

NATURAL HERITAGE HARMONIES



WINTER 2002-2003

A publication of the Nongame and Natural Heritage Program

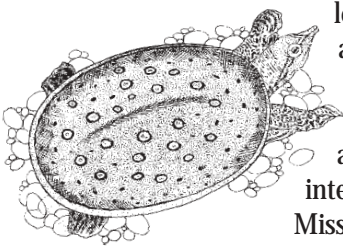
Vermont Department of Fish & Wildlife
Agency of Natural Resources

Conserving Vermont's fish, wildlife, and plants and their habitats for the people of Vermont.

Spiny Softshell Turtle Recovery Work Continues

Conservation efforts to benefit Vermont's spiny softshell turtle continues, as biologists work to protect nesting sites, complete a recovery plan, and monitor impacts from construction activity at the Missisquoi Bay Bridge.

The turtle is listed as threatened in Vermont and Canada. One Vermont population remains in the Lamoille River and Vermont shares the Missisquoi Bay population in Lake Champlain with Québec. Department of Fish and Wildlife biologists estimate that about 300 spiny softshell turtles remain in the state today. The Winooski River population was lost long ago and Québec has lost all but the international Missisquoi Bay population.



This past spring and summer, biologists worked at a department-owned nesting site along Lake

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Indiana Bats Make Champlain Valley Summer Home



Indiana bat/Susi von Oettingen, U.S. Fish and Wildlife Service

At dusk, small, winged mammals, about the size of your thumb, emerge from beneath the loose bark of a large dead tree. They are the federally endangered Indiana bat, setting out on their nightly forage for insects inhabiting the Champlain Valley. Until a few years ago, little was known about this species, but current research is revealing new and exciting information about the Indiana bat, as well as about bats in general in Vermont.

In recent years, the Vermont Fish & Wildlife Department, in cooperation with the New York Department of Environmental Conservation, the U.S. Fish and Wildlife Service, and the Green Mountain National Forest, has surveyed bats throughout the region,

and used radio telemetry of Indiana bats to learn more about their habitat needs.

“Although we had fairly good knowledge about hibernating bats in Vermont based upon surveys of caves and mines dating back to the 1930's, we are only now beginning to understand the distribution and abundance of bats in the state during other seasons,” said Scott Darling, Vermont Fish & Wildlife biologist. “We know surprisingly little about the status and security of our bat populations. We were surprised to find, during last winter's survey, 159 Indiana bats hibernating in a mine never before known to hold this species.”

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DEPARTMENT UPDATE

by *Tom Decker, Director of Wildlife*

Conserving the state's fish, wildlife, plants and their habitats for the people of Vermont cannot be the sole responsibility of a single state department. This mission of the Department of Fish and Wildlife, cannot be fully realized until every Vermonter feels a personal responsibility for its achievement. Through ongoing work by a variety of groups—be they governmental, private industry, sporting groups, foundations, or community groups—Vermont has established a reputation in New England as a state that takes seriously the conservation of our wild resources. By working together, we have a better chance of reaching our conservation goals.

The conservation of nongame wildlife, as well as Vermont's native plants and natural communities, is a part of the department's mission that staff from throughout the organization contribute to. I invite you to take a closer look at the editorial box in this issue of *Harmonies*. There you will see the names of fisheries, wildlife and outreach staff you may have been unaware were contributing to projects that range from work with falcons and osprey to restoration work for the sturgeon and marten. As new programs emerge and established programs reach an end point, you will see this group of names change in relation to the specific projects. Such integration of skill by department staff, enables fish and wildlife to most efficiently and

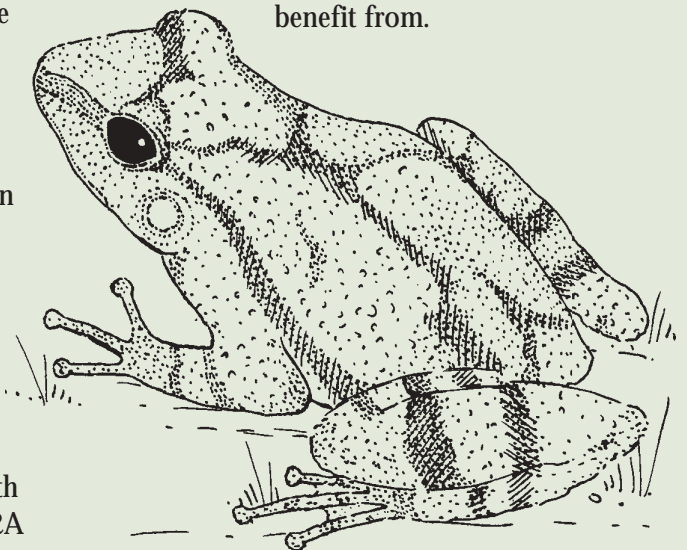
effectively tackle a multitude of conservation projects.

Integration was a key motivator for recent organizational change within the Nongame and Natural Heritage Program. In December, several NNHP staff were moved out of the main administrative offices in Waterbury to two district offices. One goal of the change was to formally facilitate broader, two-way communication between this program's staff and the larger department. By encouraging regular interaction by department staff in next-door offices, a better understanding of each individual's contribution can be developed. It is hoped this change will lead to more staff becoming engaged in a diversity of department projects they previously were unaware were being addressed by fish and wildlife.

Finally, I'd like to update you on several work initiatives. Wildlife Biologist Scott Darling and Outreach Director Lisa Helme traveled to Washington D.C. as department representatives to work with a coalition of conservation groups working to push forward the CARA or Conservation and Reinvestment Act funding initiative. The hope is that with the passage of CARA the department will secure permanent federal funding for

species of conservation concern. The department also continues its annual support, in partnership with the National Fish and Wildlife Foundation, of funding of a state coordinator in the Partners in Amphibians and Reptile Conservation in Washington D.C. The need to promote use of non-lead fishing tackle continues to be addressed by the department. Annually, three to four thousand dollars is spent in buying non-lead tackle to distribute to anglers and build awareness of the link between lead tackle and loon deaths. This important message also is incorporated into department fishing clinics.

Thank you for your support of the Department of Fish and Wildlife and the Nongame and Natural Heritage Program. As you work with us, together we will continue efforts to reach broad conservation goals all Vermonters benefit from.



Natural Community Inventory Projects Near Completion

The Nongame and Natural Heritage Program (NNHP) has been conducting natural community inventory projects since 1988. These projects are sometimes conducted in a restricted geographic area, such as a county, with the goal of identifying the presence of significant examples of all community types. Other inventories have been statewide and have focused on particular community types. With either approach, the goal is to identify high quality examples of natural communities across the state in order to provide management recommendations to landowners, aid in conservation planning, and to improve our classification of natural communities.

“We are excited to let participating landowners, as well as others, know that some of our longer-term projects are nearing completion,” said Eric Sorenson, an ecologist in the department’s Nongame Natural Heritage Program. “We really appreciate the support and patience of the private landowners, since many of our inventory projects wouldn’t be possible without their cooperation.”

Ongoing Projects

Our three-year statewide **hardwood swamp** inventory is in the final stages of report writing. This project, funded by the U.S. Environmental Protection Agency (EPA), involved visiting approximately 120 swamps, varying from typical red maple-black ash swamps, to less common red maple-black gum swamps and calcareous red maple-tamarack swamps. Breeding bird, reptile and amphibian surveys were conducted in representative swamps.

Participating landowners’ patience will be rewarded with the arrival of the final report this spring.

The **wetlands bioassessment project** is a collaborative effort with the Vermont Department of Environmental Conservation (VT DEC), and different than typical NNHP inventories. This project’s goal was to identify characteristics of vernal pools and northern white cedar swamps that could be used as indicators of ecological integrity. Data was collected on aquatic macroinvertebrates, amphibians, plants, and many environmental variables. This project not only provided valuable

“We really appreciate the support and patience of the private landowners, since many of our inventory projects wouldn’t be possible without their cooperation.”

information on the classification of both vernal pools and cedar swamps, but also reaffirmed the value of our traditional approach of assessing pool and swamp quality based on the condition of the surrounding buffer lands. The final report for this EPA funded project will be completed and available this spring from the Fish & Wildlife Department.

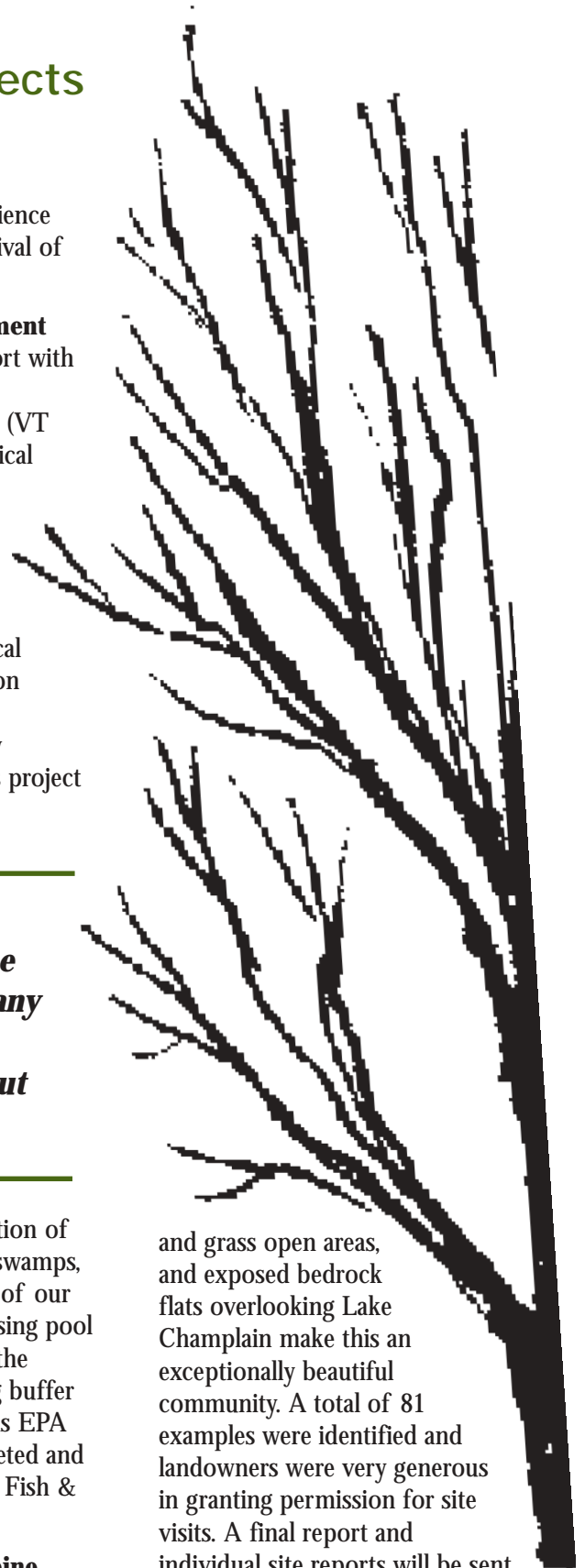
Limestone bluff cedar-pine forests occur primarily on the flat tops of rocky headlands along Lake Champlain and were the subject of a one-year inventory funded by the federal Wildlife Conservation and Restoration Program. The stunted and twisted northern white cedar, sedge

and grass open areas, and exposed bedrock flats overlooking Lake Champlain make this an exceptionally beautiful community. A total of 81 examples were identified and landowners were very generous in granting permission for site visits. A final report and individual site reports will be sent to landowners this spring.

Upcoming Projects

This spring we will begin a statewide inventory of **softwood swamps**

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Our Partners in 2002

Agencies:

Green Mountain National Forest
 Missisquoi National Wildlife Refuge
 Northeast Endangered Species and Wildlife
 Diversity Technical Committee
 Silvio O. Conte National Fish & Wildlife Refuge
 Société de la faune et des parcs du Québec
 U.S. Environmental Protection Agency
 U.S. Fish & Wildlife Service (Lake Champlain
 Office and N.H. Endangered Species Office)
 U.S.D.A. Wildlife Services
 U.S.D.A. Natural Resource Conservation Service
 U.S.G.S. Cooperative Fish & Wildlife Research Unit
 Vermont Department of Environmental
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 Vermont Department of Forests, Parks &
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 Vermont Military Department
 Vermont Regional Planning Commissions
 Vermont Towns and Cities

Organizations:

Access Fund
 Central Vermont Public Service
 Johnson State College
 Lake Champlain Land Trust
 National Wildlife Federation
 NatureServe
 New England Wildflower Society
 The Nature Conservancy – Vermont Field Office
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 Vermont Caver's Association
 Vermont Electric Power Company
 Vermont Endangered Species Committee (ESC)
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 Vermont ESC Scientific Advisory Groups
 Vermont Family Forests
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Dorothy Allard	Steve Faccio	Marc Lapin	Philip Nothnagle	Chris Sanders
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Jim Andrews	Margaret Fowle	Michael Lew-Smith	Rick Paradis	Chris Smith
Dick Bayer	Patrick Galois	Kent MacFarland	Judy Peterson	Julia Watson
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Brett Engstrom	Mark LaBarr	Ted Murin	Reenie Rice	Diane Wells
		Ethan Nedean	Chris Rimmer	Merri Zetterstrom

Spiny Softshell Turtle Recovery

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Champlain to protect nests, via regulated trapping, from raccoons and skunks. These mammals eat the turtle eggs and young as they emerge from the nest. Despite some predation, biologists did observe young emerging from their nests and are hopeful these turtles now are safely hibernating.

In 2001, the department began work on a spiny softshell turtle recovery and management plan. Steve Parren, coordinator of the department's Nongame and Natural Heritage Program, believes the plan could be ready for approval by the Agency of Natural Resources this fall.

"Before the plan is reviewed by the Commissioner of Fish and Wildlife it must first go through a rigorous approval process," explained Parren. "The plan will be reviewed by a scientific advisory group and the Conservation and Education Subcommittee of the state's Endangered Species Committee before it can receive final approval from the entire committee."

The ultimate goal of the plan is to establish large enough softshell turtle numbers that it can be removed from the list of endangered and threatened species. Parren anticipates that delisting would occur if there was evidence of a minimum of 150 breeding females; establishment of five successful nesting sites; and evidence that there were at least 100 nests annually.

As construction activity steps up this summer at the Missisquoi Bay Bridge, Parren is optimistic that mitigation measures taken to preserve turtle basking opportunities and critical underwater wintering habitat will prove effective. Conditions of an Endangered and Threatened Species Permit granted to the Agency of Transportation (AOT) require temporary basking platforms be provided as alternative basking areas during bridge construction. Since the new bridge will shade the current basking sites, the permit requires the installation of alternative permanent basking sites, once the new bridge is complete. Basking prepares turtles for

hibernation and aids in egg development. In addition, the permit requires AOT to retain large portions of the old causeway to maintain water flow conditions. The existing bridge area currently supports the largest concentration of hibernating spiny softshell turtles in Lake Champlain.

"For the threatened spiny softshell turtle to remain a part of our natural world, we need to be sure that its year-round needs are met," said Parren. "This means ensuring that places remain where softshells can nest successfully, forage and bask to sustain themselves, and hibernate undisturbed during Vermont's long winter."

Indiana Bats

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In April, twenty female Indiana bats from a mine in upstate New York were fitted with radio transmitters. Sixteen of these bats were located, mainly in Vermont's Champlain Valley. In June and July, seven female Indiana bats were captured from several sites in the Champlain Valley and the edges of the Green Mountain National Forest, fitted with transmitters and followed back to their maternity roost trees. Nightly emergent counts revealed some roost trees had nearly two hundred bats emerging at dusk.

"Based on our work, we now better understand the migration patterns and distribution of Indiana bats in the Champlain Valley, as well as the characteristics of roost tree habitat used by this species," noted Scott Darling. "We also have new insights into the distribution and abundance of all other bat species in Vermont. This information will guide us on the future directions of bat management and conservation in Vermont."

This summer, UVM's Vermont Cooperative Fish and Wildlife Research Unit will further investigate maternity roosting habitats, as well as the preferred feeding habitats of the Indiana bat. This information will be instrumental in developing habitat management practices that benefit this species.

The Vermont Butterfly Atlas Soars

The mid-April flight of a Mourning Cloak in Woodstock signaled not only the coming of spring, but also the beginning of the first season of the Vermont Butterfly Survey (VBS), an effort aimed at collecting data for Vermont's first-ever atlas of the relative abundance and distribution of butterflies across Vermont. The VBS is a five-year cooperative project lead by the Vermont Institute of Natural Science and funded, in part, by a grant from Vermont's Department of Fish and Wildlife (VFWD).

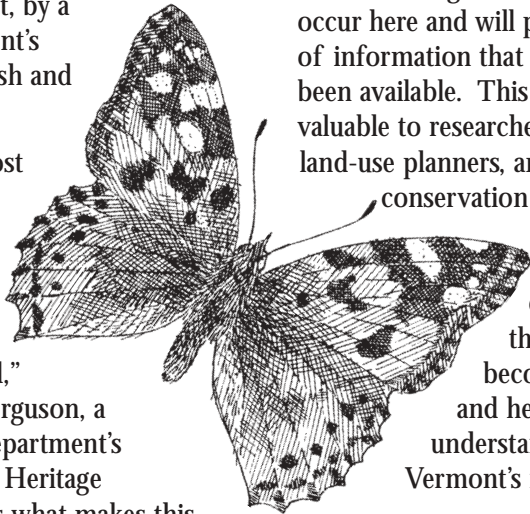
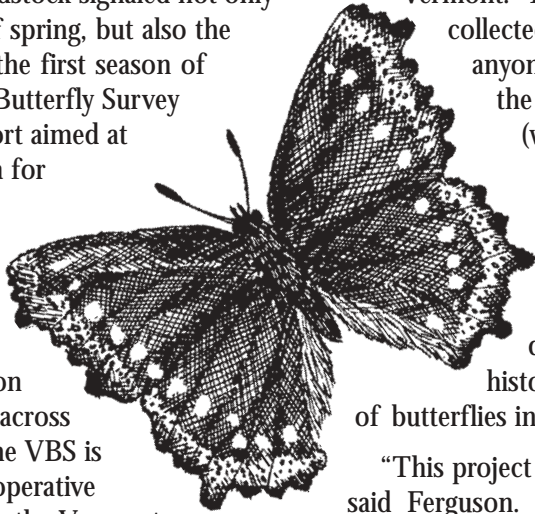
"Although almost everyone recognizes these insects, our knowledge about them in Vermont is limited," explained Mark Ferguson, a zoologist in the department's Nongame Natural Heritage Program. "That is what makes this project so exciting for me. We will gain important new information about these showy insects. Butterflies are good indicators of environmental conditions because each species has specific food and habitat needs. Not only will the information collected allow us to develop a statewide database and atlas of butterfly distribution, it will help us in conducting scientific assessment of the threats they face, and in developing statewide conservation strategies for this species."

One hundred and thirty trained volunteers participated in the survey this past summer. They visited at least 500 sites and recorded the presence of

thousands of butterflies across Vermont. The information they collected will be available to anyone free of charge on the Internet (www.uvm.edu/~vbap/). When the five-year project is completed, the data will be published as an atlas covering distributions, natural history, and conservation of butterflies in Vermont.

"This project offers many benefits," said Ferguson. "The butterfly atlas project will greatly increase our understanding of the species that occur here and will provide a baseline of information that has never before been available. This will prove valuable to researchers, landowners, land-use planners, and others making conservation and management decisions. The project also offers Vermonters the opportunity to become volunteers and help improve our understanding of Vermont's natural heritage."

Anyone with an interest in butterflies can volunteer and help contribute to the survey. For more information about the VBS, visit the website at www.uvm.edu/~vbap/.



Vermont Fish & Wildlife
Wildlife Division
Nongame and Natural Heritage
Program Department Contributors

Tom Decker	Division Director
Steve Parren	NNHP Coordinator
Bob Popp	NNHP Botanist and Inventory Coordinator
Mark Ferguson	NNHP Zoologist
Everett Marshall	NNHP Database Biologist
Eric Sorenson	NNHP Natural Community Ecologist (joint position with The Nature Conservancy)
Jodi Shippee	NNHP Database Assistant
Leif Richardson	NNHP Lands Ecologist
Lilla Stutz-Lumbra	Outreach Coordinator
Lucy Herring	Office Support
John Austin	Wildlife Biologist
John Buck	Wildlife Biologist
Tim Appleton	Fish & Wildlife Technician
Bill Crenshaw	Wildlife Biologist
John Gobeille	Wildlife Biologist
Scott Darling	Wildlife Biologist
Doug Blodgett	Wildlife Biologist
Cedric Alexander	Wildlife Biologist
Paul Hamelin	Fish & Wildlife Technician
Kimberly Royar	Wildlife Biologist
Forrest Hammond	Wildlife Biologist
Chris Bernier	Fish & Wildlife Technician
David Sausville	Waterfowl Area Specialist
Ken Cox	Fisheries Biologist
Chet MacKenzie	Fisheries Biologist

Natural Heritage Harmonies is a free, semi-annual publication of the Vermont Fish & Wildlife Department's Nongame and Natural Heritage Program. Please acknowledge the Vermont Department of Fish & Wildlife in any reprints.

Vermont Agency of Natural Resources
Fish & Wildlife Department
103 South Main Street, 10 South
Waterbury, VT 05671-0501
www.vtfishandwildlife.com

Natural Community Inventory Projects

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(spruce, fir, tamarack, and hemlock). We currently have little information about these swamps, especially the hemlock dominated swamps in the southern half of Vermont. We hope that this EPA/VT DEC funded project will continue for two years.

Another exciting inventory will be for **montane spruce-fir forests**, the dominant forest above 2,800 feet in the Green Mountains and other high elevation areas of Vermont. This project will focus on identifying the best examples in the state.



Care about Wildlife?

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1. **Line 29A on the Vermont income tax return - look for the loon !**

2. **Buy a Conservation License Plate**



3. **Donatee using Section 4 on the hunting /fishing license application**

4. **Planned gifts; stocks or property bequests**

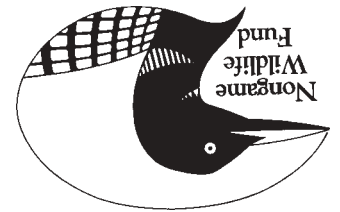
5. **Direct donations to:** Nongame Wildlife Fund
Vermont Fish & Wildlife Department
103 South Main Street, 10 South
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“ If everyone gave just a little, wildlife would benefit a lot!”

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a Difference!**

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