

Parker River Currents

The Newsletter of the Parker River Clean Water Association

Research Continues in Turtleland

Mark Grgurovic, amphibian and turtle biologist, and colleague, Susan Speak, will continue turtle research in the Georgetown/Groveland/Boxford area known as Turtleland thanks to a \$24,000 grant from The Massachusetts Environmental Trust. This grant will be administered through the Parker River Clean Water Association. Beginning in August the researchers will check the turtle nests for hatchlings digging their way out, catalogue data about the baby turtles, and release them into wetlands. As part of the grant, volunteer "Citizen Scientists" will help to monitor the turtles.

In addition to research about rare Blandings and spotted turtles the grant will include outreach to schools when the hatchlings come out, and an on-line turtle diary that will link to the Parker River Clean Water Association web site www.parker-river.org. Part of the grant will be used to survey wetlands and vernal pools in the area which will help to guide conservation planning in Georgetown, Groveland, and Boxford.

Turtleland is in the upper portions of the Parker River Watershed in Boxford, Georgetown, Groveland, and a portion of the Merrimack River Watershed in South Groveland. It is the second largest habitat area for Blandings turtles in Massachusetts. Land in the area has been protected by various means including Community Preservation funds, Self-Help Grants, private funds, and money from the Department of Fisheries and Wildlife. Efforts continue to create uninterrupted habitat by protecting more area. Further challenges include making landowners aware of good management practices for these rare species, providing effective crossings for turtles under roadways and protecting nesting sites.

Turtles are increasingly threatened by off-road vehicles using footpaths that wind through the area as roadways. Roadways are among the greatest mortality threats to slow-moving turtles. Should a turtle be encountered on or near a roadway, help it across to the direction it was headed. Do NOT take the turtle home for a pet or release it far away from where it was found. Keeping a rare or endangered species is against the law and subject to a fine, unless a special permit is obtained from the Massachusetts Natural Heritage Program. Seven of the ten species of turtles found in Massachusetts are listed as endangered, threatened, or of special concern. Everyone can help educate others as to the importance of protecting turtles and maintaining the biodiversity of natural resources in our communities.

A Message from the President

We are pleased to present our summer/fall newsletter, as a means to keeping our members and friends informed of happenings in the Parker River Watershed. One activity which I, and several other board members, have been involved in has come to completion – that is, the Strategic Land Use committee for the City of Newburyport's Master Plan. If you live in the City, we trust that you know that for the last 12 months the group has been evaluating possible scenarios of land use for the 1500 acres lying east of I-95, north of Scotland Road, and south and west of Storey Ave, Low Street and Route 1. With our encouragement and persistence, the 12 member group included as one of their recommendations that the undeveloped land closest to I-95 be maintained as a "green corridor" with limited use for residential or industrial building. I do want to thank Albert Decie and Citizens for Environmental Balance (CEB), and Steve Moore who represented the Newburyport Open Space Committee, for their collaborative efforts in supporting our PRCWA position in the SLU committee. We are very pleased with this aspect of the report (which the City Planning Board accepted, and will next ask the City Council to approve) – but, at the same time, we must be continually diligent in keeping as open space the "Common Pasture" land mass for Little River watershed and wildlife habitat protection.

Alewife fish counts this Spring were very low, and Rob will be finalizing the total tabulations soon. We very much appreciate all the faithful volunteers who did counts again this season – in spite of a lot of "goose-eggs" which you observed. Only one serious spike was seen this year, and migration ceased before the end of May.

Water Quality Monitoring in the Watershed, under the direction of Frances Doyle, has begun as of Aug 11, and will continue on a biweekly basis each Wednesday through November 17th. If anyone is interested in helping, please contact the office. This activity was undertaken, even though we have only limited funding, because your Board of Directors believes this to be one of our core programs and we wanted to keep continuity of water sampling within our rivers. Late last fall we sampled at 8 sites under a grant which we had from EPA/EMPACT.

With the technical assistance of staff from the Riverways Program/ Division of Fisheries and Wildlife, we will be placing "flow gages" into the Parker River, as part of recommendations made a year ago by Gomez and Sullivan, who had conducted the Low Flow Study of the Parker. It is our expectation that the gages will assist in monitoring the flow of the river, especially during the normally dry summer months. We will be working with the town water departments to review the flow data and the correlation with the water withdrawals from the Parker.

We wish to THANK all who have been sending in your membership renewals. Dues and contributions are critical to our Association, in these days when we have limited funding to undertake programs. See you in the watershed!

Don Bade, President

TURTLE TIME PICNIC CELEBRATION AT WEST STREET PLAYING FIELDS

Adults and children have encountered many turtles while using the Georgetown Playing Fields on West Street. The area is near prime habitat and the turtles use the area for making their nests and laying eggs. People have also encountered turtle researchers Mark and Susan in the area working to protect the turtle nests. Susan and Mark take time to teach interested children and adults about turtles, and why they need to be protected. As hatchling season begins Parker River Clean Water Association, Susan and Mark thought it might be fun to have a picnic to celebrate the new arrivals.

The date will be September 1 (rain date September 2) from 5PM-7PM. At the Georgetown playing fields on West Street, just off Route 133. West Street is across from the entrance of the Georgetown Country Club on Route 133. Adults and families interested in turtles are invited to bring a picnic meal. Parker River will supply beverage, potato chips and watermelon.

There will be live turtles to see and hopefully some new hatchlings, along with children's nature crafts and games. The first 50 children will receive free bandanas to transform themselves into Teenage Ninja Turtle Scientists.

Volunteers Needed to Monitor Turtle Nests

Join the Parker River Clean Water Association Turtle Team this September as we monitor three species of turtle hatchlings in Georgetown, Massachusetts. Volunteers will help make daily rounds to check the nests for hatchlings, weigh and measure emergent hatchlings, and then release the hatchlings into the floodplains of the Parker River. Late afternoon /early evening shifts would last just under two hours, and require light walking. Children working with an adult are encouraged to participate.

Nest monitoring will begin September 1st and continue through the second week of October. For further information and to register please call Marlene Schroeder at 978-462-9062 or Susan Speak at 1-978-270-1386.

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JUNE 6th BIODIVERSITY DAY IS A GREAT SUCCESS

Organizers of the June 6 Biodiversity Celebration - Parker River Clean Water Association, Mass Audubon Joppa Flats Education Center, and the Parker River National Wildlife Refuge – were delighted that hundreds of people turned out to enjoy outdoor events as well as those planned for inside the Joppa Flats Education Center as part of the Fifth Annual Biodiversity Celebration.

Especially popular was the 3-hour drop-in program featuring live, rare and endangered Massachusetts's turtles. This program was presented by turtle research team members **Mark Grgurovic, Jake Kissel, and Susan Speak** who helped visitors hold live spotted, Blandings, box, wood and painted turtles while explaining why turtles are threatened as well as telling factual information about the different turtle species. Many adults as well as always brave children enjoyed holding a live turtle for the first time. All survived the experience!

Dave Taylor, retired Triton science teacher, showed live animals that are a part of the Triton High School rehabilitation biology program. An unusual albino snapping turtle was quite a contrast to an endangered gopher tortoise. Following the presentation, the audience could take a closer, personal look at the animals. Divers from Stellwagen Banks National Marine Sanctuary under the leadership of **Bob Michelson** explored the river and ocean.

Many adults and children enjoyed exploring the tidal salt pannes with **Cyndy Bourquard**, and the creatures found in them such as mummichug fish and stickleback fish. **Rich Marks**, PRCWA board member, demonstrated salt water fly tying and surf casting, while **Rob Stevenson**, PRCWA board member and biologist, led three walks to explore insects, birds and “anything that moved”.

Joppa Flats Director Bill Gette led a morning and afternoon bird walk to the Refuge where an unusual King Rail was observed along with a river otter. Other Refuge visitors enjoyed a shore to estuary transect walk with **Peter Burn**, Suffolk University Biologist. **Refuge staff member Jean Adams** led an informative walk featuring the history of Plum Island, while brave souls went kayaking on the estuary with **Refuge staff leader Leslie Goodwin**.

About 25 people attended the informative tour of the Newburyport Sewage Plant given by **Brendan O'Regan** who explained how wastewater is treated. This year is the 30th Anniversary of the Clean Water Act. **Newbury Conservation Chairperson, Doug Packer**, distributed public information about Storm water Management's impact on decreasing run off pollution.

Nature Craft activities under the direction of Amesbury teacher **Bruce McBrien and daughter Becca, Victor Atkins, Peggy Laufer, and Julian Egolf** rounded out a fine day. **Don Bade**, president, manned the PRCWA display.

Our thanks to the many volunteers who contributed in many ways to make this event a success. The Biodiversity Celebration was made possible through the generous support of **Honda North and owner Marshall Jespersen** who was on site offering test-drives in energy efficient Honda hybrid cars.

WATER QUALITY MONITORING – A PRIORITY COMMITMENT

The Parker River Clean Water Association will continue its commitment to water quality monitoring in the watershed with another round of testing (Aug. thru Nov.) under the direction of Frances Doyle. If you would like more information about volunteering for this activity, please phone the PRCWA office, 978-462-2551.

Members have asked about the parameters in water quality monitoring and the information it yields. Here is a brief explanation:

Water Temperature affects the rate of many of the river's biological and chemical processes. It affects the rate of plant growth, metabolic rate of aquatic organisms, and cold water holds more oxygen than warmer water.

Dissolved Oxygen is needed by most aquatic plants and animals to survive. Some such as trout require high levels, but others like suckers live in lower levels. Too little oxygen in the water reduces the diversity of organisms in the river.

Fecal Coliform is a bacteria found in the intestinal tract of all warm-blooded animals, including humans. Mass regulations for permitting various activities such as boating, swimming, and shell fishing depend on the concentration of fecal coliform colonies per 100 ml of river water. The guiding standards are 1000 colonies per 100 ml = boating allowed; 200 colonies per 100 ml = swimming allowed; 14 colonies per 100 ml = shell fishing allowed.

When fecal coliform is detected in rivers it often indicates sewage contamination from failing septic systems, poorly treated wastewater, or domestic and wild animal manure.

Nitrogen and Phosphorus occur naturally in river systems, however human influence can cause nutrient loading which is when too many nutrients enter the water causing algae to grow at rapid rates. Sources of nutrients include failing septic or treatment plants, run off from fertilized lawns or agricultural fields, and certain industrial wastes.

Turbidity is the measure of the clarity of the water which in turn depends on particles suspended in the water. These particles might be anything from soil to algae to microbes from sources such as erosion, waste discharge or run off from roads and agricultural fields.

In conclusion, the viability of the Parker River as a resource is directly related to adequate water levels and healthy water quality. It is a natural resource which needs to be protected from overuse and neglect in order to continue to provide inspiring outdoor experiences. Consider becoming a volunteer water quality monitor!

THE BLANDINGS OF TURTLELAND

The Blandings Turtle is a medium sized, long-necked turtle ranging between 8 and 10 inches. Its high-domed top shell (carapace) is black covered with yellow spots and streaks. The yellowish bottom shell (plastron) is hinged allowing movement of the front section. Its upper jaw is notched, and its yellow throat and chin make it recognizable at a distance. Hatchlings have a brown top shell and dark brown or black bottom shell. Their top shell is about 1 ½ inches in length.

In New England they are found in eastern Massachusetts, southern New Hampshire, and southern Maine. Blandings turtles are primarily aquatic preferring densely vegetated shall ponds, marshes, or small streams. It is most often observed on land during nesting activities but has been known to feed or wander on land as well. Blandings feed on fresh-water plants, fishes, insects, crustaceans, and mollusks. On land, it has been observed eating vegetation, slugs, insect larvae, and earthworms.

Female Blandings begin to breed at about 12 years of age. They have a low rate of reproduction as less than one-half of breeding age females reproduce yearly. They nest in unvegetated nest sites that are composed of hard soil. Plowed fields, railroad embankments, and dirt roads provide a suitable substrate. Eggs are usually laid at the end of June with hatchlings emerging in late September or early October. Nests contain six to eleven eggs.

In Massachusetts Blandings are threatened by loss of habitat, road mortality, predation by pet collectors, and nest destruction by other animals. Their relatively late maturity before breeding leaves them vulnerable to mortality before reproducing. The research being conducted by Mark Grgurovic and Susan Speak will lead to a better understanding of these turtles in the prime turtle habitat found in Georgetown, Groveland, and Boxford.

Your Help Is Still Needed By Natural Heritage Program

The Natural Heritage & Endangered Species Program NHESP is responsible for the conservation of rare native plants, and animals that are officially listed as Endangered, threatened, or of Special Concern in Massachusetts. The Program is now funded substantially by contributions and grants. The recent State budget did not contain line item funds for the program. There has been heavy lobbying against NHESP by groups that oppose the work they do to protect the natural resources of Massachusetts.

Mass Wildlife's Natural Heritage Program gathers data on the numbers, distribution, and conservation needs of rare species and key natural communities throughout the state. This site-specific data is used to direct conservation efforts in the form of research, land protection, habitat management, and environmental impact review. As part of Mass Wildlife, NHESP has helped restore populations of rare plants and animals. NHESP identifies habitat critical to rare species and helps prioritize MassWildlife acquisition efforts. NHESP staff also helps other state and federal agencies, conservation groups, and municipalities to protect and manage land for rare species. NHESP reviews numerous projects annually under the MA Endangered Species Act, the MA Wetlands Protection Act, and other environmental laws for their potential impact on state-protected rare species habitat. NHESP also certifies vernal pools which then receive enhanced regulatory protection. All of these programs are accomplished with a very small budget compared to the importance of their work

You can help by making a direct donation by sending a check payable to the Natural Heritage & Endangered Species Fund to:

Natural Heritage & Endangered Species Program
MA Division of Fisheries and Wildlife
One Rabbit Hill Rd.
Westborough, MA 01581

Natural Heritage publishes a number of informative publications, including the popular Guide to Animals of Vernal Pools, Bio Map: Guiding Land Conservation for Biodiversity in Massachusetts, and Living Waters: Guiding the Protection of Freshwater Biodiversity in Massachusetts. Some publications are free and some have a nominal charge.

Visit the Natural Heritage website at www.nhesp.org

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