loss, hunting, and severe winters.

In 1975, through the efforts of conservation groups like the National Wild Turkey Federation, wild birds were live-captured using rocket nets and successfully relocated to Connecticut. As the state became more forested in the ensuing years, wild turkey populations expanded. Turkey hunting has been allowed since 1981; according to statistics collected by the CT Department of Energy and Environmental Protection (DEEP), hunting does not seem to affect



A tom turkey in full display protects his hens as they feed in a Lyme field.

Photo by Bob MacDonnell. See his portfolio at www.bobmacdonnell.zenfolio.com

the overall turkey population.

Male turkeys, at 18 to 24 pounds, can be twice the size of females. Their dark body feathers are an iridescent coppery brown; black flight feathers are barred with brown and white. Their fleshy heads can quickly change color from bright red to white or blue, especially in mating season. Adding to their splendor are beard tufts that may protrude 12 inches from their chests and dark tails which are fanshaped when on display.

Females, on the other hand, seem quite prim in contrast: they are lightercolored, with pale blue-gray heads and occasionally small beards.

Life as a young turkey is perilous. Early flight is an advantage since eggs and nestlings are prey for just about every carnivore in the New England wild: raccoons, coyotes, opossums, skunks, foxes, woodchucks, rodents, bobcats and snakes.

Young turkeys hatch with the ability to walk and feed themselves, but they are also easily chilled by rain and low temperatures. Not surprisingly, 70 percent of hatchlings don't survive. Cold, wet springs are probably the cause of the gradual drop in the brood index (number of poults per hen) in the last few years. According to the Connecticut Wild Turkey report in the 2013 November-December issue of *Connecticut Wildlife Magazine*, the number of hens and poults were highest in 2007 (when the survey started), and the lowest count was last year, which had the wettest June on record. Life expectancy for adults in the wild is 3-4 years.

Lisa Niccolai, Environmental Director of the Lyme Land Trust, notes that the Land Trust manages its preserves to benefit the turkey population, including creation of brush piles and annual mowing that helps maintain grasslands areas and encourages heavier production of mast--acorns and other nuts, one of the main components of the turkey's diet. They also eat berries, corn, seeds, invertebrates, leaves and insects.

The Land Trust also protects wetlands and waterways, creating an open canopy which encourages the growth of hawthorn and winterberry, another important source of food for the turkey. Several agricultural use properties including the Bloom property on Macintosh Road, the Hand Smith property and the Sterling City Preserve are sometimes planted in corn, adding to the food resources for the bird.

Next time you see a wild turkey, remember that you are lucky to share the neighborhood with them. As Joe Hutto put it : "I have never kept better company or known more fulfilling companionship."

Letterboxing Treasure Hunters Like Lyme Preserves

By Wendy Miller

As a follow-up to the article on geocaching in the Land Trust's Spring Newsletter, we will now delve into the somewhat secret world of letterboxing.

Geocaching and letterboxing are sometimes referred to as one and the same, and while there are some similarities, they are different in many important ways.

A brief overview of letterboxing and a refresher on geocaching:

Letterboxing is an outdoor treasure hunting game that combines navigational skills and rubber stamps. Letterboxers hide a small, weatherproof box and then distribute clues to finding the box in printed catalogs, on several web sites, or by word of mouth. The hidden box usually contains a stamp and log book, and optionally a stamp pad. Participants stamp their own log books with the Letterbox's stamp and leave an imprint of their personal stamp on the letterbox's logbook.

Geocaching is a treasure hunting game performed outdoors where the participants find caches using Global Positioning System (GPS) signals and the caches usually contain small trinkets. You can take one of the trinkets as long as you replace it with something of equal or greater value. Each cache has a log to sign with the date and your Geocache name.

My husband Tom and I had stumbled upon letterboxing quite by accident several years ago while hiking at Pleasant Valley Preserve. We were resting on a bench overlooking a lovely cedar grove when we noticed that the rock below the bench was a little loose. We moved the rock and found a Tupperware container underneath it. We opened it and inside we found a log book, a stamp and a stamp pad!

Letterboxing was started 150 years ago

in England, but it was a very local avocation until the 1980s after a guide map of letterboxes was published.

According to www.letterboxing.info "Many of the earliest letterboxers lived in the Northeast, particularly in Connecticut. As a result, the activity took hold in and around that state, and Connecticut now has the largest number of letterboxes of any state."

In fact, there are more than 50 letterboxes hidden in various locations around Lyme, most in state, town and Land Trust preserves. You can find a list of them along with hints on how to find them on www.letterboxing.org.

For additional information, including how to tell others about your letterbox location, go to www.letterboxing.org/faq/ faq.html. For information on how children can get involved in letterboxing, go to www.letterboxing.org/kids/

How to Get Started Finding Letterboxes

You will need:

1.Trail Name - A trail name is your letterboxing identity. Some local names are Butterfly, SweetPea and McDucks.

2. **Rubber Stamp** – Most people buy a stamp that means something to them, hand-carve one themselves or have one commercially made.

3. Letterboxing Log Book – This is where you will make imprints of the stamps that you find. If you don't want to carry your book with you, an alternative is to bring small cards or pieces of paper to do the imprints and then add it to your log book when you get home.

4. Ink Pad – You'll need an ink pad in order to do your imprints. Archival Ink pads by Ranger and Ancient Page by Clearsnap were recommended by www.letterboxing.org as they "dry instantly, are waterproof, and are available in craft stores."

5. **Clues** - For letterbox location clues go to www.letterboxing.org or www.atlasquest.com. A search in letterboxing.org showed more than 50 letterbox locations in Lyme.

6. **Pen or Pencil (optional)** – In case you want to add a note to your log book or the letterbox's notebook.

7. **Compass (optional)** – While not needed for all letterboxes, it is a good idea to have a compass with you.

How To Create & Hide A Letterbox

You will need:

1. Letterbox Name – This is what the letterbox is called and there is often a clue in the naming of it as well. One local one that is a dead give-away is called "Hadlyme Country Store."

2. **Stamp** – This stamp that you create or buy usually has some connection to its location, however that is totally up to you. Visitors will use your stamp for imprinting in their letterboxing log look.

3. **Notebook** – Visitors will imprint their stamps onto the notebook you leave in the letterbox. Getting one that is relatively small will enable your overall hiding place to be smaller and an acid-free notebook will keep your imprints for a lifetime.

4. Waterproof Container – Tupperware or similar products work best although clearly anything goes.

5. Ink Pad (optional) – While not mandatory it is nice to have in case visitors forget their own ink pad.

6. Siting of Letterboxes -- Boxes should not be sited in any kind of antiquity, in or near stonerows, circles, cists, cairns, buildings, walls, ruins, etc. Boxes should not be sited in any potentially dangerous situations where injuries could be caused, and boxes should not be sited as a fixture. Cement or any other building material should not be used.

Ninth Annual Land Trust Photo Contest Deadline Is October 31

Deadline for submission of photo entries in the Ninth Annual Land Trusts' Amateur Photo Contest is Oct. 31.

Amateur photographers, regardless of where they reside, may submit photographs of the scenic countryside, wildlife, plants, and cultural and historic features in the towns of Lyme, Old Lyme, Essex, Salem and East Haddam. Land Trusts in these towns sponsor this photo contest.

Submissions will be accepted from the first to the last day of October, 2014. Contest rules are available online at lymelandtrust.org/news/photo-contest/. Entry forms for the contest will be available after September 1 by email:

photocontest@lymelandtrust.org.

A panel of three judges will award \$100, \$75, \$50 and \$25 cash prizes in the following five categories: Landscape/Waterscape, Plants, Wildlife, and Cultural/Historic for photographers 15 years of age and older, plus photographs of any subject for young photographers aged 14 and younger. Additionally, a special John G. Mitchell Memorial Award of \$100 will go to the photograph determined to best promote and support biodiversity and the environment. John G. Mitchell was an environmentalist and former photo contest judge.

All entered photographs, plus all winning photos, will be displayed and celebrated in a public reception in March 2015, details of which will be announced later.

Contest awards are being funded with the generous support of Lorensen Toyota, the Oakley/Wing Group at Smith Barney, Evan Griswold at Coldwell Banker, Ballek Garden Center, Essex Savings Bank, Murtha Cullina LLP, Chelsea Groton Bank, and Alison Mitchell in honor of her late husband John G. Mitchell.



Autumn Stump Marian Morrissette 2013 Honorable Mention, Plants

Former Land Trust President Linda Bireley Retires As Lyme Open Space Coordinator



Long-time conservationist and leader in preservation Linda Bireley retired on June 30 as the first Town of Lyme Open Space Coordinator, a post she held for eight years.

Linda developed the position, which is responsible for ensuring that town preserves are protected, maintained, and managed in close cooperation with the Lyme Land Trust and other conservation organizations, such as The Nature Conservancy.

A driving force in Lyme land protection for many years, Linda served on the Lyme Land Trust Board of Directors from 1997-2007, including terms as Secretary, Vice President and President. Linda also served as executive assistant to the Land Trust 2007 to 2011.

Linda also retired as coordinator of the Land Trust's fish ladders.

Join Lyme Land Trust's Geocaching Field Class



Photo by Humphrey Tyler

A field class on how to participate in the treasure hunting game of geocaching will be held at 10 AM on Sept 20 at Mt. Archer Woods Preserve on Mt. Archer Road.



Trails Day Celebrated

With Family Outing

Photo by Angie Falstrom

Families celebrated Connecticut Trails Day on June 7 with scavenger hunts, hikes, discovery of fairy villages, and a picnic in Hartman Park & Walbridge Woodlands Preserve.

Earth Day: Lyme Students Meet Salamander Eggs



Photo by Humphrey Tyler

Lyme Consolidated School students handle salamander eggs in Pleasant Valley Preserve on Earth Day. The program was organized by the Lyme School PTO & the Land Trust.



Lyme Land Conservation Trust, Inc.

PO Box 1002, Lyme, CT 06371

Lyme Land Conservation Trust Calendar of Events

All events subject to change. Dates & times will be announced by press release & e-mail, and will be posted on the Land Trust website and Facebook page. Consult the Upcoming Events page at www.lymelandtrust.org/news/events/ for the latest information. To reduce costs & paper, the Land Trust no longer mails postcard notification of all events. To receive email notifications, send an email to: info@lymelandtrust.org with a request to be added to the events email list.

Annual

Tree Swallow Cruise on the Connecticut River

When - Fri., Sept. 26, 5-8 PM

What - "Tree Swallow Spectacular" cruise on the *RiverQuest* excursion boat. Preregistration and prepayment required at www.lymelandtrust.org/ swallowcruise. Cost is \$40 per person. For more info email: info@lymelandtrust.org

Where - Excursion boat leaves from Eagle Landing State Park, Haddam, at 5 PM sharp.

Annual Source-to-Sea Cleanup of the Connecticut River

When - Fri., Sept. 26 & Sat., Sept. 27

What - 18th Annual Source-To-Sea Cleanup of the length of the Connecticut River through NH, VT, MA & CT involving more than 2,000 volunteers. The Land Trust needs volunteers with power & paddle craft. Contact Humphrey Tyler at: hstyler@gmail.com

Where - Cleanup boat launch points will be designated for teams that will collect trash along Lyme's shoreline.

2014 Lyme Plein Air "Paint-Out"

When - Sat., Oct. 11 & Sun, Oct. 12

What - The now annual gathering of artists from across the Northeast to paint scenes at one of Lyme's preserved landscapes, co-sponsored by the Lyman Allyn Art Museum and the Lyme Art Association. Registration & more info will be posted on www.lymelandtrust.org. For more info contact Jil Nelson at: jilnelson20@gmail.com

Where - Banningwood Preserve, Rt. 82 (Town Road) in Hadlyme.