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FALL/WINTER NEWSLETTER

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The Beaches & Bays Gala on Long Island Raised \$750K for Conservation and Clean Water. Long Island's Trustees and philanthropy team collaborated to bring together 320 supporters for a successful benefit dinner-dance, which included an "Ocean Fishes" exhibit by James Prosek (featured in the cover article, "Water Colors," in Issue 3/2012, of Nature Conservancy) and stunning "waste-stream" sculptures by Aurora Robson. Motivated by the compelling need for action on Long Island's declining water quality, guests pledged \$250,000 during the live auction – in support of the Long Island Clean Water campaign.

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Conservancy



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NATURE LONG ISLAND

CONSERVATION NEWS FROM THE NATURE CONSERVANCY

FALL/WINTER 2014

A Letter from The Director



© Kenton Rowe

Nancy Kelley stands on the shores of the Peconic Bay.

As the year draws to a close, we can reflect on Long Island's environment with mixed emotions. There are victories to celebrate, but there are also ongoing challenges, one of which is Long Island's water quality.

This past summer, water quality throughout Long Island's bays and harbors was one of the worst on record. There were numerous beach and shellfish harvesting area closures, recurring brown and red tides in salt water bodies, and blue-green algae in some of our fresh water ponds and lakes.

The single largest cause of our poor water quality is nitrogen pollution leaking from aging sewer and septic systems into Long Island's ground water and from there into surface waters. As we saw this summer, not only does polluted water cause red tides; it also kills fish and other marine life, poisons the shellfish we eat, and increases harmful acidification.

Scientists tell us there are solutions to Long Island's water quality problems. We need stronger policies and standards that will limit the amount of nitrogen in our groundwater. Upgrading and modernizing our sewer and septic systems may be one of the most important and effective ways to improve water quality on Long Island. We and others are currently researching the best technologies available and how other coastal areas have dealt with similar water quality issues.

Tackling the issue of water quality is one of Long Island's biggest environmental challenges. We need everyone to take notice and call for action. After all, there's nothing more important than clean water – it defines life on Long Island.

Nancy N. Kelley
Executive Director
The Nature Conservancy on Long Island



On the Cover:

Rosemary Lane Topliff revels in nature at Mashomack Preserve. Photograph by Kenton Rowe.

Songbirds Reveal Vital Information

Scientists from The Nature Conservancy on Long Island and the Biodiversity Research Institute (BRI) in Maine are testing mercury levels in songbirds in salt marshes across Long Island to assess the environmental health of these areas. A grant from the New York State Energy Research and Development Authority (NYSERDA) will support this project for the next five years.

Interestingly, Long Island locations have shown a wide range of mercury concentrations. Saltmarsh sparrows nesting in a few local marshes have low blood mercury concentrations, while others are among the highest concentrations measured in the northeast.

Mercury, a neurotoxin, can harm the birds' nervous system and ultimately impair reproduction. But it's also a concern for human health as mercury increases up the food chain, reaching harmful levels in the top predators (e.g. tuna, swordfish, shark). Songbirds such as salt marsh sparrows that consume invertebrates higher on the food chain (e.g. spiders) are also at risk to elevated mercury exposure.

Some of the mercury in our area originates from coal-fired power plants in the Midwest, but researchers are investigating the potential local contributors of mercury. One source is discarded thermostats that leach into the environment when incinerated. A law passed by the New York State Assembly in June 2013, and awaiting the governor's signature, requires thermostats to be recycled by July 2014. The Nature Conservancy helped advocate for passage of the bill.

With further study, we can discern the sources of elevated levels of mercury on Long Island and how we can prevent further contamination.



© Marian Lindberg/TNC

Assemblyman Fred Thiele joined us and BRI in the field at Accabonac Harbor to observe how saltmarsh sparrows are caught and sampled



Dr. Marilyn Jordan is Retiring

After 21 years with The Nature Conservancy, ecologist Dr. Marilyn Jordan is retiring. Marilyn has provided scientific guidance for many successful conservation projects.

Marilyn's invasive plant species work included helping to develop a scientific protocol to assess plant "invasiveness" in New York State. Marilyn chaired the Long Island Invasive Species Management Areas' Scientific Review Committee which assessed 185 species of non-native plants using the protocol. This resulted in a scientifically-based list of plants prohibited from sale in Nassau and Suffolk Counties. Results were later used by the NYS Department of Environmental Conservation to help develop a list of invasive plant species to be prohibited from sale or regulated in the entire state.

In 1994, Marilyn took responsibility for monitoring *Agalinis acuta* (sandplain gerardia), a federally endangered plant, and reported results to the U.S. Fish & Wildlife Service for the next 15 years.

As soon as the ashes cooled following the 1995 Sunrise Wildfire, Marilyn began monitoring vegetation changes until 2005. Other projects in the Central Pine Barrens included baseline pond water quality monitoring.

Marilyn helped develop the Mashomack Preserve forest health monitoring plan in 2000, focused on tracking impacts of deer browse on forest vegetation. This monitoring project has implications well beyond Long Island.

Recently, Marilyn developed a research project with U.S. Geological Survey to look at atmospheric deposition impacts on Long Island forests and coastal plain ponds. A companion project involves monitoring mercury in songbirds by the Biodiversity Research Institute.

This doesn't begin to capture Marilyn's contributions. Her numerous reports, articles, and publications leave a lasting legacy of her work with The Nature Conservancy and its partners.

"After retirement I plan to stay involved in conservation through writing and speaking to explain the methods and results of scientific research to the public in areas such as climate change, nitrogen pollution and novel ecosystems" she explains.

We thank Marilyn for her invaluable work!



We Walk on Water



Think your family walks on water? Well, it's true – but Long Islanders do a lot more than walk on top of the underground aquifers that provide water to our homes, businesses and bays. Increasingly, pollution from sewage is seeping into our water. Stopping this trend is imperative, which is why the top priority for The Nature Conservancy is protecting the health of our most precious liquid asset.

Long Island is, after all, an island. Water defines our way of life, from beach-going to boating to fishing. These recreational activities also form the basis for Long Island's important tourism sector, which brought an estimated \$5.1 billion in revenue to the island in 2012.

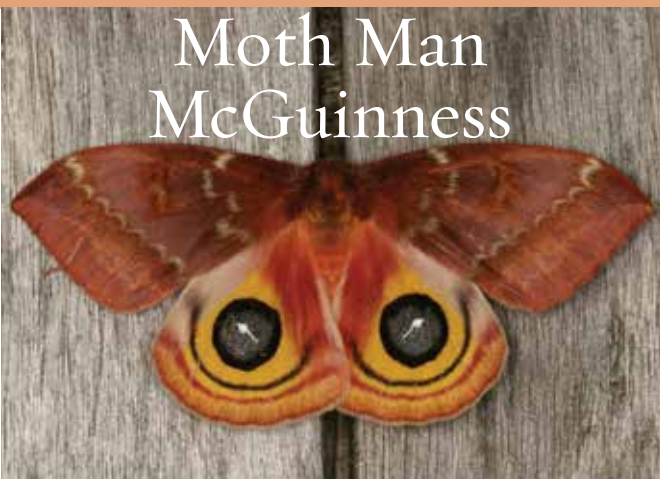
To keep our water healthy, communities across the island need to upgrade and modernize their sewer and septic systems. That is the goal of the Long Island Clean Water Partnership, formed in 2013, of which The Nature Conservancy is a member.

The Partnership's work is based on scientific findings that water quality is declining, especially due to nitrogen pollution from sewage. In Suffolk County, 70% of homes rely on septic systems when the national average is 20%.

Septic systems and most sewage treatment plants were not designed to remove nitrogen, which means it flows into our groundwater and then into our bays. In certain concentrations, nitrogen can harm human health. Nitrogen also causes red tides, chokes off sea life, kills fish and can even poison shellfish that people eat.

In the coming months, the Partnership will build its strength through a website and outreach to form a large coalition. We will work to gain widespread agreement as to how needed changes can be implemented and financed. All are encouraged to join the effort. For more information, visit LongIslandCleanWaterPartnership.org.

Moth Man McGuinness



Automeris io



Citheronia regalis

Under the cover of darkness, armed with a white sheet, ultra violet lights and a deep cycle battery, Hugh McGuinness can be found slinking around Long Island's dark and isolated wild lands. But he's no ghost.

Dr. McGuinness, known as "moth man," has been researching moths on Nature Conservancy preserves for 10 years. He became interested in moths during graduate school when a friend invited him to a "moth night" at Jamaica Refuge in Queens. "I was amazed by the diversity of life that had been hidden from me by darkness."

Since those first years he has catalogued more than 1,200 moth species on Long Island. In fact, McGuinness discovered a new species at the Conservancy's Mashomack Preserve in 2008 that was named in his honor last year: *Sparganothis mcguinnessi*.

This summer, his work took him to the Conservancy's Atlantic Double Dunes Preserve in Amagansett where he participated in a project run by Dr. Timothy L. McCabe of the New York State Museum. "Our goal is to assess the rarity of about 30 species of moths in New York in order to update their conservation status," said McGuinness.

Searching for moths is an adventure into uncharted territory. "What I love about this work is that nobody has looked seriously at moths on Long Island in more than 50 years. You never know what you are going to find."

In addition, moths are important indicator species, meaning that they can be used in conservation work. According to McGuinness "Moths are ubiquitous, abundant and relatively easy to identify, so we can use information about them to inform us about the health of an ecosystem. For example, we can use the populations of certain moth species to tell us when a pine barrens needs to be burned to maintain maximum biodiversity."

Remembering Larry and Eva Paul

There's not a single person who knew the backwoods of Long Island like Larry Paul. His love for the natural world, plants, animals, and his wife Eva, was unmatched.

Larry and Eva dedicated 32 years volunteering with The Nature Conservancy's Long Island Chapter, starting in 1981. Among countless accomplishments, Larry revised the trail maps for 38 Long Island Chapter preserves, refined our preserve boundaries and worked with scientists to help protect local rare and threatened species. Eva helped with office work and kept our preserve kiosks supplied with trail maps.

Larry and Eva's spirits will forever be together and their presence always felt within the forests of Long Island.



© The Nature Conservancy



Like ghosts in the night, great egrets roost together at the edge of a marsh. Their black legs and yellow bill help distinguish them from similar species like the snowy egret.

Montana-based photographer Kenton Rowe, whose work has appeared in National Geographic, Travel and Leisure Magazine, Outdoor Life and the Wall Street Journal, paid a visit to Long Island this summer to photograph The Nature Conservancy's work and our 2,039-acre Mashomack Preserve on Shelter Island.

Here's a sampling of Kenton's images. Check out our webpage for additional shots at www.nature.org/longisland



The Nature Conservancy's Young Professionals Group, a volunteer program, brings together a cross-section of New York City's brightest men and women who share a love of nature and concern for the environment. Members participate in events ranging from cocktail parties to trail maintenance and canoe trips. They even get their hands and feet wet!



With miles of trails to explore through forests, old fields, meadows, and wetlands, Mashomack is known as the "Jewel of the Peconics." In 1980, The Nature Conservancy, together with the residents of Shelter Island and Long Island, completed the effort to preserve this 2,039-acre gem for future generations. Many family friendly events take place here throughout the year.



The water surrounding Mashomack Preserve is the perfect place to hatch and raise scallops as part of the Conservancy's shellfish restoration project. Scallops live in these protected waters until they are old enough to be successfully transplanted to other locations.



Grassland habitat like the one pictured here is threatened on Long Island and around the world. Mashomack's grasslands support a variety of birds such as swallows, bluebirds and woodcock.