

“Bugs” and Bacteria:

Highlight’s of DRWA’s 2005 Water Quality Monitoring

2005 brought several exciting changes to DRWA’s water quality monitoring program. Our bacteria monitoring program, which for several years had focused on monitoring for unsafe *E. coli* concentrations at recreational swimming holes in the Deerfield, Green, North, and Cold rivers, shifted focus to screening the North, South, and Chickley rivers for elevated bacteria concentrations. The change resulted from DRWA’s participation in a new non-point-source pollution assessment of the Deerfield River watershed being led by the Franklin Regional Coalition of Governments.

DRWA is charged with collecting and analyzing two years of bacteria data from the North, South, and Chickley rivers to identify sources of bacteria pollution within each sub-watershed. Summer 2005 marked the first of two years of sampling. These efforts were overseen by Project Coordinator Marjo Iken, who coordinated sampling by a contingent of dedicated DRWA volunteers. A requirement that bacteria samples had to be collected during both wet and dry weather required some fancy-footwork scheduling by Marjo. Thanks to the dedication and flexibility of a core of volunteer samplers, a total of

108 samples were collected from the three sub-watersheds between June and September.

Data collected during wet-weather events were, by and large, “a wash”—as elevated concentrations occurred at most sampling stations in each sub-watershed, preventing identification of potential contamination sources. However, data collected during dry-weather events have proved very useful in determining where to focus sampling next summer. These data will be used to focus 2006 sampling in reaches where suspected bacteria sources occur in an effort to isolate and identify those sources. We plan to begin the 2006 sampling next June and will announce a mandatory training for interested volunteers in the spring.



Sunburn Beach High water at the confluence of the North and Deerfield Rivers after rainstorm in 2005. Photo: T Merrill

2005 also marked the year of inception of DRWA’s macroinvertebrate monitoring program.

The program aims to augment the Department of Watershed Management’s efforts to assess the biological health of the watershed and—specifically, to identify areas within the watershed where that biology is impaired. Macroinvertebrates were our biological assemblage of choice because they are easy to collect, are responsive to changes in habitat and water quality, and are widely used in such assessments. DRWA will lead a fall sampling of a selected sub-watershed each year with the aim to assess biological conditions in 60-70 sites every five years!

This past fall, DRWA volunteers Mike Cole, Robert May, and John Burns collected macroinvertebrate samples from 12 reaches of the Green River and its tributaries. The data and samples are currently under quality-control review, but preliminary results suggest that the Green River, for most of its length, supports a diverse and healthy macroinvertebrate community. Only the lower

In this Issue:

- 2 Mahican-Mohawk Trail & South River Bridge. Green River Chapter Meeting
- 3 Knotweed Survey Results
- 4 Hike and Bike Schedule and Other Trips
- 6 Mini-Grant Applications Still Open

Continued from page 1

river on the south end of Greenfield showed any measurable sign of impairment, as the community scored in the "slightly impaired" category. Among Green River tributaries, the lower portions of both Cherry Run Brook and Mill Brook supported moderately impaired communities, suggesting that the biology has been degraded in these more developed areas of the sub-watershed. Tributaries occurring north of the town of Greenfield generally supported unimpaired macroinvertebrate communities.

Fall 2006 will find us in the South River sub-watershed, where we will continue towards our five-year goal of assessing 60 to 70 locations.

We thank all of the people who generously gave their time and energy to these water-quality sampling projects in 2005 and look forward to another rewarding, productive, and fun sampling season in 2006. *Please contact Mike Cole at (413)774-5515 or mcole@abrinc.com if you have any questions about these projects or if you're interested in participating.*

Mike Cole

Winter was Tough on the Mahican-Mohawk Trailbut there is still hope for the South River Bridge

The Mahican-Mohawk Trail has sustained severe damage during the winter, so hikers should be prepared to hike around or jump the Dragon Brook crossing--or better yet, volunteer to help replace the bridge which went out in the October high water.

Another spot which opened up is on the old New Haven Railroad roadbed east of Bardwell's Ferry Bridge. You may remember that there is a detour using snowmobile trails around the big slump. Previously, one could still walk the crest of the slump holding on to trees but now the crest has been breached in two places and trying to cross it is discouraged. Use of the detour is recommended.

There is a new sinkhole closer to the station grounds. This is above a stone arch culvert over a small brook. Apparently a stone dropped out of the center of the culvert and allowed the sand fill to create a sink hole which went from 5 feet wide to 20 - 30 feet wide, within three weeks. We think we have a good and simple route around this problem, but again we will need some volunteers to help.

Will we have a new bridge across the South River this year? That is a good question. We still have hopes to build it this August with the volunteers from the Student Conservation Association (AmeriCorps). The power company, TransCanada Northeast Hydro (TC), who owns the property, has put money in escrow for this project and we have grant requests to two foundations to supplement this. We even have a fiberglass bridge designed to span the river using three of the piers in the river as supports. TC, understandably, is concerned that the work and re-

April Program:

The Deerfield River Watershed as Seen by an Aquatic Ecologist

Join us Tuesday April 4 at 7 PM at the Shelburne Historical Society Museum on Maple Street (the old Arms Academy) for a new presentation by Dr. Michael Cole. Mike moved to Greenfield over a year ago and has spent a lot of his free time exploring the watershed's streams with his collection net, fly rod, and camera. An aquatic ecologist by trade, he will share his intimate knowledge of the fauna he's encountered in his river forays. We will be treated by a slide show on the fish and macroinvertebrates that are common - and not so common - in our streams, and hear the latest assessment of the biological health of the Watershed.

Free and open to all

sults will be safe for everyone building and using the bridge. There are also permits from the Conway Conservation Commission and the Massachusetts Historical Commission to be obtained. Stay tuned for developments. In the meantime, we hope to hear from volunteers on this and other sections of the trail. *Please contact Jim Vieira, trail maintainer, at (413) 628-8331 or Polly Bartlett at (413) 625-6628.*

Green River Chapter Corner

The new Green River Chapter of the Deerfield River Watershed Association will meet for the first time Thursday, March 2nd at the Greenfield Community College's Downtown Campus (270 Main St, Greenfield) from 6:30-8:30 pm.

Following up the Shoreline Survey conducted in Greenfield this past August as well as Macro-Invertebrate and Knotweed surveys that occurred along the Green River in the fall, we are gathering folks together to talk about what we can do to help keep the Green River a pristine resource. During the meeting, we will discuss survey findings and create an Action Plan of both short- and long-term projects, and strategies for protecting the Green River.

Everyone is welcome. For more information, contact David Boles at (413) 773-7560 or Carrie Banks at banks-carrie@hotmail.com

Project Update

Volunteers Search Six Rivers For Knotweed Invasion

Last fall, ten volunteers and one school group searched six rivers and streams for Japanese knotweed. The sites chosen for the fall surveys were rivers and streams highlighted by the Massachusetts Natural Heritage and Endangered Species Program in their *Living Waters Technical Report* published in 2003. These waterways have been identified as important sites for the conservation of freshwater plants and animals in the Commonwealth. Surveys will continue this spring when we hope to finish this round of monitoring.

Many of the streams surveyed were small, e.g., between one and three miles long, and located far from major roads and developments. Very little knotweed was found on most streams. Since we started monitoring the watershed for knotweed in 2003 we've become more familiar with

knotweed's habitat preferences. This plant is more common in waterways located next to major roads, and it prefers sunny sites. Because it is spread when root and stem fragments are washed downstream, the lower reaches of rivers will usually have larger knotweed patches than the upper sections.

Knotweed thrives wherever there has been a disturbance: flooding events bring fragments to both inland sites and downstream areas. Transporting fill contaminated with fragments is another way Japanese knotweed reaches new areas.

Despite difficult fall weather, we were able to survey a total of 8.7 miles of rivers and streams. The results of these surveys follow:

(1) Bog Brook: This small stream (about 1.5 miles long) is located in Savoy Mountain State Forest where it drains Bog Pond and ends at the Cold River. It's a beautiful mountain stream with steep banks and a lot of shade. Because of the recent flooding, we found many mudslides and debris was plentiful. We didn't find any knotweed in the small section completed, but we will be back in the spring to finish the survey.

(2) Gulf Brook: This stream, also located in Savoy Mountain State Forest, is about 3 miles long and drains Burnett Pond. It enters the Cold River downstream of Bog Brook. These two streams have similar topography: both flow through small, steep river valleys in heavily

forested regions. No knotweed was found in the surveyed portion of Gulf Brook.

(3) Meadow Brook: This small stream runs through a heavily forested part of the watershed: Catamount State Forest in Colrain. This brook is about 1.3 miles long and drains McLeod Pond before entering the North River. Surveyors did not find any knotweed in Meadow Brook.

(4) Glen Brook: At a little over 6 miles in length, Glen Brook is a challenge to survey. Its headwaters are located northeast of Leyden Center and as it flows south it runs parallel to Brattleboro and Greenfield Roads. Its riparian habitats include forest, beaver-created swamps, wet meadows, and hayfields. Not far from the border of Greenfield, the brook enters two impoundments that serve as the Town of Greenfield's water supply. This is where volunteers began their surveys. Surprisingly, although the Glen Brook runs next to several roads and many sunny areas, no knotweed was found.

(5) Cold River: This river begins in Florida and flows for about 13.7 miles before entering the Deerfield River in

Japanese Knotweed Control Workshop on April 29th at the Great Falls Discovery Center

The Deerfield River Watershed Association and Conte National Fish and Wildlife Refuge are co-sponsoring a workshop where attendees will learn how to control knotweed on their property. This free workshop will be held on April 29th, from 1:00-4:30 pm, at the Great Falls Discovery Center in Turners Falls. Three experts will discuss the mechanical and chemical methods used to control knotweed, and the regulatory issues associated with removing invasive plants in wetlands or areas with rare plant and animal communities. To register, please contact Cynthia Boettner at (413) 863-0209, ext. 6 or Cynthia_Boettner@fws.gov.

Charlemont. The Cold flows through some of the steepest terrain in the watershed. The section located adjacent to Route 2 was surveyed and a couple of small patches of knotweed were found. We hope to remove these this spring and summer. The upper sections of the river were not surveyed and are difficult to access.

(6) West Branch of the North River: This river, approximately 7 miles long,

flows into the North River north of Griswoldville in Colrain. Although only a small portion of the river was surveyed, knotweed was fairly abundant. The upstream areas are more difficult to access than the lower portions, but we would like to determine if knotweed is less abundant in the upper reaches.

If you are interested in helping with surveys this spring, or removing knotweed on the Green River and other waterways, please contact Pat Serrentino at (413) 772-0520; (pserr@crocker.com). And don't forget to check our website (deerfieldriver.org) for additional information on all aspects of knotweed ecology and management.

This project is made possible by the generosity of motorists who choose to purchase one of the Massachusetts Environmental Trust's specialty license plates. The Trust will provide close to \$1 million in grants to over 40 organizations this year. Please go to www.MassEnvironmentalTrust.org to learn more about the Trust, the programs it supports, and the specialty license plate offerings.

Pat Serrentino

Hike and Bike Your Watershed: 2006 Spring and Summer Schedule

These activities are sponsored by the Deerfield River Watershed Association. All events are free and open to the public. Please register with the event leader as we try to limit the number of participants to minimize disturbance to the environment and make it more enjoyable for participants. Contact the Association for future Hike and Bike activities, any changes or updates to the schedule, volunteer trail maintenance work, and other events at: www.deerfieldriver.org or check local newspapers. You may also join an e-mail list of people who have asked to be notified of hikes which happen spontaneously. Any additional hikes will be posted on the website. If you want to be added to the e-mail list, please contact Pat Serrentino at pserr@crocker.com or (413) 772-0520. Polly Bartlett's contact information is: dbartlet@crocker.com, or (413) 625-6628.

MARCH

Spring Hike from High Ledges to Davenport Sugar House, Shelburne:

March 26, Sunday; contact Polly Bartlett for time. This hike will start at Davenport's and includes hiking to High Ledges with a return to Davenport's Sugar House for brunch. Depending on the weather conditions, we'll hike, snowshoe, or cross-country ski. Often good boots are all that is necessary to enjoy this half mile hike on snowmobile trails to the Massamet Ridge, followed by a mile-long trek down the ridge to High Ledges with its spectacular views up the Deerfield River and down into Shelburne Falls. Please register with Polly Bartlett.

Big Night for Salamanders and Frogs: Mid- to end of March; 6:30 – 8:30 pm. Join biologists Pat Serrentino and Alex Haro as we look for signs of the annual migration of amphibians from their wintering areas to vernal pools during the beginning of their breeding season. This event will be coordinated through email only as the exact time depends on local weather conditions and occurs on the first warm, rainy night in early spring. We will be driving to several sites; carpooling is possible. Please register with Pat Serrentino.



Sluice Brook crosses the Mahican-Mohawk trail and drops into the Deerfield above #2 Dam.

APRIL

Catamount History and Spring Wildflowers, Catamount State Forest, Colrain: April 22, Saturday, 10:00 am. Join Muriel Russell, local expert in Catamount history, for an exploration of caves and wildflowers in the Catamount State Forest. Bring a flashlight to explore caves and lunch to enjoy at McLeod Pond. Directions to start: From Rte. 112 in Griswoldville, Colrain, take Adamsville Rd. to Lively Rd., and then a quick left onto East Catamount Rd. (steep and dirt) to the end where there is parking. Rain date is April 29, same time. Please register with Muriel Russell (413) 624-3311.

Courtship Display of American Woodcocks:

April; 6:30-8:30 pm. The male woodcock's mating display is one of our area's most amazing spring events. Join Pat Serrentino to look for woodcocks in old fields and wetlands in Leyden and Greenfield. This event will be coordinated through email only as the time and date depends on local weather conditions. Please register with Pat Serrentino

Dubuque State Forest Hike, Hawley:

April 30, Sunday, 10:00 am. Join Polly Bartlett and Pat Serrentino for this early spring hike with little elevation change but lots of interesting natural history. We'll look for spring flowers, frogs and salamanders, migrating birds, beavers, and other inhabitants of forests and wetlands. There are also impressive stone remains of previous mills. The entire loop, starting at King Corner on

Route 8A, is about four-five miles but shorter loops with car spotting can be arranged. Hikers should meet at 9:00 for car pooling from Greenfield. Please register with Polly Bartlett.

MAY

Spring Wildflowers at Bear Swamp, Ashfield: May 6, Saturday, 9:30 am. Join Naturalist Denise Pavao for a leisurely hike through forests and wetlands to look for spring wildflowers, ferns, and other signs of spring. Bear Swamp is located adjacent to Hawley Road in Ashfield, south of the intersection with Tatro Road. Please register with Polly Bartlett.

Bird Migration at Poet's Seat Tower, Greenfield: May 20, Saturday, 8:00 am. Join Pat Serrentino to look for spring migrants at this well-known hot spot. If conditions are right, we will see migrating warblers, vireos, thrushes, raptors, and local resident birds, too. Please contact Pat Serrentino to register and for directions.

JUNE

Late Spring Birding in the Lower Valley (Greenfield and Leyden): June 4, Sunday, 8:00 am. Join Pat Serrentino to look for spring migrants and breeding birds in a variety of habitats throughout the lower Deerfield River watershed. Meet at Staples in Greenfield to carpool. Register with Pat Serrentino.

Invasive Plants: Identification and Ecology, Greenfield:

June 17, Saturday, 9:00 am. Join Pat Serrentino and Jen Strules for an educational nature walk through forest and wetlands at Highland Park and other areas in Greenfield to learn how to identify invasive plants and why they are a threat to both natural areas and your backyard. Please contact Pat Serrentino to register and for directions.

Moths, Bugs, and Other Creatures of the Night, Turners Falls:

June 24, Saturday, 8:30 pm. This event will take place at the Conte Anadromous Fish Laboratory to look for night-flying moths, beetles, and other insects, as well as bats, frogs, and other creatures active at night. Please contact Alex Haro at (413) 772-0520 to register and for directions.

JULY

Wetland Ecology at Tannery Falls and Pond, Savoy:

July 16, Sunday, 8:30 am. Join Pat Serrentino and Alex Haro for an exploration of Tannery Falls and Pond to look for plants and animals found in ponds, streams, marshes, and swamps. This part of the Savoy Mountain State Forest is chock full of goodies, including high elevation birds, stream salamanders, beavers, dragonflies, and native fish. Please contact Pat Serrentino to register and for directions; car-pooling from Greenfield is possible.



Hikers on the Mahican-Mohawk trail along the Deerfield between Bardwell's Ferry Bridge and Wilcox Hollow, Shelburne.

JUNE-JULY ELECTRIFYING EVENT!! Tours of Deerfield Power Dams From River's Source to Stillwater

Two trips have been planned for people to learn about the important role the Deerfield River plays in the watershed, particularly as an electrical power source.

The first trip will be **Friday, June 23rd**. We will meet in Shelburne Falls and begin the trip at the Somerset Reservoir in Vermont. Matt Cole, Community Relations Officer for the TransCanada Hydro Northeast, Inc. power company, will explain the flow regulations imposed by the relicensing agreement. We will follow the river and its many diversions and power plants to the Massachusetts line. Although we will not be hiking the trails that parallel the Deerfield River, we will take note of trail heads for future hikes.

The second trip will take place on **Friday, July 21st**, and will include a tour of the facilities from the Massachusetts State

line to the Number Two power station located downstream from Shelburne Falls. These trips are by reservation only; the van holds 15 people. Contact Polly Bartlett to register at (413) 625-6628 or e-mail at dbartlet@crocker.com.

MARCH-APRIL-MAY

3 Programs Co-sponsored by DRWA and Colrain Open Space Planning Committee:

The Life-cycles and Functions of Vernal Pools, and How to Protect Them.

This slide/lecture will be presented **Thursday, March**

Continued on page 6

Become a DRWA Member!

Name

Street.....

City.....State.....Zip.....

E-Mail.....

**Individual \$15, Family/Business \$25, Contributing \$50,
Sustaining \$100, Patron \$500**

Send to DRWA Box 13 Shelburne Falls, MA 01370

Continued from page 5

30, from 7 - 9 pm, with naturalist and writer Karl Meyer at the Colrain Community Church, on Rt. 112, Colrain. This free program will focus on the seasonal blooming of these habitats, and give pointed information on how citizens can protect vernal pools by the hands-on process of certifying them under the Commonwealth's Natural Heritage and Endangered Species guidelines. For further information and to register, phone: (413)624-3357.

Producing Healthy Food Locally and Sustainable Farms

Thursday April 20, at 7 p.m., Colrain dairy farmer Larry Shearer will discuss the management strategies on his family farm, as well as his experiences as the Sustainable Farmer Educator for the U.S. Department of Agriculture and his vision for a healthy and abundant local food supply. The talk takes place at the Colrain Community Church on Rt. 112 in Colrain.

Managing Your Woodlot

On **Saturday May 6th**, at 10:00 a.m., Dave Celino, local consulting forester, and Rita Thibodeau, Natural Resources Conservation Service officer, will present a program on how to manage your wooded property in a way that's profitable and environmentally sound. Spend the morning learning some of the tools for preserving forest land—how to develop a forest management plan, and how to implement commercial and non-commercial activities on private forest land. The program will end with a tour of a working woodlot. Attendees should bring a lunch, and dress for the weather and walking in the woods. Program takes place at the Colrain Community Church, Rt. 112, Colrain.

DEERFIELD RIVER CURRENT

Published by

Deerfield River Watershed Assn. Inc.

P.O. Box 13

Shelburne Falls MA 01370

Editors : Karl Meyer, Ted Merrill

The Deerfield River Watershed Association is a volunteer organization dedicated to the preservation, protection and care of the Deerfield River and its tributaries in the interests of its adjacent communities. Its activities include water quality monitoring, educational programs, administration of volunteer programs and participation in regulatory matters.

Officers:

Marie Françoise Walk, *President*

Carrie Banks, *Vice President*

Catherine Reid, secretary, Joan Adler, *Treasurer*

Board Members:

David Boles, Polly Bartlett, Peter Buell, Robert May,

Karl Meyer, Ted Merrill

www.deerfieldriver.org

Mini-Grants Applications Still Open

Last year DRWA established a Watershed School Mini-Grant Program. The goal of this grant program is to increase environmental awareness and to help protect the watershed's natural resources (wildlife, water quality, special places...)

Schools in the watershed are encouraged to apply for grants to help them conduct environmental projects or further their own education goals in that field. There is no deadline to apply, maximum award is \$300, and application guidelines can be found at:

www.deerfieldriver.org/minigrants.htm.

Deerfield River Watershed Association, Inc.

PO Box 13

Shelburne Falls, MA 01370