

# Batten Kill News



Volume 1, Issue 2

Summer 2000

## Inside this issue:

<i>Habitat Survey Gets Underway</i>	2
<i>BK River Steward Program in its 2nd Summer</i>	2
<i>FYI</i>	3
<i>Before You Cut Those Trees and Brush...</i>	3
<i>Saving Fish for Tomorrow</i>	5
<i>Check Out These Web Sites</i>	6



*The MISSION of the Vermont Department of Fish and Wildlife is the conservation of fish, wildlife, and plants and their habitats for the people of Vermont. In order to accomplish this mission, the integrity, diversity, and vitality of all natural systems must be protected.*

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## Senator Jeffords Announces \$200,000 for the Batten Kill



*Left to right: Ken Cox, VT Fish & Wildlife Department; Jennifer Kimberly, Natural Resource Conservation Service; Senator Jim Jeffords; Shelly Stiles, Bennington County Conservation District; Eric Derleth, U.S. Fish & Wildlife Service; and Steven Roy, U.S. Forest Service.*

On July 6th Senator Jeffords announced a federal appropriation of \$200,000 for stream habitat restoration projects on the Batten Kill. The money will be included in the U.S. Forest Service, Green Mountain National Forest fiscal year 2001 spending bill which was recently approved by the Senate Appropriations Committee. Jeffords was joined by federal, state, and private organizations (the U.S. Forest Service, the U.S. Fish & Wildlife Service, the U.S. Department of Agriculture, the Vermont Fish & Wildlife Department, the Bennington County Conservation District, and the Batten Kill Watershed Coalition) involved in Batten Kill watershed and resource management projects and efforts.

The Senator's announcement was made at Wilbur's Bridge on the Batten Kill in Manchester, the site of a streambank and fish habitat restoration project to be completed this summer. The project will use natural channel design methods to control bank erosion, reduce sediments being released to the river, and restore fish habitat at the site.

Jeffords' appropriation request would fund new and ongoing efforts to assess, improve, and protect the river, such as river channel and habitat inventories, trout resource assessments, and habitat restoration. The money would be administered by the U.S. Forest Service and partnered with other agencies' and organizations' resources to enhance and maintain activities beneficial to the river.

## ***Batten Kill Habitat Survey Gets Underway***

In June, Vermont Fish & Wildlife Department and U.S. Forest Service fisheries staff began an extensive and in depth inventory of the Batten Kill. The survey is an integral part of an investigation into the cause for the decline in the river's brown trout population and sport fishery. The survey will generate baseline information about trout habitat quantity and quality, channel morphology, riparian conditions, and adjacent land-uses on a watershed scale. Data generated from the inventory will be used to address some of the issues raised by citizens as well as those identified by the Batten Kill Study Team (see *January 2000 issue of Batten Kill News*). Additionally, the information will

be used to support other river management activities, such as fish population, habitat and watershed monitoring and evaluation programs; stream and riparian habitat restoration; and river protection efforts.

Survey crews began collecting data on every mile of the river beginning at the New York state line and will continue upstream. Beyond the work started this season, one or two additional summers will be needed to complete the inventory of the Batten Kill mainstem and its major tributaries. Other work being done this field season includes: river temperature



monitoring, fish population surveys, and merganser counts. For more information on these activities contact: *Kenneth Cox, District Fisheries Biologist, Vermont Department of Fish & Wildlife (802) 885-8828.*

## ***Batten Kill River Steward Program in its Second Summer***

The Batten Kill River Steward Program began its second summer on May 31 when Monique Monteverde took to the waters of the Kill. Monteverde, a May graduate of Middlebury College where she majored in environmental studies, offers boating tips and natural history information to river users and helps floaters and anglers understand how the river can be shared and enjoyed by all.

Conflicts between anglers and canoeists, kayakers, and tubers have been an issue on the river since before 1989, when a petition to restrict floating was first submitted to the Vermont Water Resources Board for its consideration. In 1992 two commercial canoe liveries on the river voluntarily adopted



restricted floating hours to lessen conflicts between their clientele and anglers. But user conflicts continued, and in 1998 the Board responded to a second petition after obtaining public input. The Board denied most elements of the petition, when testimony presented at a public hearing was almost unanimously against regulating floaters' use of the river and public education was offered as a more

appropriate course of action. The River Steward Program is a response to those appeals for public outreach.

The program, which is sponsored by the Bennington County Conservation District, is modeled on the nearly 60 year old steward program sponsored by the Green Mountain Club, on stewards programs run by the Adirondack Mountain Club, and on river ranger programs instituted by river groups across the country. It is funded in part by a Vermont Watershed Grant and the Vermont Conservation License Plate Program, by the Orvis Company, and by Battenkill Canoe.

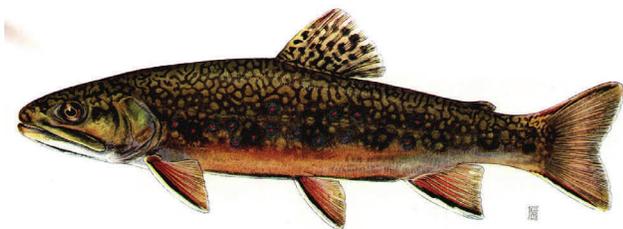
*Shelly Stiles, District Manager Bennington County Conservation District*

## FYI

Of the two trout species with populations in the Batten Kill watershed, the brook trout is the only one indigenous to the state. Brown trout are not native to North America and were introduced to the Batten Kill sometime before 1910. Therefore, prior to the introduction of brown trout to the Kill, the brookie was the river's sole sport fish. The brook trout is a member of the char group (genus *Salvelinus*) which also includes the lake trout. Char are characterized by having very small scales and a general body coloration of light markings on a predominantly dark background.

Like the brown trout, the brookie is a fall spawning species. Generally, they begin spawning before browns with some activity occurring as early as late September. The eggs are deposited in silt-free pockets (a.k.a. redds) excavated in the gravelly streambed and do not hatch until the following spring. By the end of their first summer of life in the Batten Kill, brook trout average about three inches in length; a year later (age 1) they average 6 inches; and at age 2 are 8 to 9 inches. A three year old brookie measures about 10 inches.

Brook trout are widely distributed throughout the Batten Kill watershed and provide fishing opportunities in a variety of settings. The largest brook trout are more apt to be encountered in the Batten Kill mainstem, particularly in its upper reaches in Manchester and Dorset, as well as in several ponds located in the Green Mountains. Tributaries and headwater streams generally support the greatest densities of fish but on average these fish are small in size. Beaver impoundments can also be productive providing they do not get too warm during the summer months.



## "Shade Trees as a Protection to Trout

The preservation of our streams would be materially assisted if land owners would be careful to protect all trees growing along their banks. Even the alders and other shrubbery along the banks of a brook are a protection...[to] insure greater volume and purity of water for the fish..."

*Eleventh Biennial Report of Vermont Fish Commissioners (1892)*

## Before You Cut Those Trees and Brush on Streambanks, Please Consider the Following!

Streamside, or riparian vegetation, is crucial to protecting and enhancing aquatic ecosystems in Vermont. Riparian habitat is extremely complex in its function and affect on streams, lakes, ponds, and wetlands. Unfortunately, the importance and value of this vegetation is not fully understood by many landowners and communities; consequently, it is increasingly being removed with deleterious effects on the aquatic environment and the natural resources we all value. The above quotation made over a century ago illustrates the long-recognized importance of riparian vegetation to Vermont's waterways and fishery resources, but even today this critical component of our environment continues to be lost.

The *riparian zone* is that interactive area of land located adjacent to and up-gradient from water bodies. In its natural, undisturbed state, it is usually dominated by a category of plants, called *phreatophytes*, which have roots that typically extend down to the water table. Therefore, they are adapted to having their "feet" periodically wet. This plant community consists of many species of trees, shrubs, herbaceous forbs, and grasses. Similarly, a wide variety of terrestrial and aquatic animals have evolved to become dependent on the riparian zone.

*(continued on page 4)*

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Riparian areas and vegetation are important to maintaining water quality and productive wildlife populations in a number of ways:

- They protect the water from non-point pollution sources originating from surrounding land uses, such as excessive nutrients from livestock manure and chemical fertilizers, road sand and salt, sediments, oils, some pesticides, and other substances damaging to aquatic systems.
- They provide habitat, food, and cover for terrestrial and aquatic wildlife. Riparian trees and shrubs shade stream channels helping to maintain critical water temperatures for cold water fishes, such as trout. Riparian corridors can be important travel corridors between habitats used by a variety of mammal, bird, reptile, and amphibian species. And, the riparian zone is a major source of food and organic material which drive aquatic ecosystems.
- They are the link connecting water and land ecosystems to one another and are vital to the overall health of both.

Additionally, riparian vegetation is a cost-effective way to reduce flooding and erosion which otherwise result in the loss of valuable land, roads, and other structures and at great expense to landowners and towns. The root systems of woody riparian plants, such as trees and shrubs, strengthen stream banks and hold together the soil preventing or minimizing bank erosion and maintain stream channels. Riparian vegetation reduces the energy of flood flows and enables the land to act more like a sponge. This vegetation helps to slow down the speed at which overland runoff enters our waterways, increases the water storage capacity of the land, and gradually releases water to streams over a longer period of time.

Stream banks stripped of trees and shrubs, either by the establishment of lawns, roadways and parking areas, and other land developments, as well as some agricultural practices rob our waterways of their health, biodiversity, many recreational benefits, and investments. Preservation, restoration, and proper management of riparian zones offers a low cost solution to many of the water quality and habitat problems Vermont's aquatic and terrestrial systems face.



What can you do? Landowners and towns can make an enormous difference in our water quality and enjoyment of natural resources by simply leaving or restoring a swath of native plants along shorelines; or where there is grazing livestock, fencing them outside the riparian zone. Width of the *vegetated buffer strip* should be determined individually based on adjacent land slope, geography, and threats to the water body. The Vermont Agency of Natural Resources; the U.S. Department of Agriculture, Natural Resource Conservation Services; U.S. Fish & Wildlife Service; and local watershed or river groups can advise landowners on recommended buffer strip width, management, and protection measures. Mailing addresses and telephone numbers for these resource agencies are provided below:

**Vermont Agency of Natural Resources**  
 100 Mineral Street, Suite 302  
 Springfield, VT 05156-3168  
 (802) 885-8855

**Natural Resource Conservation Service**  
 118 South Street  
 Bennington, VT 05201  
 (802) 442-2275

**U.S. Fish & Wildlife Service**  
 Partners for Fish & Wildlife Program  
 11 Lincoln Street  
 Essex Junction, VT 05452  
 (802) 951-6313

## Check Out These Web Sites



**VT Agency of Natural Resources**  
[www.anr.state.vt.us](http://www.anr.state.vt.us)

**VT Fish & Wildlife Department**  
[www.anr.state.vt.us/fw/fwhome](http://www.anr.state.vt.us/fw/fwhome)

**U.S. Dept. of Agriculture**  
[www.usda.gov](http://www.usda.gov)

**U.S. Forest Service**  
[www.fs.fed.us](http://www.fs.fed.us)

**U.S. Fish & Wildlife Service**  
[www.fws.gov](http://www.fws.gov)

**National Association of Conservation Districts**  
[www.nacdnet.org](http://www.nacdnet.org)

**Natural Resource Conservation Service**  
[www.nhq.nrcs.usda.gov/CCS/Buffers.html](http://www.nhq.nrcs.usda.gov/CCS/Buffers.html)

**Aldo Leopold**  
[www.aldoleopold.org](http://www.aldoleopold.org)  
[www.naturenet.com/alnc](http://www.naturenet.com/alnc)

**“Too much emphasis is placed on replanting game, and not enough on creating environments where constant replanting is unnecessary. We have still to learn the fundamental fact that in a favorable environment any wild species raises itself.”**

*Aldo Leopold, Father of Modern Conservation, 1887-1949,  
 in Report of the Committee on American Wild Life Policy (1929)*

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## BATTEN KILL NEWS

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