



OUR P.A.P.E.R

Parks Are for People & Environmental Resources

A publication of the New York State Office of Parks,
Recreation and Historic Preservation

Volume 4, Issue 2

Introduction

This issue of *Our Paper* is our biggest yet! Our regional and Albany environmental staff are taking on more and more natural resource stewardship projects each year. While we have several updates, accomplishments and photos to share throughout this issue of our newsletter, there are still many interesting and important stories we would have liked to have included. So, please stay tuned for future issues...

As always you can visit *Our P.A.P.E.R.* on-line at:

<http://www.nysparks.com/environment/documents.aspx>

Invasive Plant Hydrilla Discovered in Cayuga Lake Inlet

In August of 2011, the monoecious variety of *Hydrilla verticillata* (Hydrilla) was detected in the inlet to Cayuga Lake, the Cayuga Inlet (the Inlet) in Ithaca, NY. Currently, Hydrilla is known in 166 acres of the Inlet, including Allan H Treman State Marine Park (SMP) in the Finger Lakes Region. It is thought that the plant had been in the Inlet for one to two years prior to its discovery. Often referred to as one of the world's worst invasive, Hydrilla has the potential to spread within a very short time throughout the waterways of the Finger Lakes and Great Lakes, devastating fishing, boating, local economies and aquatic ecosystems.

Hydrilla is an extremely aggressive submerged aquatic plant, forming dense mats and growing in 30 feet of water even in low light. In favorable conditions it can grow 12 inches per day. Hydrilla has three mechanisms of spread; underground tubers, water dispersed turions, and vegetative sprouting from broken plant fragments. The plant's rapid growth results in dense monocultures, which cause significant declines in native plant diversity and abundance, low dissolved oxygen, and physiological stress to fish.

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Emergent stems and leaves of Hydrilla could easily be seen in Cayuga Inlet at Cass Park, Ithaca, NY. Photo by R. Johnson



Hydrilla infestation at Johnson's Boatyard, Ithaca, NY. Photo by R. Johnson

Interconnections: Allan H Treman State Marine Park, Cayuga Inlet and Cayuga Lake

Allan H Treman SMP is located along the Cayuga Inlet at the entrance of Cayuga Lake. It is the largest inland marina in the state. Dense Hydrilla growth has already taken over large portions of the Inlet, eliminating native aquatic plants from these areas. If Hydrilla were to spread into Cayuga Lake, it could result in a major suppression and elimination of many native species.

Water-based recreationalists, like those at Allan H. Treman, move between the eleven Finger Lakes and two Great Lakes to pursue fishing, boating, and swimming activities. This is of great concern because boat movement is a key mode of transport and spread of Hydrilla. Stem fragments transported on a boat or trailer to another waterbody have a high potential to survive and establish a new infestation. In Ithaca and Allan H Treman, we are at a critical point in eradicating Hydrilla for a relatively low-cost; the early detection - rapid response phase.

Collaborative Eradication Efforts

A large partnership, called the Hydrilla Task Force, came together in August to develop a safe and effective treatment strategy, work through regulatory hurdles, and alert and educate the public. Members of the Task Force include: NYS Office of Parks, Recreation and Historic Preservation (OPRHP), NYS Department of Environmental Conservation (DEC), Tompkins Co Soil and Water Conservation District, City of Ithaca, Cornell University, Tompkins Co Department of Health, Tompkins Co Sheriffs Department, Racine-Johnson Aquatic Ecologists, the Cayuga Lake Watershed Network, the Floating Classroom, and Cornell Cooperative Extension (CCE). Additionally, the US Army Corps of Engineers (US ACE) is a partner, as well as 6 independent Hydrilla experts to insure the most effective management and monitoring efforts are implemented.

This group of partners began monitoring, education and treatment efforts in August 2011. The Park, Inlet and Cayuga Lake were surveyed for Hydrilla using a standardized rake toss method, and, to date, no rooted plants have been found in the Lake. Both an herbicide treatment (endothall) and diver-assisted biomass removal methods were utilized to reduce vegetative survival, with 95% and <1% success, respectively. Public education began almost immediately through signage and face to face conversations at all boat launches and marinas. Boat stewards are located in all launches throughout the Finger Lakes Region for the 2012 season, including a full-time steward at Allan H Treman. Drawing on what was learned in 2011, monitoring, education, and treatment plans are currently being applied for the 2012 growing season. Continued education, monitoring and management will be required for at least 5-8 years in the Inlet and Allan H Treman State Marine Park in order to meet the goal of eradication and prevent the spread of Hydrilla to other waterbodies. For more information visit www.stophydrilla.org.

This article is a combination of: LA Bogan, S Poelvoorde and J Teeter. 2012. Highly Invasive Aquatic Plant in the Cayuga Inlet Has the Potential to Devastate the Finger Lakes Region's Tourism Economy; and A Hinickle and LA Bogan. 2012. Cayuga Inlet Hydrilla Eradication. National Fish and Wildlife Foundation, Sustain Our Great Lakes Stewardship Grants, Pre-proposal.



Signs like these have been placed at Allan H Treman State Marine Park and along the Cayuga Inlet.



Regional Biologist, Tom Hughes conducting a rake toss survey in Cayuga Lake.



Holly Menninger, former Coordinator of the NY Invasive Species Research Institute and Cornell student volunteer Cassie Garcia survey Hydrilla with rake tosses in Cayuga Inlet.

Northern Cricket Frog Habitat Restoration in Sterling Forest State Park

The northern cricket frog (*Acris crepitans*) is a NYS Endangered Species that reaches its northern range limits in southeastern NY. Within this region of the state, this diminutive species (about an inch in length) is currently restricted to relatively few sites, being extirpated from many areas throughout its range where it once occurred. The species is thought to be extirpated from several former locations in Harriman and Sterling Forest State Parks, but fortunately, Sterling Forest State Park still supports a population of these tiny frogs.

At the lake where this particular population resides, a modern dam was installed in 2004 to replace a failing stone dam at the lake's outlet. This new, larger, dam was constructed with stone riprap armoring 300 feet of the shoreline. While protection of the cricket frog population was taken into account during dam construction, stone rip-rap is not suitable habitat for this species and improved habitat conditions were desired.

To create suitable habitat in place of the rip-rap shoreline, as well as improve the overall aesthetic quality of the dam, a habitat restoration project designed to benefit this declining species was initiated. The habitat restoration is designed in multiple phases, all timed with cricket frog activity periods and habitat use in mind, in order to prevent accidental mortality of individual frogs.

The first phase of the project involved filling the voids within the riprap shoreline with three sizes of crushed stone to create a solid, stable, slope that is free of voids that might trap frogs. Once in place, the crushed stone was then covered with a shallow layer of weed-free topsoil that was planted with a mix of herbaceous vegetation native to the park, as well as annual rye grass that was used for erosion control. This phase resulted in much more suitable upland habitat along the slope of the dam and improved the overall appearance of the shoreline. The next phase of the project involved creating sparsely vegetated aquatic habitat along the shoreline of the type that is known to be utilized by cricket frogs. To do this, we designed an irregular wetland shoreline and installed coconut fiber logs and sand bags that followed this plan. After dewatering, the shoreline was backfilled with a mix of 75% peat / 25% weed-free topsoil to create the bog-like mats desired.

The restoration project is currently at this stage of implementation. The final stage of the project, anticipated to be completed during the summer of 2012, involves transplanting native vegetation to the peat mats and filling the remaining narrow strip of rip-rap along the shoreline with a peat/soil mix, followed by seeding with a native grass mix. The project is progressing as planned and cricket frog use of the newly created habitat will be monitored once the project is complete. Stay tuned for further information detailing this exciting project.



Color variation in the Northern Cricket Frog (Acris crepitans) - a NYS Endangered Species found in Sterling Forest State Park.

*- Jesse Jaycox, NRS Biologist
Palisades and Taconic Regions*



Original shoreline- stone rip-rap is not a suitable habitat type for northern cricket frogs.

Northern Cricket Frog Restoration—continued



Rip-rap shoreline filled with crushed stone, topped with weed-free topsoil, and planted with native grasses (covered in erosion control blankets).



Former rip-rap shoreline after grasses became established.



Aquatic habitat restoration begins in November with the addition of a peat/soil mix along the shoreline.

Shoreline Restoration at Midway State Park

On June 4th, a jolly crew went to work between the raindrops to restore a section of shoreline along Chautauqua Lake in Midway State Park. Through a collaboration of NYS Parks, Chautauqua Lake Watershed Conservancy and Master Gardeners, a workshop was held on native plant shoreline restoration for local landowners. Chautauqua Lake is a very developed lake with only 10% of the shoreline in natural condition. This workshop was designed to assist local shoreline owners in design, plant selection, and value of a more natural, native shoreline to replace existing lawns. After the short discussion portion of the workshop, the hands-on restoration work began.



Shoreline property owners learned the art of digging and planting between tree roots.

The area of shoreline restored formerly housed a few cottages, and following the recent master plan, this section was to be left as a natural regeneration area. So through the efforts of the volunteers and coordinators, a variety of native plants were transplanted along the shoreline, including cardinal flower, bee balm, and elderberry. This new vegetated buffer along the lake shore has many functions: it stabilizes the shoreline from erosion, slows water runoff into the lake, provides food and habitat for various wildlife species, supplies overwintering habitat for the milfoil weevil (which feeds on the invasive Eurasian water milfoil in the lake), and even acts as a public demonstration area for the public to learn about the value and beauty of native, natural shorelines. Thanks to the many hands that made this project possible!

- Meg Janis, NRS Biologist
Western District Regions

Rare Plant Protection along the Niagara River Gorge

At Whirlpool State Park along the Niagara River, a state-endangered wildflower, sky blue aster (*Symphotrichum oolentangiense*) is making a comeback due to new management practices. This success story is the result of a collaborative effort between Natural Heritage Program botanists, the stewardship biologist, and OPRHP staff, both from EMB and the Niagara region. After discussions with park management on the best management practices and rare plant protection, a new area of the park has been removed from the regular mowing routine. The past two summers have allowed the natural meadow to recover, filled with this rare flower and other native species, including another uncommon wildflower, upland goldenrod (*Oligoneuron album*). The wooded areas of the park were also taken off of the mowing schedule, and asters were blooming in the mottled sunlight under the canopy. Protection of this population is particularly important since there are only two known locations with sky blue aster in New York, and the population at Whirlpool is the largest and best quality population in the state. Thanks to good communication, environmental education, and flexibility of park staff, this rare plant population is on the rise.



Whirlpool State Park meadow full of sky blue asters in bloom.



Sky blue aster (*Symphotrichum oolentangiense*)

- Meg Janis, NRS Biologist
Western District Regions

Natural Resource Project Update—Protecting American Hart's-tongue Fern



OPRHP staff trained student volunteers to dig up and remove pale swallow-wort growing in close proximity to the ferns.

Pictured above—Tyler Talone, high school student from Greece, NY and Stephanie Anos, SUNY ESF.

Clark Reservation and Chittenango Falls State Parks are home to about 88% of the U.S. population of the federally and state threatened American hart's-tongue fern. Regional efforts continue to protect this rare fern from invasive plants, most notably pale swallow-wort. For the fourth consecutive year, staff and volunteers have been working side by side hand pulling and digging swallow-wort in both parks. In addition, Jim Engel from White Oak Nursery has been applying herbicides to patches of swallow-wort where manual removal is not feasible.

These efforts are making a difference, and they will continue in 2012. The regional biologist will continue to work with ESF graduate student Tom Brumbelow as well as other partners, including USFWS, NY Natural Heritage Program and Council of Park Friends to protect this valuable species.

- Tom Hughes, NRS Biologist
Central and Finger Lakes Regions

The NY Natural Heritage Program/State Parks Partnership

New York's State Parks offer an astounding array of landscapes and habitats and hundreds of locations for rare plant and animal species. Who collects this information? How do we know what is rare in the state and our parks? What do we do with that information? This is the role of the Natural Heritage Program (NYNHP).

Since 1998, NYNHP has conducted inventories in state parks to document the rare species and rare and/or outstanding examples of natural communities (e.g., pine barrens, hemlock forests, cattail marshes, dunes). In 2008, a formal partnership was established to increase the level of collaboration. Two full-time NYNHP biologists lead the way working closely with State Parks biologists, planners, and resource managers to facilitate conservation of significant biodiversity elements on state park lands. We conduct inventories and provide reports, tools, and expert advice to support the state parks mission of responsible stewardship of resources while the parks continue to provide recreational and interpretive opportunities.

Isn't the inventory done yet?

Since 2008 alone, NYNHP biologists discovered or documented **167 new records** for rare species and natural communities within state parks! This included one globally rare plant last seen in NY State over 30 years ago and 49 rare moth records in 3 Long Island parks. There is much more to discover.

Did you know?

Approximately 1500 current and 1000 historical records of rare species and significant natural communities have been documented on state park lands.

30 of New York State's rare species are found **only** within state parks.

Nearly 80% of all the types of natural communities described in New York State occur within state parks: from dunes and beaches, to rocky summits, lakeshore marshes, and more.

Full natural community mapping has been completed for over 100 parks totaling over 280,000 acres. These are one of the most frequently requested products from this project.

Want more information?

Descriptions of many of the rare species and natural communities are available in NYNHP's Conservation Guides. Or you can get information on rare species by town or county is at NY Nature Explorer or for lists of tracked species and other information go to NYNHP's home site.

- NY Natural Heritage Program www.nynhp.org
- Conservation Guides <http://guides.nynhp.org>
- NY Nature Explorer <http://www.dec.ny.gov/natureexplorer> - interactive data viewer

*Statistics from NYNHP database 2011, Nick Conrad (NYNHP), George Robinson (University at Albany)

- Julie Lundgren, NYNHP State Parks Ecologist



School Groups Assist with Environmental Projects on Long Island

During the fall of 2011, school groups helped out the regional natural resource steward-biologist Ariana Newell with several environmental projects on Long Island.

In September, OPRHP began its 4th year working with Hauppauge High School's A.P. Environmental Science classes, NYS DEC, and NY Sea Grant on a long-term habitat monitoring program along a tidal creek at Sunken Meadow State Park. A project is under development to increase tidal flow to the creek in order to restore a degraded salt marsh and re-establish diadromous fish runs. Students monitor water quality, macro-invertebrates, plants, fish and other wildlife six times throughout the school year to gather pre-restoration data. This information has been used to provide some of the baseline data for developing the restoration project.



Hauppauge students conduct fish surveys Sunken Meadow SP.

In October and November, a marine biology class from Cold Spring Harbor High School assisted Ariana and NY Sea Grant outreach coordinator Larissa Graham with monitoring efforts at Nissequogue River and Caumsett State Parks. The class divided into 5 monitoring teams: Estuary, Rocky Shore, Wetlands, River, Forests and Bluffs to study the various habitats at both state parks, and research similarities and differences between the two parks. They collected many types of data including water quality; botanical surveys; seining to identify fish and other aquatic animals; and counting, sexing, and measuring native crabs and invasive Asian shore crabs in order to monitor the populations. They used the data they collected to prepare research papers for class and presentations for their school. The information they gathered can be used by state parks to compare to future monitoring efforts. The class plans to continue the new partnership next spring by volunteering for beach clean ups.



Students from Cold Spring Harbor High School seine fish and measure Asian shore crabs at Nissequogue River State Park.



On November 20th, 9 student volunteers and 2 supervisors from the group Students Taking Action for Tomorrow's Environment (S.T.A.T.E) worked with the regional environmental manager Annie McIntyre and regional biologist Ariana Newell to enhance the rare coastal plain pond habitat at Brookhaven State Park. Students helped by removing fish from a small pond that is important for amphibian breeding; cutting invasive *Phragmites* along the shore line; and removing Chinese Mystery Snails, an invasive snail that people often keep in fish tanks. The goal of this effort was to improve the quality of the coastal plain pond habitat for the rare plants and animals that utilize this area, as well as teach the students why it is important not to release any type of plant or animal into the environment, showing them first hand how it can affect the natural communities.

School Groups—continued



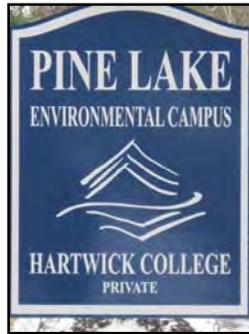
Students seining fish at Brookhaven State Park.



Chinese Mystery Snail— an invasive snail commonly kept in fish tanks.

- Ariana Newell, NRS Biologist
New York City and Long Island Regions

Hartwick College and Project Watershed at Robert V. Riddell State Park



In July, staff from OPRHP and Project Watershed CNY & National Izaak Walton League *Save our Streams* teamed up for a full day teacher workshop. The workshop, hosted by Hartwick College—Pine Lake Environmental Campus, provided training on NYS DEC and US EPA approved protocols for water chemistry, physical habitat surveys and biological sampling.

The workshop was integrated into the summer internship experiences at Robert V Riddell State Park for Hartwick College students Liam Heiland and Kristy Scaggs (pictured above right).

Similar workshop and internships are planned for summer 2012.

- Tom Hughes, NRS Biologist
Central and Finger Lakes Regions

Using *Biocontrol* Insects to Control *Invasive* Insects

Two projects this summer and fall highlight the role that biocontrol and strong partnerships can play in invasive species management. Biocontrol agents are living organisms that are used to target and control invasive species causing harm to our environment. These biocontrol agents are thoroughly screened so as to avoid introducing anything that could, itself, become an invasive species. Generally speaking, they study and choose species that will target the invasive species and only the invasive species. As one US Fish and Wildlife Service officer told me, “we want something that would rather die than eat anything else.”



Weevils are released in dense patches of spotted knapweed (pictured at right) to control the plant.



A typical release size is about 500 weevils which are distributed relatively close to one another so they can find each other to mate.

In the first case, three different weevils were introduced at Saratoga Spa State Park in order to control spotted knapweed. Spotted knapweed is a fairly common invasive plant with pretty pink flowers on tiny “pineapples”. Unfortunately, it also puts out chemicals through its roots that kill other plants and is abundant in some of the habitat managed for Karner blue butterflies. *Larinus minutus*, *Larinus obtusus*, and *Cyphocleonus achates*, two seed head feeding weevils and one root feeding weevil respectively, were released in cooperation with the US Department of Agriculture – Animal and Plant Health Inspection Service (APHIS). While these weevils will never eradicate the knapweed at the site, our permanent photo-monitoring plots will be able to show that they should be able to keep the knapweed at bay.

Meanwhile, at Mine Kill State Park, a recent discovery made the park the most northerly occurrence of Hemlock Woolly Adelgid (HWA) in New York State. HWA is a tiny, aphid-like insect native to Japan that feeds on healthy hemlock trees, eventually killing them. Through a partnership with Cornell University and APHIS, the park intends to release a beetle as a biocontrol for HWA. However, before the beetle can be released, we need to know a lot more about the HWA population at the park. Thankfully, students from SUNY Cobleskill volunteered to come to the park and perform surveys. The students did some great work and will be back again for additional surveys in cooperation with the Catskill Regional Invasive Species Partnership.



SUNY Cobleskill volunteers survey the branches of hemlock trees for hemlock woolly adelgid at Mine Kill State Park.

- Casey Holzworth, NRS Biologist
Thousand Islands and Saratoga-Capital District Regions

PHOTOS FROM OUR NYS PARKS



*A red fox keeps a look out at Connetquot River State Park.
- Photo by Ariana Newell*

Every year, biologists and scientists from NYS Parks and NY Natural Heritage Program are witnessing firsthand the natural beauty of our NYS Parks.

These trained individuals recognize the value of recording everlasting images of plants, wildlife and other natural scenes while performing their work in the field.

This edition focuses on the diverse wildlife found in our NYS Parks. Amazing insects, reptiles, birds, and mammals can be seen every day!



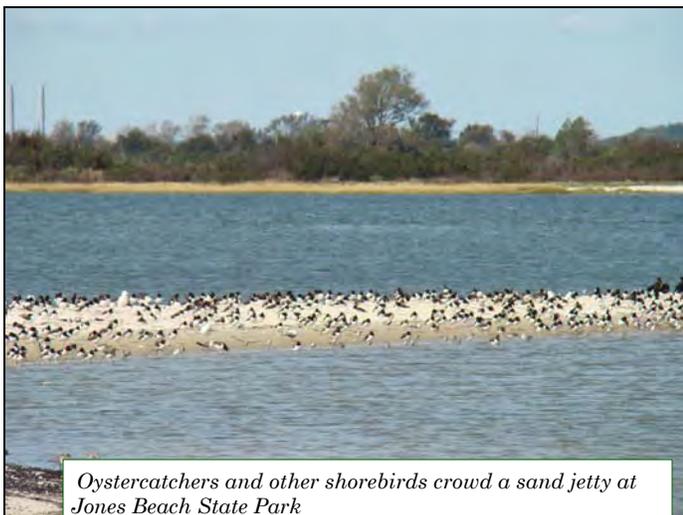
*A nesting Blandings turtle seeks cover at James Baird State Park.
- Photo by Jesse Jaycox*



*An eastern box turtle wandering about after a spring rain-storm at Schunnemunk Mountain State Park.
- Photo by Jesse Jaycox*



*This eastern box turtle seems to prefer to stay put at Hither Hills State Park.
- Photo by Kim Smith*



*Oystercatchers and other shorebirds crowd a sand jetty at Jones Beach State Park
- Photo by Kim Smith*



*A black vulture rests on a ledge at Bear Mountain State Park.
- Photo by Jesse Jaycox*



This black and yellow garden spider waits eagerly for food to arrive at Evangola State Park.

- Photo by Meg Janis



A New England bluet damselfly clings to a plant at Sterling Forest State Park.

- Photo by Jesse Jaycox



A monarch butterfly finds a late summer resting place at Seneca Lake State Park.

- Photo by Tom Hughes



This Major Datana caterpillar seems to be having a nice meal at Connetquot River SP.

- Photo by Ariana Newell



A northern water snake gives a mysterious gaze at Connetquot River State Park.

- Photo by Ariana Newell



A five lined skink contemplates its next move at Hudson Highlands State Park Preserve.

- Photo by Jesse Jaycox



A Canada goose does not like the intrusion as it protects its nest at Fair Haven Beach State Park.

- Photo by Danielle Dewey



A female great-horned owl makes a rare day time appearance near the Mark Twain golf course.

- Photo by Danielle Dewey

Meet the Biologist –Mark Rogers, NRS Wildlife Biologist, Albany

I grew up in Madison County about five miles south of Canastota. I spent much of my time exploring the woodlands and swamps around our home. After graduating from high school, I attended Clarkson College for two years before transferring to the SUNY College of Environmental Science and Forestry where I received a Bachelor of Science degree in Environmental and Forest Biology.

After college, I worked in the restaurant business for several years before accepting an internship at Beaver Lake Nature Center in Baldwinsville, NY as an interpretive naturalist. My first job working for State Parks was as a museum co-director at the Lake Kanawauke Regional Trailside Museum in Harriman State Park. This was a summer seasonal position that I held in 1991 and 1992. In 1999, I returned to State Parks accepting a seasonal position at Sterling Forest State Park assisting the environmental education program at the park. In 2000, I accepted a permanent position at Rockefeller State Park Preserve as an Environmental Educator 1, a position I held until 2008 when I began my new job as the Natural Resource Steward Biologist for wildlife issues in state parks.

In my current position, I spend much of my time focusing on Canada goose management and deer management issues in our parks. I am also working on a wildlife manual that will help managers address wildlife management issues in their facilities. I look forward to working with all our parks and sites in protecting our wildlife resources while addressing the challenges they can present to park operations.



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EMB Mission Statement

The mission of the Environmental Management Bureau is to assist OPRHP in the responsible stewardship of its valuable natural, historic and cultural resources, as well as in providing safe and enjoyable recreational and interpretive opportunities for all New York State residents and visitors.