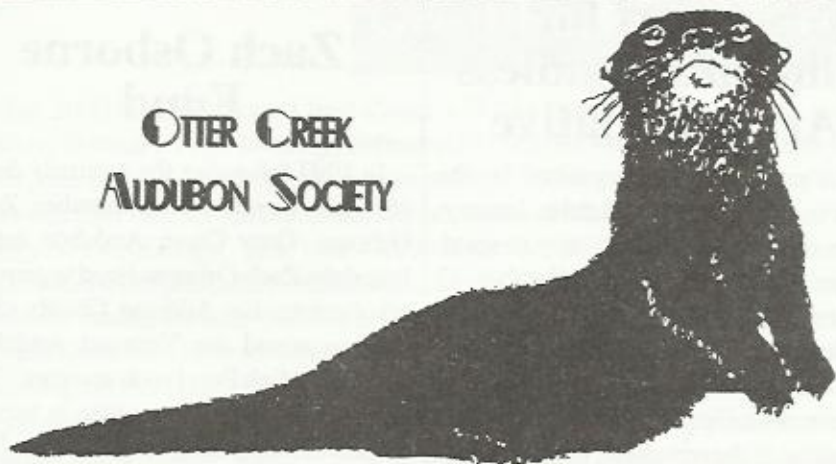


OTTER CREEK  
AUDUBON SOCIETY



# OTTER TRACKS

## In This Issue:

- Calendar of Events
- Clinton's Roadless Areas Initiative
- Cormorants
- Great Backyard Bird Count
- ... and more



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## Lamprey Control in Lake Champlain

The sea lamprey is an unloved, unwanted member of the Lake Champlain fish community. Its origins are in doubt. State fisheries biologists say the species was introduced into Lake Champlain and the Great Lakes during construction of the St. Lawrence Seaway in the late 1950s. Other biologists contend it is native to the Champlain Basin, as in fact are two other lamprey species, brook and silver lamprey. Development in the Champlain Basin and aggressive fisheries management have apparently produced ideal conditions for expansion of its population.

The sea lamprey migrates up most of the tributaries of Lake Champlain to spawn. Lamprey larvae, called ammocoetes, take about seven years to mature and make their way down to the lake, where, as adults, they attach themselves to the sides of large fish with their round suction-disc mouths. They feed parasitically on their host fish until they drop off preparatory to spawning. Lake trout and landlocked salmon are the preferred hosts, but lampreys parasitize wall-eye, northern pike, sturgeon and others in smaller numbers.

To improve the quality of the lake trout and salmon fishery the Vermont Department of Fish and Wildlife, New York Department of Environmental Conservation and the U.S. Fish and Wildlife Service collaborated on an eight-year experimental lamprey control program starting in 1990. Treatment consisted of pouring a predetermined concentration of the poison TFM upstream of lamprey spawning sites in most of the rivers flowing into Lake Champlain

shown to harbor larval lamprey. TFM is particularly toxic to larval animals, although it kills a range of fish, amphibians, mussels and macroinvertebrates as well. Where rivers enter the lake in multiple channels via deltas, treatment was made by aerial spraying of another chemical, called Bayer 73.

Treatment took place in 1990-1992 and in 1994-1996, depending on the river. The chemicals killed large numbers of lamprey ammocoetes and other non-target animals, although the three-agency partnership in its comprehensive evaluation of the experimental program concluded that the mortality to nontarget species was "not significant". Audubon has questioned the accuracy of this conclusion.

Prompted by fishermen who see lamprey populations recovering in the four-year span between treatments, the three-agency partnership has begun work on a permanent program that would treat the entire basin every four years. An attempt would be made to control lampreys in rivers not treated in the experimental program such as the Pike River at the north end of Missisquoi Bay in Quebec and the Winooski River in Colchester, Winooski and Burlington. Because federal funds are involved in the treatment program, the three-agency partnership must prepare an Environmental Impact Statement (EIS) proposing a dispassionate assessment of a range of alternative actions, including as one alternative no treatment.

Hearings on January 10 and 11 to ad-  
*continued on page 2*

*continued from page 1*

dress the scope of the EIS held in Middlebury and Milton drew a preponderance of fishermen eager to proceed with a new round of treatment. The President of the Vermont Audubon Council, the umbrella organization of the eight Audubon chapters in Vermont, and the National Audubon Vermont State Office Director both spoke in support of lamprey control but against the use of poisons in rivers with vulnerable populations of threatened and endangered species.

The Poultney River is a case in point. On the border between Vermont and New York in southern Rutland County, it produces about one percent of Lake Champlain's lampreys. It is the river richest in biological diversity in New England. It has five endangered and one threatened mussel species as well as two threatened fish species. The State of Vermont has classified the Poultney an Outstanding Resource Water for its biological resources. Audubon advocated that alternatives to chemical poisons be used on the Poultney. Such alternatives, studied extensively in the Great Lakes by the U.S. Fish and Wildlife Service, include use of barrier dams, introduction of sterile males, traps, and pheromones (chemical attractants) to reduce the number of ammocoetes in the Poultney.

The draft EIS will be available for public comment in several months. Audubon and several other organizations concerned about the effects of repeated application of poison in the Champlain Basin on ecological and human health, will be looking to see if our advice has been taken.



## Support for Clinton's Roadless Areas Initiative

At a public hearing organized by the U.S. Forest Service in Rutland in January, Vermonters had the opportunity to speak out on President Clinton's October 13 roadless areas directive. This directive instructed the U.S. Secretary of Agriculture to issue a notice of intent to prepare an Environmental Impact Statement (EIS) on protection of the remaining roadless areas on all National Forests. At stake is the future of a combined area of 60 million acres across the country. Out of 52 speakers at the Rutland hearing 39 spoke in favor of roadless area protection. Although the Forest Service is tentatively setting an arbitrary minimum threshold of 5000 acres for protection, most speakers voiced concern that protection of Forest Service roadless areas of 1000 acres or more was a far more appropriate criterion in Vermont.

President Clinton noted in his instructions to Agriculture Secretary Glickman the importance of these roadless areas as "the last best unprotected wildlands in America, vital havens for wildlife, absolutely critical to the survival of endangered species." They "bestow upon us unique and irreplaceable benefits," he said. Concerns expressed at the Rutland hearing that this directive could reduce the area in Vermont available for timber harvest were answered by those who pointed out that less than two percent of Vermont's timber harvest comes from National Forest land, and only half of Vermont's annual growth of wood is presently cut, leaving ample room for privately-owned timberland to make up the difference. On the other hand, only one percent of Vermont's forest land is wilderness, compared to a national average of five percent.

When the draft EIS appears in the next several months, it will recommend to the public one of the several proposed alternatives. Audubon members will want to provide their views to Secretary Glickman on this issue.

## Zach Osborne Fund

In 1997 following the untimely death of Otter Creek board member Zach Osborne, Otter Creek Audubon established the Zach Osborne Fund to provide scholarships for Addison County children to attend the Vermont Audubon Camps at High Pond each summer. The OCAS Education Committee is hard at work reviewing camp applications. The rest of us have a role to play, too, in considering a contribution to the Zach Osborne Fund, so that the dreams of an Addison County student can be fulfilled. Please make checks payable to Otter Creek Audubon, noting that it is for the Zach Osborne Fund. Your contribution is tax-deductible and much appreciated.

## Cree Rights Violated by Quebec Ministry of Forests

On December 21 the Quebec Superior Court ruled that the Quebec Ministry of Forests has systematically violated the rights of the Cree Nation by operating under a forestry management regime that failed to take into account the social and environmental repercussions on the Cree Nation. The forestry regime was ruled unconstitutional and inoperative after July 1, 2000. New forestry management plans will only be approved after completion of a full environmental assessment that considers impacts on Cree social and environmental conditions, including their hunting, trapping and fishing rights as provided for in the James Bay and Northern Quebec agreement. One particularly egregious aspect of the denounced management plan was that the Ministry of Forests had delegated its powers to develop forest management plans to the logging companies. Likening the decision to the historic vindication of Cree rights 25 years ago which led to the Northern Quebec Agreement, Dr. Ted Moses, Grand Chief of the Cree, stated: "The present forestry regime is quashed and must be immediately replaced by a new regime which takes into account our rights."

## Great Backyard Bird Count

The 2000 Great Backyard Bird Count will take place from Friday, February 18 to Monday, February 21. We encourage everyone to participate in this citizen science collaboration between the National Audubon Society and the Cornell Laboratory of Ornithology. Last year 42,000 observers submitted reports to the Cornell Lab of Ornithology covering the birds seen each day during the four-day event.

Results from the 1999 count, available at [www.birdsource.org](http://www.birdsource.org), and click on the Great Backyard Bird Count button, show the distribution of our winter species clearly. Some species like downy woodpeckers, white-breasted nuthatches and black-capped chickadees are found throughout the Northeast. Others like red-bellied woodpeckers have recently arrived in Vermont from farther south and reach their northern limit here. Only four sites in Vermont had red-bellied woodpeckers on the 1999 count. Comparisons with the 2000 and future counts will reveal the extent of continued northward expansion of this species. Some northern finches like common redpoll and pine siskin are

eruptive, moving south irregularly in large numbers, presumably when their winter seed crop fails farther north. Great Backyard Bird Count maps show not only the distribution and abundance of these species in 1999, they show how far south the eruptive wave carried.

To participate, tally the highest number of each species seen at one time (so as not to count the same birds more than once), and fill out the form enclosed in this issue of *Otter Tracks*. You may submit data for any or all of the four days of the count, but please use a separate sheet for each day. You may submit the data directly to birdsource via the Internet or you may mail your forms to Otter Creek Audubon. We will be happy to send them in for you. If you do enter your observations on the Internet, we request that you send us your forms as well, so that we can continue to compile information on winter birds in Addison County gathered over the past decade as part of our Valentine's Day Feeder Count. We encourage teachers to make feeder and backyard counts with their students and to submit data.

## Book Review

by Heather Karlson

### **The Story of Vermont: A Natural and Cultural History A Book by Christopher Klyza & Stephen Trombulak**

We often forget that the pastoral character of Addison County reflects only the very recent history of Vermont. Klyza and Trombulak's new book changes our perceptions by presenting a longer view, both in time and space.

The Story of Vermont leads us through the cycles of mountain building, erosion, development of ancient oceans and lakes, and glacial processes that influenced today's landscape. We find that many of the soils and rocks that now make up Vermont were created millions of years and thousands of miles apart. As we approach the present, the pace of the text slows. From tundra to mastodons to thousands of years of hunting and gathering, to colonial settlement, we follow the changes that bring us to the land upon which we now stand. The authors approach the story of Vermont dynamically, recognizing the flow and change within the many interacting systems over time. Watersheds and the paths of pollutants show the irrelevance of Vermont's political boundaries and the importance of cultural cooperation beyond these artificial lines.

A separate section provides brief descriptions of Vermont's

plant communities and a sampling of common and rare wildlife. Frequent references in the text connect the ecological systems with human actions and bioregional boundaries, providing cohesiveness.

The interdisciplinary nature of the book prevents any individual subject from being discussed in depth, but the writing is rich with facts and details that make the story feel complete. An effective series of maps, diagrams, and photographs helps to elucidate the text. The reference list suggests numerous sources for additional reading. Readers must be creative in using the brief index, however, as many subjects are not listed.

With an emphasis on the interconnections between geology, biology, and human cultures, this book provides a sense of wholeness to the many facets of the place we call Vermont. The last chapter presents three possible scenarios for the future. The final vision includes a series of wild reserves and locally-based economic networks for sustainable tree and crop harvest, which empowers readers with a feeling of hope and recognition of their role in helping to create the future story of Vermont.

## Tax Check-off Reminder

Who among us does not think longingly of spring during the long cold nights of winter? Don't forget, though, that one date in spring, April 15, produces a blizzard of its own, as thousands of last-minute tax returns head to the IRS and Vermont Department of Taxes. Also, don't forget that for the Nongame and Natural Heritage Program of the Vermont Department of Fish

and Wildlife, the folks who monitor and manage the other 95 percent of Vermont's species, April 15 is a fateful day. It is the day they hope Vermonters remember the tax check-off and commit a portion of their refund to wildlife. For the Nongame and Natural Heritage Program it is the most important day of the year. We hope you'll share in that sense of importance.

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## Cormorants Subject of National Management Plan

The U.S. Fish and Wildlife Service has announced that it is preparing a comprehensive national cormorant management plan. In an Environmental Impact Statement (EIS) the Service will evaluate the species' status, impacts on other resources, and management strategies. At issue is the perceived impact of expanding cormorant populations on commercial and recreational fisheries.

Cormorant populations reached a low point in the 1950s and 1960s as a result of the pesticide DDT, human persecution, and decline in the health of ecosystems like the Great Lakes. Following amelioration of these threats, numbers increased at a rate of six percent annually for three decades. Currently the total national population is 1-2 million birds. The Lake Champlain population is about four thousand pairs.

On Lake Champlain most cormorants breed on the Four Brothers and Young Island.

They winter in Gulf Coast states where, with catfish farms plentiful, the living for cormorants is easy.

In 1999 the Vermont Department of Fish and Wildlife secured a federal permit and treated the eggs of the 2500 Young Island cormorant pairs with mineral oil. Only a few hundred cormorant chicks survived to join the adult population. Other states controlled their populations as well.

The EIS will look at the food habits of cormorants in various parts of the species' range. In Lake Champlain, for example, by far the most frequently taken food fish is undersize yellow perch, and only very rarely trout or salmon fry, in spite of which fishermen have called for cormorant control. A coordinated, science-based management plan may permit cormorants to go about their business without repeated human persecution.

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