

# field, forest & fen

Fall 2009

## The Nature of Conservation

### Pearly Mussels

Although the non-native zebra mussel (*Dreissena polymorpha*) has made local headlines, we don't hear much about the dozen or so fascinating freshwater mussel species native to the Susquehanna River and its tributaries. These include four "species of greatest conservation need", a designation of the United States Fish and Wildlife Service for declining species: the yellow lamp mussel (*Lampsilis cariosa*), green floater (*Lasmigona subviridis*), elktoe (*Alasmidonta marginata*), and brook floater (*Alasmidonta varicosa*).

These four species belong to the Unionidae, or Pearly Mussel family, which are bivalved mollusks characterized by an anterior beak, hinge teeth, and like most bivalves, muscular foot and large semi-internal mantle cavity. The two shells are formed from minerals, mostly calcium carbonate, extracted from the water and secreted in layers. The lustrous interior layer of the shell is called nacre or mother-of-pearl, and was once extensively harvested for commer-

cial purposes. During reproduction freshwater mussels produce parasitic larvae called glochidia which attach to specific fish hosts. They metamorphose in 10-30 days to the juvenile stage. The glochidia then fall off the fish and burrow into the sediment with their posterior margins exposed, pumping water through an incurrent siphon into the mantle cavity to obtain oxygen and food. They are filter feeders, ingesting algae, detritus, and bacteria. It may take several years before a juvenile reaches sexual maturity. Survival rates from larvae to adult are extremely low, but under the right conditions a freshwater mussel may live 10 to over 100 years depending on the species.

Pearly mussels are an important part of our ecosystem. They remove particulate matter from the water column and are key indicators of water quality. They are a food source for muskrats and other predators. However, they are considered the most threatened of all taxonomic groups in North America, with nearly 70% of the 297 species now listed as extinct, endangered, threatened, or of special concern. The most serious threats are siltation, channel modification, and impoundments, which disrupt the river bottoms in which they bur-

row and the water quality from which they obtain oxygen and food. These threats also impact the healthy fish populations which are critical to mussel survival. Pollutants, salt runoff from roads, and competition from non-native species like zebra mussels also threaten native mussel populations.

Further research is still needed concerning pearly mussel ecology and life history. The fish species hosts for many species are still unknown, as well as how habitat variables, such as substrate and riparian zone vegetation, affect survival rates. The SUNY Oneonta Biological Field Station in Cooperstown is currently conducting research to locate populations of threatened pearly mussels, and to study mussel viability and habitat preferences in the Susquehanna and its major tributaries. Answers to these questions will help us to make sound conservation plans, including protecting land along local waterways, that may help to save the imperiled pearly mussels.



Yellow lamp mussel (*Lampsilis cariosa*)

## Otsego Land Trust's First Land Purchase

Going once, going twice, SOLD to Otsego Land Trust. The gavel went down, and it took a moment for John Robinson, Joe Homburger, and Peter Hujik, to catch their breath. Otsego Land Trust had purchased their first parcel at the Otsego County tax sale.

The story actually began in late July 2008 when John noticed in the newspaper that a small 3-acre parcel strategically located at the confluence of Oaks Creek and the Susquehanna River along County Highway 11C would be auctioned off at an upcoming sale. John urged Otsego Land Trust to pursue this opportunity- and quickly- because the auction would be held August 11 at the County Highway Garage on Linden Avenue in Cooperstown.

Peter and Joe carried John's urgent request to the Otsego Land Trust Board of Directors. What to do? Otsego Land Trust had never purchased a fee-simple parcel of land. Fortunately, staff was able to secure Board authorization for the purchase at a meeting August 5th. The Board firmly set a "not to exceed" limit for the proposed purchase.

John, not convinced that the final sale price would fall within



Compton Bridge on County Highway 11C  
Photo credit: R. Walker

the bidding limit, recruited several of his friends to attend, and brought additional cash in hopes of increasing the chances for success. As bidding progressed, three bidders competed, then two with intense interest, and finally Otsego Land Trust prevailed- happily within budget- by outbidding a downstate real estate broker.

### A 3-Acre Treasure

Why all the fuss about 3 acres? Because this strategically located parcel runs 1,400 ft. along the Susquehanna River, which has the highest concentration of rare and endangered species documented in Otsego County. The parcel also encompasses an ecologically significant floodplain. Railroad tracks owned by Leatherstocking Railway form the eastern boundary. Compton Bridge on County Hwy 11C, which dissects the property, is a popular viewing location during

the annual General Clinton Canoe Regatta. The property falls within the vicinity of a previously protected property with 1,000 feet of frontage on the Susquehanna River and several other prospective conservation easements. A preliminary plant survey has revealed a rich native floodplain flora with minimal invasive species as well as a remnant floodplain forest. The topography of the property lends itself to public access for fishing and boating activities.

### Looking Forward

Now that Otsego Land Trust owns its first piece of real property, it is busy working on the development of a management plan. Employing in-house skills and partnering with New York State Department of Environmental Conservation, the ultimate goal is to provide public fishing, canoeing, and kayaking access. Thank you, John Robinson, for engaging our team and launching this important initiative. Due to the attention and enthusiasm of one individual, many more may soon enjoy the beauty of the Susquehanna River for years to come.



Turtlehead (*Chelone glabra*) on floodplain  
Photo credit: C. Tedesco



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Otsego Land Trust protects the distinctive rural character of the Otsego County area by securing lands and waters of significant scenic, historic, and ecological value, including forests and farmlands.

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Otsego Land Trust is partially funded by the New York Conservation Partnership Program administered by the Land Trust Alliance Northeast Program with support from the State of New York. A copy of Otsego Land Trust's annual financial report may be obtained upon request from our office or from the New York State Attorney General's Charities Bureau, ATTN: FOIL Officer, 120 Broadway, New York, NY 10271.

## Field Notes: A River Runs Through It

*And when I had asked the name of a river from the brakesman, and heard that it was called the Susquehanna, the beauty of the name seemed to be part and parcel of the beauty of the land. As when Adam with divine fitness named the creatures, so this word Susquehanna was at once accepted by the fancy. That was the name, as no other could be, for that shining river and desirable valley.*

Robert Louis Stevenson

As the Susquehanna River captured the imagination of Robert Louis Stevenson, so it continues to inspire today—largely because much of this noteworthy valley remains open and scenic. However, despite the economic downturn, threats to the land and water of the beautiful Susquehanna continue to mount.

Your ongoing support over the past several years has enabled us to make a landscape-scale impact in the headwaters of the Susquehanna River by protecting over 1,000 acres along Red Creek and another 800 acres on and around Otsego Lake. Now we are hoping to gain momentum along the Susquehanna River main stem. With just three properties protected along the 50-mile stretch of the Susquehanna River from Cooperstown to Sidney, our conservation efforts along the river have just begun.


Protecting the Susquehanna River means sustaining active farmland and neighboring natural areas. Peter Farmer and Abigail Armstrong did just that when they developed a conservation easement to protect the alfalfa field and floodplain forest they own along the river north of Phoenix Mills Cross Road in 2007.

This newsletter shares the story of how their neighbor John Robinson enabled us to purchase a neighboring property downstream. In collaboration with New York State Department of Environmental Conservation, we are excited about the prospect of providing public access to the river from the Compton

Bridge site in the near future. Stay tuned for details in the coming months!

Developing our first public preserve along the Susquehanna River—the namesake of the Basin where we work—is only fitting. Other watersheds where we work—Butternut Creek, Otego Creek, and Red Creek to name a few—all flow into the Susquehanna River.

And the story continues as the watershed that sustained the Susquehannock tribe is again capturing the imagination of its residents. People up and down the river—from the Upper Susquehanna Coalition to the Chesapeake Bay Conservancy—are striving to protect the longest river on the eastern seaboard. With your sustained commitment and support, together we can counter the threats we face and work on a meaningful scale along our stretch of the Susquehanna River.

Peter Hujik  
Executive Director

Harry Levine  
Chairman

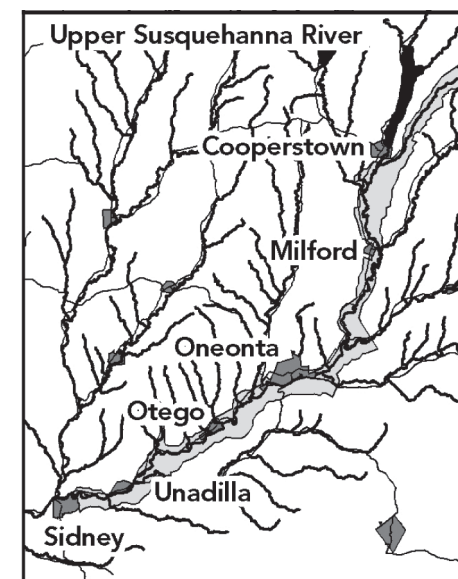
### Did you know?

“Susquehanna” comes from the Algonquin word meaning “people of the Muddy River” (some variations exist). The Susquehannock experienced a rapid decline after 1650, primarily due to war and disease, which continued until the last 20 were massacred by colonists in 1763.

## Conservation Spotlight: Upper Susquehanna River

The Susquehanna River, the longest river on the eastern seaboard, meanders 444 miles from its outlet on Otsego Lake through New York, Pennsylvania, and Maryland to the Chesapeake Bay and the Atlantic Ocean. It is a valuable water source, recreation source, and home to a fascinating array of plants, animals and people. It is a treasure trove of cultural and historic resources, including four sites listed on the National Register of Historic Places.

In our *Conservation Blueprint*, we have identified a 50-mile stretch of the Susquehanna River as priority for protecting land. There are approximately 10,500 acres of sugar maple forest, over 2,500 acres of wetland, and nearly 16,000 acres in active agriculture along this stretch of river from south of Cooperstown to Sidney. The high quality farmland in the river valley faces high commercial and residential development pressure along this corridor of cities, towns, and villages.



■ Conservation Area — Major Roads

Threatened bird species in the Upper Susquehanna include the bald eagle, northern harrier, and pied-billed grebe. Also at risk are timber rattlesnakes and several mussels (see page 4). Migratory fish like shad, herring, and striped bass, once plentiful, have long been extirpated from the northern reaches of the river due to dam construction over the last two centuries. Sedimentation and water pollution are additional threats to the health of the Susquehanna River.

## Otsego Land Trust Awarded 2 Grants

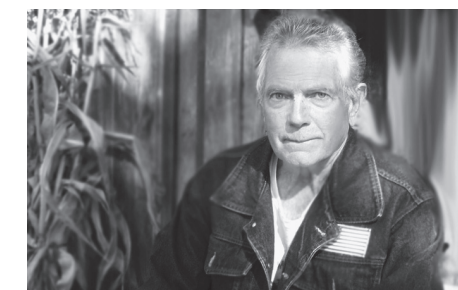
The New York State Department of Environmental Conservation (DEC) and the Land Trust Alliance announced October 1<sup>st</sup> that Otsego Land Trust is the recipient of two New York State Conservation Partnership Program (NYSCPP) grants totaling \$29,000.

The first grant will enable Otsego Land Trust to develop a website to more effectively share information about our mission, available land protection tools, and news and events, as well as the stories of people protecting their land. The second grant will support Otsego Land Trust's preparation for a rigorous national accreditation. This comprehensive certification is designed to ensure the long term success of the Otsego Land Trust and our conservation efforts.

Otsego Land Trust has received a total of \$133,665 in awards from the NYSCPP since 2003. A previous NYSCPP award enabled Otsego Land Trust to develop a *Conservation Blueprint*, a guide that steers land protection efforts in strategic areas throughout the Otsego region. Last year's award provided additional support to work with the many landowners who are working with us to protect the landscapes we all cherish.

## The People Behind the Places We Protect

John D. Robinson Sr., a Cooperstown native son, traces his longstanding family roots in Otsego County back to 1792 when his ancestors settled in Lena in the Town of New Lisbon. Enjoying outdoor activities, he has spent innumerable hours exploring the Otsego region, swimming, hiking, fishing, trapping, and hunting.



John D. Robinson Sr.  
Photo credit: J. Homburger

If one were to ask John what he did for a living, his reply would be that he was a union laborer. His hand-crafted log cabin home on the shore of the Susquehanna River, his workmanship in stone masonry at Historic Hyde Hall on Otsego Lake, and his keen interest in local history reflect his deep abiding passion for local culture and conservation.

John, a regular participant at walks offered by Otsego Land Trust, became aware of our mission to protect natural areas, working farms and forest, and historic sites while exploring some of the special lands we have secured. Because of a timely lead from John regarding an upcoming tax sale, Otsego Land Trust was able to make its first land purchase of a 3-acre parcel of wetlands along the Susquehanna River. As a result of John's contribution, Otsego Land Trust presented him our inaugural “Trailblazer Award” for enabling us to reach this important milestone.