

# NEW JERSEY NATURAL LANDS TRUST

2008 Annual Report



*Preserving New Jersey's Natural Diversity*

## Statement of Purpose

The New Jersey Natural Lands Trust was created by the Legislature in 1968 as an independent agency with the mission to preserve land in its natural state for enjoyment by the public and to protect natural diversity through the acquisition of open space. The Trust preserves land primarily by donations of open space through acquisition of title in fee simple or of conservation easements, and manages its properties to conserve endangered species habitat, rare natural features, and significant ecosystems. The Trust invites passive use by the public for recreational or educational purposes wherever such use will not adversely affect ecological communities and biological diversity.

The Trust also recognizes that ownership and management alone are not enough to achieve its mission. Public education is an integral function of protecting natural diversity. The Trust distributes information designed to convey a conservation ethic for the protection of open space and its natural values.

## New Jersey Natural Lands Trust contact information:

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Cover Photo Credit: Mark Peck of the Royal Ontario Museum, Toronto, Ontario, Canada, May 2008

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*Great Piece Meadows Preserve*

## In 2008. . .

**T**he New Jersey Natural Lands Trust brought approximately 300 new acres under Trust stewardship, making the Trust responsible for over 25,000 acres managed as a system of more than 120 preserves throughout the state.

Four of the Trust's new holdings totaling 85 acres were donated at no cost to the Trust, while the others were purchased by the Trust or transferred to the Trust for management through the State's Green Acres Program.

The acquisitions represented additions to the **Thomas F. Breden Preserve at Milford Bluffs** and the **Crossley, Great Piece Meadows, Moorestown and Sweet Hollow preserves.**



*Sweet Hollow Preserve*

# Trust Expands Thomas F. Breden Preserve at Milford Bluffs

**Y**ears ago, the Trust joined forces with the New Jersey Chapter of The Nature Conservancy and the New Jersey Green Acres Program to preserve 200 acres at the top of a red shale ridge just north of the Borough of Milford. Initially named Milford Bluffs, the preserve was renamed the Thomas F. Breden Preserve at Milford Bluffs in 2004 in memory of the Trust's Executive Director who had passed away suddenly at the age of 47. While the Trust and The Nature Conservancy owned separate tax parcels--the Trust owning 165 acres and The Nature Conservancy 37 acres--they co-managed the properties as one preserve.

In 2008, The Nature Conservancy donated its 37 acres to the Trust making the Trust the sole owner and manager of the preserve. The Nature Conservancy's donation followed their adoption of a statewide conservation plan wherein they determined to concentrate efforts in the far northwestern and southern portions of New Jersey. Since the Thomas F. Breden Preserve was not close to either of their focus areas, they offered their interest at the Thomas F. Breden Preserve at Milford Bluffs to the Trust and we gladly accepted.

This year the Trust was also able to extend the preserve south into the Borough of Milford through Green Acres' acquisition of the 46-acre Lang property.

Through The Nature Conservancy's donation and the Lang acquisition, the preserve now encompasses almost 250 acres and includes most of the red shale cliffs and rock outcrops in the area. In addition to the breathtaking vista they provide of the Delaware River below, the hot, dry microclimate of the cliffs provide critical habitat to an array of rare plants such as the green violet, hairy lipfern and small-fruit grooveburr.

Throughout most of the year, there is a seasonal parade of beautiful wildflowers from columbine, trout lily, spring beauty, wild geranium and violets to goldenrods and asters. Most unique is the uncommon prickly-pear cactus, the only cactus native to New Jersey and particularly spectacular in June and July when there are thousands of plants in yellow bloom in contrast to the red shale cliffs.

In addition to enjoying the breathtaking views and wildflowers, one may also enjoy the trails at the preserve that wind through diverse habitats such as the cliffs, woodlots, old fields as well as a hemlock forest along the Milford Creek, a trout stream.



*Green Violet*



*River view from Thomas F. Breden Preserve at Milford Bluffs*



*"Peregrine Falcon"*



*"Gentian"*

## Sale of Stefan Martin Prints Benefits Trust

In 1984, the Trust commissioned a series of limited edition prints created exclusively for the Trust by New Jersey wood engraver Stefan Martin. Each of the three prints highlights an object of the Trust's preservation efforts: the State-endangered Peregrine Falcon, titled "Peregrine Falcon;" a northern New Jersey stream habitat titled, "Morning Stream;" and a grouping of three Pine Barrens Gentian, titled "Gentian." After Stefan Martin's death in a 1994 fishing accident, a fellow artist noted that Martin was "absolutely one of the most important artists in New Jersey. He won many awards, was nationally known, and very well-loved."

Unframed prints are \$150 each, or \$400 for all three (a \$50 savings). Remaining as of this writing are 203 "Peregrine Falcon," 130 "Morning Stream," and 20 "Gentian" prints.

To order, contact the Trust at 609-984-1339, or email [NatLands@dep.state.nj.us](mailto:NatLands@dep.state.nj.us) and indicate which print or prints you would like to order and your name and phone number. We will get back to you with ordering details.



*"Morning Stream"*

# Another Attempt to Preserve Armstrong Bog

The Trust has long been interested in preserving a 327-acre property in Frankford Township, Sussex County commonly known as Armstrong Bog. Since the 1970's Armstrong Bog has been known as a premiere New Jersey habitat for the federally- and state-endangered bog turtle and the state-threatened wood turtle.

The property is bisected by Route 565 (Ross's Corner-Sussex Road). The Papakating Creek flows northward through the center of the property and east-west across the property along the abandoned Lehigh and New England Railroad. Frankford Township and surrounding municipalities are promoting the use of the abandoned rail bed as a future regional trail. This property falls within what is known as the Papakating Creek Natural Heritage Priority Site. The Trust currently manages two other properties along the Papakating Creek as part of its Papakating Creek Preserve.

In partnership with the Green Acres Program, the Trust has made numerous overtures and offers over the years to various owners and contract purchasers to preserve the site. Unfortunately these owners and contract purchasers seemed focused on the property's development potential, and the Trust and Green Acres were never able to meet price expectations. It seemed that the property was destined for at least some level of development. Development of the site will inevitably directly impact or degrade the bog turtle habitat, such as through storm water runoff and disrupted hydrological patterns.

Now the stars may be aligning to finally preserve this property seemingly destined for development.

This summer the United States Fish & Wildlife Service announced the availability of federal grant money under Section 6 of the Endangered Species Act for land acquisition



*Armstrong Bog property*

tions associated with the recovery of federally endangered or threatened species such as bog turtle. The Trust jumped at the opportunity and applied for federal money towards the acquisition of Armstrong Bog.

At the same time, the Trust for Public Land has jump-started discussions with the landowners and is working on generating open space funding from a variety of other sources towards this acquisition. The Trust is extremely hopeful that through its partnership with the New Jersey Green Acres Program and the Trust for Public Land, it will finally be able to preserve this site.

Most significantly, if this site is preserved, federal and state agencies finally will have the opportunity to monitor the bog turtle population and to manage invasive plant species and other threats to the bog turtle habitat. Emergent wetlands, important to bog turtles, have become degraded by invasive plant species such as purple loosestrife, reed canary grass and common reed. Furthermore, once extensive emergent wetlands of sedges, sphagnum and cattail have succeeded into shrub/shrub wetlands, which are considered less suitable for bog turtles. Management techniques such as control of invasive plant species and restoration of an emergent wetland habitat would enhance the future suitability of the wetlands for bog and wood turtles. To date, habitat management and monitoring have not been possible due to the lack of cooperation by the landowners.

The Trust's strategic attempt to leverage federal funding comes at a time when the economic downturn and lower real estate values provide opportunity to preserve open space but while Garden State Preservation Trust funding for open space preservation is greatly diminished. The US Fish & Wildlife Service has not announced when it will make its grant awards.



*Bog Turtle. Photo courtesy of NJ Division of Fish and Wildlife*

# Bats and Biologists at Black Meadows

On a quiet summer night, songs of insects call out from the freshwater marsh wetlands known locally in the Passaic watershed as Black Meadows. On this night, wildlife biologists are stationed nearby along a tree edged bend of the Whippany River. Suddenly, the wildlife sounds of the marsh go silent. A defining loud rush of turbulent air passes over the wing of jet a, passing low overhead; it's coming in over tall trees to land at the Morristown Municipal Airport, centered in Black Meadows. The biologists are here to monitor a mist net set up across the stream in an effort to discover an important but overlooked mammal of the marsh. They are surveying for the federally endangered Indiana bat, *Myotis sodalis*, in locations such as Black Meadows and the Great Swamp, just two noted wetland systems within the Passaic River watershed where Indiana bats have been found. Biological work is being done here to help design improvements to a required airport safety flight corridor. This night, the biologists caught many bats of several species, but no endangered Indiana bats. Another night, they would find in their nets one small, furry juvenile Indiana bat. This was proof positive that Indiana bat utilize Black Meadows. Upcoming research may reveal that there is a maternity colony here at Black Meadows that has produced this young Indiana bat.

The Morristown Airport is required to operate the airport in compliance with the safety standards established by the Federal Aviation Administration (FAA), such as requirements that critical areas surrounding and extending beyond the ends of the runways are free of obstructions that could interfere with the approach, landing or taking-off of aircraft.



*Monitoring with Mist Nets.*  
*Photo courtesy of US Fish and Wildlife Service*



*Indiana Bat. Photo courtesy of US Fish and Wildlife Service*

Specifically, the FAA imposes standards regarding the height of obstructions, including trees, in the vicinity of the ends of airport runways and requires obstructions that exceed their standards to be removed. Built in that late 1950's, trees within the Morristown Airport flight path have now grown so tall that they exceed the standards and need to be removed.

Biologists with the Trust and the United States Fish and Wildlife Service (USFWS) and airport officials worked together to develop a plan that meets the safety objectives of the airport and the critical needs of the bats. Under a plan approved by the Trust's Board of Trustees, arborists would top branches from the tallest trees, which would then also be intentionally girdled and killed in order to create a natural dead tree or "snag" often used by roosting and maternal bats, including Indiana bats.

The Airport also agreed to a \$76,000 contribution to the USFWS to fund a two-year extension of an important, ongoing Indiana bat research study being conducted at the nearby Great Swamp National Wildlife Refuge. In its first two years, scientists have learned a great deal from this research including movements from radio tracked bats, preferred habitat signatures, and population estimates. The Airport's funding will also provide survey work at Black Meadows. The Airport also agreed to acquire seven acres of forested wetland habitat as mitigation for its clearing activities. In this unique situation requiring public safety and endangered species protection, the Trust and the Airport found a win-win solution. Bats and jets will safely fly; Black Meadows will never go silent.

# Research Results from the Trust's Shorebird Fund

By Amanda Dey, Ph.D.

## Endangered and Nongame Species Program

**T**he Delaware Bay is one of the Western Hemisphere's most important shorebird migration stopover sites. It ranks among world-renowned stopovers including the Copper River Delta in Alaska, the Yellow Sea in China, and the Dutch Wadden Sea in Europe. Delaware Bay is unique, however, because it is the center of horseshoe crab breeding in the Western Hemisphere. Tiny, green horseshoe crab eggs unearthed during spawning activity fuel the northbound migration of at least six shorebird species en route to the Arctic to breed.

The New Jersey Natural Lands Trust (Trust) has a long history of support for the protection and study of Delaware Bay's migratory shorebirds. In 1985, the Trust received mitigation funds for the destruction of several acres of wetlands caused by the construction of the Salem Nuclear Power Plant in Salem, NJ. The company created three acres to offset the

destruction and placed \$1 million into the care of the Trust. At first the funds were used to acquire lands important to shorebirds. In 1986 the Division of Fish & Wildlife's Endangered and Nongame Species Program (ENSP) proposed the Delaware Bay Shorebird Project using primarily income from the fund. This "Shorebird Fund" has fueled protection and monitoring of shorebirds for the last 23 years.

In 1986, ENSP began aerial surveys to document numbers of migratory shorebirds on Delaware Bay. By 1990, in partnership with most of the state's conservation groups, ENSP and the Trust developed a comprehensive management plan for migratory shorebirds that was soon incorporated into state and national planning for shorebird protection. In 1986, Delaware Bay became the first Site of Hemispheric Importance designated under the Western Hemisphere Shorebird Reserve Network (WHSRN). There are now over



*Red Knots in Flight. Photo Courtesy of Mark Peck of the Royal Ontario Museum, Toronto, Ontario, Canada, May 2008*



70 sites in 10 countries designated as important shorebird areas. The Trust also funded some of the first management programs in the US aimed at shorebirds, including the first viewing platform at Reeds Beach and educational signs describing the stopover and the importance of protecting it. In 1992, the Trust funded an unprecedented simulation of an oil spill in Delaware Bay and invited agencies and commercial interests responsible for spill prevention and response to participate. The failure to effectively deal with even a small spill prompted changes to spill response that may have saved the bay from extensive damage in two subsequent spills.

In the mid-1990's, the horseshoe crab harvest increased dramatically and shorebird numbers began to decline. This spurred the current work of the Delaware Bay Shorebird Project funded by the Trust--intensive studies to understand if decline of horseshoe crabs and their eggs were impacting migratory shorebirds. In the ensuing 12 years, biologists not only documented precipitous declines in shorebird numbers but, more alarmingly, elucidated the cause: an increasing proportion of shorebirds, particularly the red knot, were not gaining sufficient weight to complete migration and successfully reproduce. Sufficient weight gain on Delaware Bay, the last stop before birds reach the Arctic, is necessary for survival and successful reproduction.



*Red Knot. Photo Courtesy of Mark Peck of the Royal Ontario Museum, Toronto, Ontario, Canada, May 2008*

The red knot was particularly hard hit, and its population declined by more than 90 percent between 1996 and 2008. The semipalmated sandpiper, under intensive study by NJ Audubon biologists in a project also funded by the Trust, has shown similar year-on-year decline in weight gain. A count of its wintering population in late 2008 showed a decline of greater than 80 percent since the original winter count of the mid-1980's. Ruddy turnstone numbers have declined significantly as have sanderling and other species. All told, the entire stopover population is less than one-quarter of the 500,000 birds once counted in the early 1990's.

In 2007, ENSP biologists and colleagues from the US, Canada, South America, the United Kingdom, Australia

and New Zealand synthesized all published and unpublished information on red knot for consideration for federal listing under the Endangered Species Act. This document was published in 2008 as a monograph entitled "Status of the Red Knot in the Western Hemisphere." The monograph, the latest in the Studies in Avian Biology series published by the Cooper Ornithological Society, received US and worldwide distribution. Information from this report was instrumental to Governor Jon S. Corzine, the NJ Legislature, and state conservation groups, who in 2008 lead the Atlantic coast states in shorebird conservation by imposing an indefinite ban on horseshoe crab harvest until the red knot population recovers. This and other published works were only possible through the support from the Trust.



*Spawning Horseshoe Crabs. Photo courtesy of the NJ Division of Fish and Wildlife*

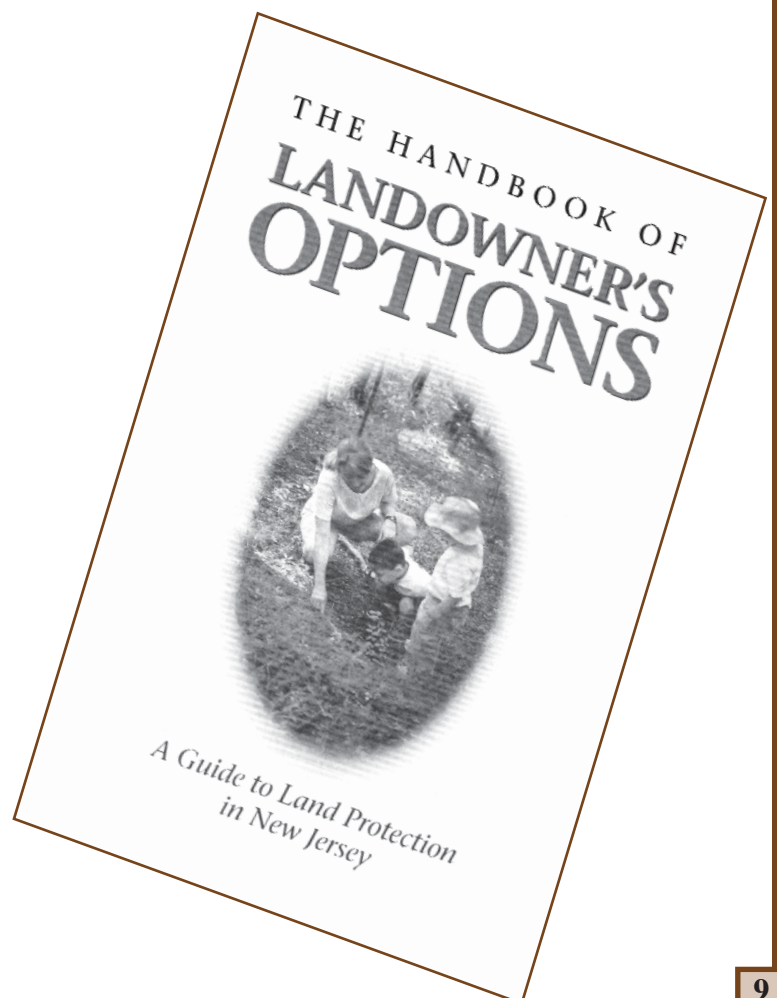
# The Handbook of Landowner's Options – A Guide to Land Protection in New Jersey

**L**and in New Jersey is in demand more than ever before. Realizing that much of the effort to preserve land must come from the private sector, the New Jersey Natural Lands Trust and The Nature Conservancy of New Jersey published *The Handbook of Landowner's Options – A Guide to Land Protection in New Jersey*. The handbook describes the options available to landowners who wish to preserve the natural attributes of their property. It illustrates how property owners can work together with private, nonprofit conservation organizations and government agencies to preserve open space through a variety of methods tailored to their individual needs.

The Handbook is available on the website at the site of the New Jersey Environmental Digital Library.

The link to the document is <http://njedl.rutgers.edu/ftp/PDFs/2116.pdf>.

To receive a hard copy of this document (the first copy is free, additional copies are \$1 each), contact the Trust at 609-984-1339 or [NatLands@dep.state.nj.us](mailto:NatLands@dep.state.nj.us). If requesting more than one copy, make your check payable to the New Jersey Natural Lands Trust, and send your request, including the name and address to which the handbooks are to be sent, to the NJ Natural Lands Trust, PO Box 404, Trenton, NJ 08625.



# Easily accessible, updated information about the Trust – [www.njnlt.org](http://www.njnlt.org)

The Trust works to regularly update information on its website including new preserve profiles, maps and management projects.

For updated information about Trust activities throughout the year, please visit [www.njnlt.org](http://www.njnlt.org). The heart of the website is the Preserves and Public Uses page, containing a map of the Trust's preserves. For selected preserves, maps and additional information – including locations, features of interest, size, access, directions, and permitted passive recreational activi-

ties – is provided by clicking on the preserve location on the map. For those interested in deer hunting (only the hunting of deer is allowed, and only on selected Trust preserves), the user can access, print and electronically submit a hunter registration letter directly to the Trust, and also print the map of the Trust preserve which must accompany the registration letter. This self-registration process has replaced the prior mail-in registration process. In 2007, more than 3,000 hunters registered to hunt at Trust preserves.

*The Trust's new website home page.*

# Swapping Lands to Improve Management Efficiency

**U**pon the recommendation of the Trust's Land Manager Martin Rapp, the Board approved the transfer of management responsibility for 164 acres of Trust-owned lands at nine different preserves to the New Jersey Division of Parks & Forestry (Parks & Forestry). In exchange, the Trust is taking on management responsibility for 140 acres at four existing Trust preserves (Beech Ridge, Mountain Lake Bog, Reinhardt and Wallkill preserves). The Trust initiated discussions with Parks & Forestry about a swap with the goal of making management of state-owned lands more efficient and effective by ensuring that contiguous (and nearby) parcels are the responsibility of a single management entity. Although

Parks & Forestry presently has very limited resources, given the relative small size of the nine preserves being transferred and their geographical proximity to large Parks & Forestry holdings, they should not pose much, if any, additional management burden to the agency. The Trust expects to propose a similar swap of management responsibility between it and the Division of Fish & Wildlife in the future. As it did prior to proposing the swap with Parks & Forestry, the Trust will consider a property's ecological significance and, in most cases, where the property is ecologically significant, management responsibility will not be transferred from the Trust.



*Mountain Lake Bog Preserve*

## Record Number of Registered Hunters

**D**uring the 2008-2009 hunting season over 4,000 hunters registered to hunt at Trust preserves via its website: [www.njnlt.org](http://www.njnlt.org). The Trust allows deer hunting at many of its preserves to protect biodiversity. The deer population in New Jersey is far greater than the ecosystem can sustain. Over-browsing by deer deplete native vegetation resulting in various threats to animal and plant habitat such as decreased food sources and increased invasive plants. The Trust does not allow hunting for

waterfowl or game other than deer at its preserves, as it believes that at this point only deer over-browsing poses a threat to biodiversity. In order to hunt at selected Trust preserves, the user can access, print and electronically submit a hunter registration letter directly to the Trust, and also print a map of the Trust preserve which must accompany the registration letter. The Trust works to regularly update information on its website including new preserve profiles, maps and management projects.

## 2008 List of Donors

The New Jersey Natural Lands Trust gratefully extends its thanks to the following who have donated land, funds or services to the Trust in 2008 to help preserve and protect New Jersey's natural heritage:

Dorothy Chamberlain

Evergreen Environmental

The Nature Conservancy



The Trust accepts gifts, legacies, bequests, and endowments of land and/or funds for use in accordance with the Trust's mission. For more information about how you can make a donation to further the Trust's mission to acquire, preserve, and manage natural lands for the protection of natural diversity, call 609-984-1339, or visit the Trust's website at [www.njnlt.org](http://www.njnlt.org)

*The New Jersey Natural Lands Trust financial report is available upon request.*

## Thanks to Our Volunteers

**T**he Trust would like to acknowledge and thank its many volunteers for their invaluable contributions to the maintenance of Trust preserves.

It takes a lot of commitment and discipline to keep a watchful eye on a piece of property over time, especially since volunteer monitoring is pretty much a self-motivated endeavor. It also takes dedication to

attend a preserve workday and pick up what appears to be the same trash, year after year.

If you are interested in becoming a Trust volunteer monitor or attend a workday, please contact the New Jersey Natural Lands Trust at 609-984-1339, or email [NatLands@dep.state.nj.us](mailto:NatLands@dep.state.nj.us).

# The New Jersey NATURAL LANDS TRUST

## Board of Trustees

An 11-member Board of Trustees sets policy for the Trust.  
Six members are appointed by the Governor from the recommendations  
of a nominating caucus of conservation organizations, and five members are State officials.

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