THE NORTHERN FOREST FORUM

Working for Sustainable Natural & Human Communities in the Northern Forest & Gulf of Maine region of the Northern Appalachians

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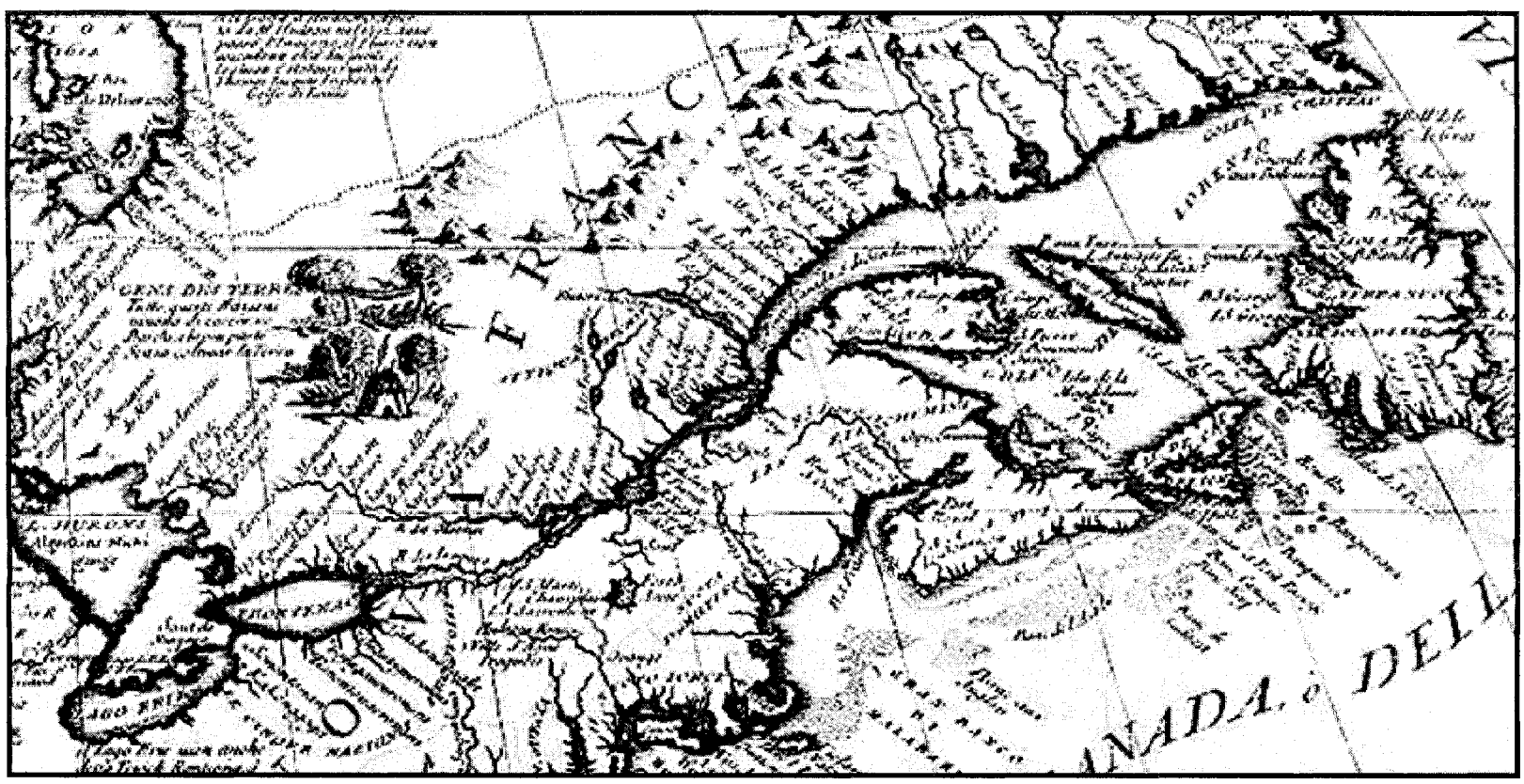
The Northern Appalachian/Acadian Forest: Sharing History, Nature & Landscape Lake Ontario to the Gaspé



Landscape Scale Conservation in the Northeastern United States and Eastern Provinces of Canada

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Also

The Northern Forest Forum

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Please address letters for publication specifically "To the Editor". E-mail: nff@sover.net

Next Deadline for Articles, Letters, Photos and Artwork: Monday, January 27 Contribute your thoughts to the defense and restoration of our natural environment.

A Wentworth, Nova Scotia farmer sculpted out of a dead elm pauses with an apple, perhaps imported from China, in front of the Sobey's supermarket.

Clean Water Act Trumps State Deference to Aerial Spraying

A recent Federal appeals court decision in the 9th District (Oregon and Washington) set some interesting precedent for the states of New Hampshire and Maine, vis â vis aerial spraying over clearcut forests. Particulars of the case are spelled out in a story on page four of this issue of the paper. What is germane, however is this: discharge of pesticide into waters broadly defined as navigable triggers Clean Water Act review. States permitting the aerial delivery of pesticides should be reviewing applications on the basis of NPDES (National Pollutant Discharge Elimination System) permits. Presently, they are not. Maine has no permitting system and instead relies on an intent-to-spray notification; New Hampshire's permits assume no discharge into state waters, although its monitoring of sprays has established drift beyond target areas.

What is striking is that the 9th District court found no difficulty in finding that spray DOES end up in water — based on what the Forest Service's own Environmental Impact Statement had to say. A key aspect of the Oregon case is that the federal appeals court found that drift from aerially applied pesticide is inevitable. (In fact, in finding that the defendants, the United States Forest Service, had failed to prepare an adequate Environmental Impact Statement, the impacts of drift outside target areas was the central concern.)

Barring definitive proof that spray is not entering the waters of northern New England, the precautionary principle demands a halt to spraying. During the successful moratorium campaign on aerial spraying in Vermont, the statement made by one opponent applies equally to the entire region where sprays are applied, across both northern New England and the Maritime: to spray WITHOUT impacting water, you'd "have to apply the herbicides with a syringe." The topography and hydrology of the region make it damned difficult to hike, let alone spray, without encountering water.

Critics of permitting systems however raise the most basic point. Why issue permits to pollute at all? Why assume that permits create effective controls? If such a stance is naive, it is even more gullible to assume the public is protected under today's approach to regulating rather than eliminating the undesirable. Given near universal public opposition to spraying, the ruinous timber practices they reflect, and the INTENDED ecological effects they have, as well as those no one is paid to consider, why permit this practice at all? A ban on spraying, which is what Vermont's indefinite moratorium amounts to, is called for not only in the forests of northern New England, but in Nova Scotia and New Brunswick as well — particularly given the growing industry lobby for reciprocal, U.S./Canada registration of chemicals.

It is likely that the Forest Service will seek changes to the Clean Water Act in Congress; undoubtedly the pesticide lobby is already working over the elected officials whom they have duly bought and paid for. Hopefully, however, bipartisan and civic-minded support exists for defending the Act from Bush administration gutting. We hope the region's Congressional delegation will stand firm in support of *clean water* — a most basic right.

Barring an immediate turn to sound environmental policy by Maine and New Hampshire state legislators — who could render this whole issue null by banning biocide in the woods as their Vermont counterparts have — we call on the Environmental Protection Agency to do its duty by the Clean Water Act and require discharge permitting of aerial sprayers. Moreover, the Agency should move aggressively to assess the environmental risks these chemicals pose to the region's waters and ecosystem health. Any such study should ask: why are chemicals being used at all? There is no clear reason why these steps should not be taken.

Crowd in Montreal contemplating the birth of an idea, destruction of a building or some such societal transition. Sculpture near McGill University.

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A subscription and membership form is provided on the back cover, for your convenience. If you want to help defend and restore the forests of the region, please consider membership. A big thanks to all our members and supporters.

Sierra Club finds Green Certification of the Irving Allagash Woodlands Unacceptable

(Press Release of November 22, 2002)

The Sierra Club has dropped a formal appeal of the "green" certification of J.D. Irving's Allagash woodland by the Forest Stewardship Council. Instead, the club has made public the results of its own report on Irving's forestry practices, conducted by Mitch Lansky, an authority on forest practices in Maine and author of **Beyond the Beauty Strip** and the new **Low-impact Forestry** manual.

The forty-page report contains considerable evidence that the certification process of Maine forests owned by Irving is seriously flawed. In 2000, Irving's lands received certification using the standards developed by the Forest Stewardship Council (FSC) as a well-managed natural forest. According to Lansky, there appears to be a trend of "grade inflation" where standards were not met, but Irving was given high marks anyway. Lansky points out that the high marks appear to be based more on promises or process than on actual activities on the ground.

"The Sierra Club believes that the integrity of independent third-party certification processes is critical in the absence of meaningful forestry legislation at the state level," said Carole Haas, Chair of the Maine Chapter of the Sierra Club.

"It is critical to ensure that the Forest Stewardship Council exercise the rigor that is necessary if it is to be a truly credible global forest certification system," added Haas. "In this particular instance we are deeply disappointed."

Lansky's report documents many forestry practices that do not meet FSC standards. They include:

- Replacing Maine's natural forests with unnatural concentrations of boreal softwood species
- Mismanaged sensitive stream-side zones
- A clear-cutting rate among the highest for large landowners in the state
- One of the highest rates of herbicide use in the state
- An over reliance on high impact logging equipment
- Serious failures to meet social benefit standards, such as
- poor relationships with townspeople
- policies that pressure truckers to drive overloaded trucks and loggers to work day and night shifts
- A squeeze on contractors, leading toward lowered real logger wages even as productivity and responsibilities have increased

"Awarding 'green' certification to Irving for its forestry practices rewards Irving for the very practices the public does not want to encourage," said Haas. "In the end, certification must meet the public's expectations or it is worthless. " "That is why we choose to make Mitch's findings publicly known."

Nearly all of Maine's forests are privately owned. The owners include corporations such as Irving, and institutional investors. Less than 2% of Maine's North Woods is protected as wilderness.

"The North Woods are cherished and beloved by Mainers everywhere. The failure of the FSC certification process in the Irving case simply highlights the need to find ways to fully protect more of the Maine's forests as untouched wilderness -- diverse and clean habitats that are the source of joy and inspiration to Mainer's now and in the future," said Karen Woodsum, the director of the Maine Woods Campaign of the Sierra Club.

The Maine Chapter of the Sierra Club is a grassroots environmental organization with over 4500 members in the state of Maine. Contact: Carole Haas 207-767-1037Karen Woodsum -207-791-2821 Mitch Lansky - 207-456-7018

Mitch Lansky, author of the Sierra Club's Irving report, stands in an Irving clearcut.

Windpower the Best Way to Go

Dear Editor,

Thank you for your great coverage on the wind energy debate in the northern forest. As always, you've done a fine job of getting some interesting ideas and perspectives into the public debate.

The time for commercial wind energy production in the Northern Forest is now and I welcome it with open arms. While projects like Endless Energy's Redington Pond Ridge and Black Nubble might not be the best situated, there may be other places where wind energy is appropriate.

I believe that the most dramatic threat to the Northern Forest is not logging, it's not acid rain, it's not illegal ATV use, it's certainly not wind energy and it probably isn't even development. The biggest threat to the rich natural history of the region, the rural economies that we depend on and the continuation of our traditions and cultures is global warming. Global climate change is the direct result of our sickening addiction to fossil fuels. While the solutions to curb the impacts of global climate change are multi-faceted, it is very clear that the most important shift we can take is moving from a fossil fuel economy to a renewable economy.

I don't support the Redington Pond Ridge and Black Nubble projects because it would bisect an increasingly rare characteristic of the Northern Forest-a roadless area. Open up the road for the construction and maintenance of the turbines and along with it comes fragmentation of habitat, greater threat to development and increased logging. Roadless areas should be fought for tooth and nail and it's too bad that eco-entrepreneurs like Endless Energy are even considering this proposal. I do however believe that there are many ridges throughout the region that could and should be opened up for wind turbines. East Mountain, Little Equinox and the Searsburg Ridge are three such places in Vermont that would be great sites for wind turbines. They all have roads leading to the top of them and they all have pre-existing development. Ski areas are other places that would be great spots to put wind turbines.

If NIMBY naysayers threaten these projects however we're going to be left with a questionable energy future. Vermont Yankee produces over 1/3 of Vermont's power. Over half comes from Hydro Quebec. By 2012 Yankee will hopefully be decommissioned and hydro Quebec's expensive contract in its final stages. As we look to the future, it's absolutely true to say that energy efficiency is a great way to regain some of that energy not being proposed (only if the person's home and work environmental are built to the highest energy efficiency standards). However, creation of new energy sources is crucial to dumping nuclear as well and wind energy is by far the best way to go in the Northern Forest.

Sincerely,

Matteo Burani
Worcester, VT

Aerial Spraying and the Clean Water Act: Federal Circuit Court in US Forest Service Case Says Discharge Permits Required

Douglas Fir Tussock Moth spray program must receive EPA discharge permit — spray a point source pollutant, Court says.

In an opinion filed November 4, the United States Court of Appeals for the Ninth Circuit in Seattle ruled that the U.S. Forest Service aerial spray program for Douglas Fir tussock moth must apply for a point source discharge permit under the Clean Water Act. The ruling has significance because it denied the US Forest Service claim that aerial spraying is covered by silvicultural exemptions in the Act. It also established that the insecticide, a form of Bacillus thuringensis, is a pollutant. The second aspect of the ruling, involving the inadequacy of the Forest Service's Environmental Impact Statement, concluded that spray impacts outside targeted areas were both inevitable and tangible.

The spray program covers a proposed 628,000 acres in Washington and Oregon's National Forests. It is intended to diminish an anticipated outbreak of the tussock moth which in the early 70s defoliated some 700,000 acres. The court's opinion acknowledged both the moth's natural role in forest ecology and the USFS's desire to prevent moth damage.

The Clean Water Act aspect of the case turned on whether aerial spraying is a point or non-point source of pollution. The court concluded that "the insecticides at issue meet the definition of 'pollutant' under the Clean Water Act, and Forest Service aircraft spray these insecticides directly into rivers, which are waters covered by the Clean Water Act. Further, an airplane fitted with tanks and mechanical spraying apparatus is a 'discrete conveyance.' Therefore all the elements of the definition of point source pollution are met."

Further, the decision dealt with exemption claims by quoting from the Federal Register: "By recognizing that most water pollution from silvicultural activities is nonpoint in nature, it was not intended that certain operations already identified as point sources be excluded from the permit program by definitional oversight." The Court also said that the Environmental Protection Agency cannot simply declare point sources to be "nonpoint" and avoid a permitting requirement.

Does this decision have any impact on aerial spraying in our region — i.e., Maine? A staff person at the Bureau of Pesticide Control suggested that the court had over-reached in its decision and that applicability is unlikely. Noting that clearcuts in Maine have a riparian protection zone, the staffer said that spraying has a built-in buffer from Maine waters. The 9th circuit decision is so broad, concluded the staffer, that its conclusions would shut down spraying across the nation. Even ground spraying, he said, could conceivably have the impacts found by the Court. BPC staff were aware of the case and found it "absurd."

To read the opinion:
http://www.ca9.uscourts.gov/ca9/newopinions.nsf/16A2BEC5B0289AE488256C6500015E81/$file/0135729.pdf?openelement

Bush Assault on Citizen Participation in USFS Planning Process

News Release of The Wilderness Society

BOSTON — Nearly a quarter of a century of environmental safeguards would be dismantled if the Bush Administration's proposed National Forest Management regulations are enacted.

"These proposed regulations are one of the most flagrant attacks yet on public lands and citizen participation by this administration," said Julie Wormser, Northeast regional director of The Wilderness Society. They will have real consequences for the national forests in New Hampshire, Maine, Vermont, New York, and Pennsylvania."

"It's quite a list," said Mike Anderson, Senior Resource Analyst for The Wilderness Society. "Just call it a process of elimination for national forest protections."

Under this proposed rule, forest plans could be adopted and revised without preparing an environmental impact statement leaving the American people with only minimum information about the environmental effects of Forest Service proposals.

"Not only does it take away opportunity for strong citizen participation at the beginning of the planning process, it also removes opportunity for citizens' appeals of any final plan that the Forest Service would put forth," said Anderson.

"The planning process for New England's national forest is well underway. The forest service has sought input from hundreds of New Englanders over the last five years," continued Wormser. "I have personally gone to over 50 forest service meetings during this time. The Forest Service staff have told us all along that they are committed to developing management plans that take local concerns into account. And now the Bush Administration is throwing all our hard work away? What a slap in the face to all of us who believed in the democratic process.

"Remote backcountry areas like the Wild River Valley in New Hampshire's White Mountain National Forest, and Lamb Brook in Vermont's Green Mountain National Forest will also face more risk under this set of proposed regulations," added Wormser. "The Bush Administration actually said last year that it would use the local forest planning process to improve upon the Roadless Area Conservation Rule, but this proposal in fact abolishes requirements to evaluate and protect the ecological values of roadless areas."

Ignoring a key recommendation of the Committee of Scientists to give top priority to protecting healthy ecosystems, this draft rule also downplays the importance of ecological sustainability by giving equal consideration to logging and other economic activities. Further it eliminates the requirement to maintain viable populations of native wildlife and plant species. Finally it drops requirements for independent scientific assessments and science advisory panels.

"These draft regulations not only violate important principles of good forest stewardship they also violate laws like the National Forest Management Act and National Environmental Policy Act, which require the Forest Service to protect wildlife habitat and water quality and give the public and scientists a meaningful role in the decision-making process," said Wormser. "Clean drinking water, recreational opportunities like hiking, hunting and fishing as well as wilderness values and environmental quality will all suffer if these proposed regulations are approved."

"If the release of these proposed regulations this week was meant to be a Thanksgiving gift for the American people, they should speak up and tell this administration, 'thanks but no thanks,'" added Wormser.

[The proposed regulations are available at http://www.4d4s.org/nfma/.]

NEPA Suit Aims at Federal Complicity in Climate Change

(*Press Release*) WASHINGTON – August 27, 2002 – Friends of the Earth (FoE), Greenpeace and the City of Boulder, Colorado filed a lawsuit today in the U.S. District Court in San Francisco on behalf of their members and citizens who are victims of global warming. The suit has been filed against two U.S. government agencies – the Export Import Bank (ExIm) and the Overseas Private Investment Corporation (OPIC). Ex-Im and OPIC are taxpayer funded agencies that provide financing and loans to U.S. corporations for overseas projects that commercial banks deem too risky.

This legal action – the first of its kind – alleges that OPIC and Ex-Im illegally provided over $32 billion in financing and insurance for oil fields, pipelines and coal-fired power plants over the past ten years without assessing their contribution to global warming and their impact on the U.S. environment as required under key provisions of the National Environmental Policy Act (NEPA). NEPA requires all federal agencies to conduct an environmental assessment of programs and project-specific decisions having a significant effect on the human environment; however, according to the complaint, OPIC and ExIm have refused to review their programs' and fossil fuel projects' contributions to global warming under NEPA.

FoE and Greenpeace members involved in the suit include a North Carolina couple who fear their retirement property will be lost to storm surges, erosion and the rising sea level; one of the largest maple syrup producers in Vermont who believes his business will be ruined as maple trees disappear from the area; and a marine biologist whose life's work is in jeopardy because coral reefs he has spent a lifetime studying and enjoying are disappearing at an alarming rate due to bleaching from rising ocean temperatures.

"We're nervous about climate change—if we have no maples, we have no farm income and the value of our land will be devastated," said FoE/Greenpeace members Arthur and Anne Berndt. Regarding the state of the coral reefs off the Florida Keys, FoE member Dr. Phillip Dustan said, "It's tantamount to visiting Sequoia National Forest and finding 90% of the trees either dead or on the ground."

FoE, Greenpeace, and the City of Boulder view this suit as a critical first step toward compelling the Bush administration to take action against global warming, and to protect people from its dangerous effects. After the city council voted to join the lawsuit, Boulder Mayor Will Toor said, "All of the work that the city of Boulder does to maintain the quality of life for our residents will be negatively impacted by the detrimental effects of climate change. We believe that this lawsuit is one way force the federal government to start paying attention to this critical issue."

For more information, including a complete list of plaintiffs, visit www.climatelawsuit.org

WMNF Draft Plans Presented; EIS Up in Air

As expected, the four planning options developed by the US Forest Service planning staff for the White Mountain National Forest offer up a broad range of options without particulars. While the USFS has described option 2 as the strongest wilerness option, advocates have questioned this characterization and asked for clarification. Option 3 has also been read as offering the best alternative overall. Missing details in ALL the alternatives as well as the new Bush, anti-citizen planning rules are problematic — particularly for biodiversity and roadless areas. Although the December 18 deadline for comments will have passed as you read this, BE SURE to watch for announcements of Final Draft Hearings in January. Comments and inquiries to the US Forest Service should be directed to: WMNF 719 Main St. Laconia, NH 03246 Email: blevesque@fs.fed.us

Public Advocate calls for an investigation of CMP surplus lands

By Richard Fecteau, Friends of Bigelow

Arising from a proposal by Central Maine Power to lease and develop land along the boundary of the Bigelow Preserve for a commercial sporting camp, the Friends of Bigelow responded with legal research. As a result, the Public Advocate has submitted a request to the Public Utilities Commission for an investigation of utility owned surplus land.

The parcel in question, located in Dead River Township, was acquired by CMP as part of the Flagstaff Reservoir project in the 1940s. CMP was granted the power of eminent domain by Private and Special Law, 1927 Chapter 113 Section 12, for the public purpose of hydro power. The inhabitants of three villages, Flagstaff, Dead River and Bigelow Township were required to sell their real estate and move elsewhere.

Beginning in 1927, the inhabitants of the Dead River valley faced a diminished real estate market. Who would invest in land condemned to be flooded, property values could only go down as a result.The threat of eminent domain causes people to behave differently. When the condemning entity approaches such a landowner seeking a sale, the landowner necessarily feels a degree of powerlessness not felt by those with access to an open market or who do not want to sell.

After electric utility deregulation and the sale of CMP's generating assets to Florida Light & Power, CMP's surplus lands not used for power distribution were offered to the State of Maine. On September 13, 2000, CMP submitted to the Land for Maine Future Board a proposal to sell 8500 acres for $ 5.7 million. After the takeover of CMP by Energy East of New York the deal was withdrawn.

The Public Advocate, Stephen Ward and senior counsel, Eric Bryant, have prepared an eleven page brief that was delivered to the PUC on Tuesday, 11/26/02. The document includes an appendix of 88 pages. The brief asserts that;

The PUC has the authority to conduct this investigation and to issue all appropriate orders or refer the matter to the Attorney General or the Legislature.

The Dead River parcel was acquired by CMP through eminent domain or under the threat of eminent domain and should not now be commercially developed.

CMP should then be directed, by the Legislature if necessary, to put the property to a public use.

The parcel may have been in CMP's ratebase and the ratepayers may be entitled to a portion of the revenue generated by any sale or lease of the property.

Public Hearing Slated on Western Maine Corporation Ski Lodge

LURC will hold a February 12 hearing in Farmington on the commercial lodge proposed by Western Maine Corporation for Dead River township land owned by Central Maine Power. Friends of Bigelow is urging LURC to evaluate WMC's proposal in the context of WMC's plans for a western Maine hut and trail system that would traverse other unorganized towns.

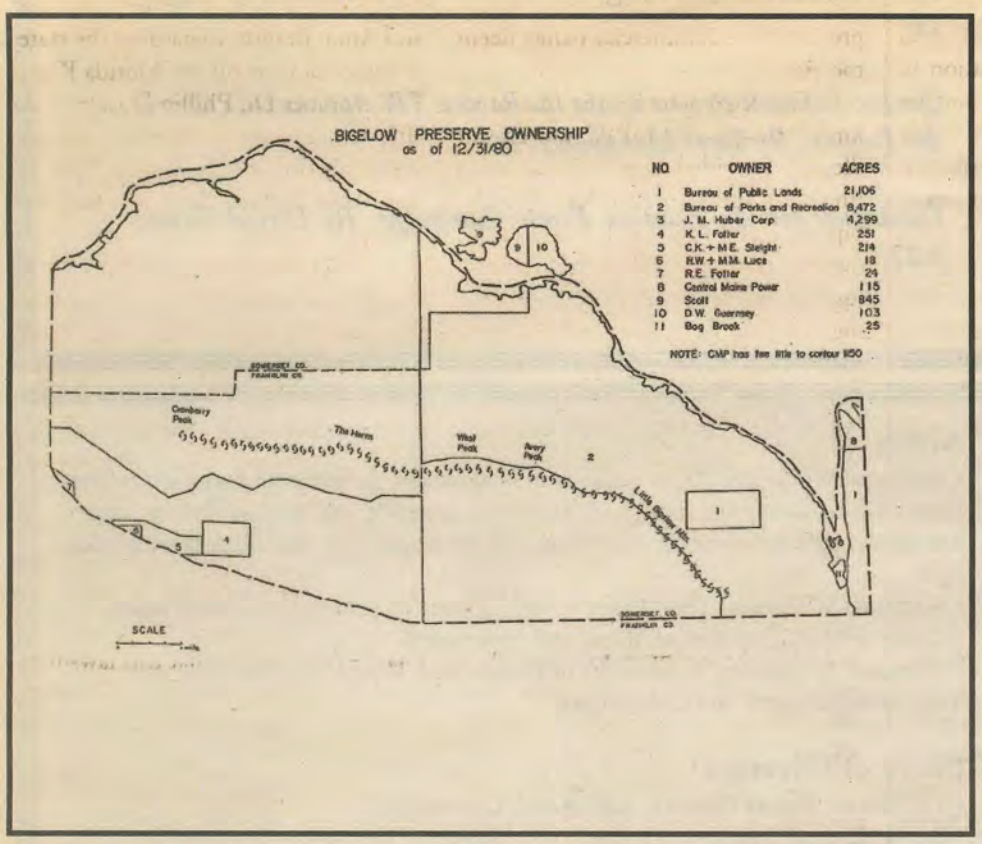
Friends of Bigelow News Release

The group that led the fight to preserve the 12-mile-long Bigelow Mountain Range requested the state Land Use Regulation Commission to hold a public hearing on an application to build a 40 bed ski lodge just outside the Bigelow Preserve in Western Maine.

The LURC board met 11/13/02 in Houlton, Me. and voted yes on a staff recommendation to hold a public hearing on an application by Western Mountain Corporation to develop a commercial lodge on Flagstaff Lake. The site, located in Dead River Township, was acquired by Central Maine Power Co. prior to flooding the towns of Flagstaff, Dead River and Bigelow Plantation for the Flagstaff reservoir.

In 1976, the voters of Maine created the Bigelow Preserve by referendum that directed the Department of Conservation to acquire " generally all land in Wyman and North One Half township north of Stratton Brook and Stratton Brook Pond, and all land in Dead River township south and east of Flagstaff Lake." This includes site WMC/CMP intend to develop.

Friends of Bigelow believe it is not legal for WMC/CMP to build a lodge at this location. The Act that created the Bigelow Preserve states this land is to be part of the Preserve and no commercial development is allowed within the Preserve.



The Bigelow Preserve Management Plan addresses private lots contained within the Preserve boundaries by noting " There is always the potential that a significant conflict between the private owners and the Preserve management could arise. If it does, the Department will consider ways of resolving such conflicts, including acquisition of the outstanding interests."

In September of 2000, CMP proposed to sell its remaining 900 acres of land around Flagstaff Lake and Dead River Township to the State. After the takeover of CMP by Energy East of New York, the proposal was withdrawn. The Department of Conservation has not since attempted to complete this area of the Preserve that is now under threat of development.

Earlier this year, Friends of Bigelow came out strongly in opposition to any commercial use of the 40,000-acre wild preserve, which includes 33.4 miles of the Appalachian Trail system. WMC as part of its commercial scheme had planned to groom a twelve foot wide corridor through the Preserve connecting its proposed publicly financed $500,000 lodges located just outside the Preserve boundaries.

Last March the Department of Conservation received negative public input on the WMC proposal. Eighty five percent of written comment was opposed to WMC's plans, yet the Department continues to spend thousands of dollars worth of staff time on this ill fated scheme.

This development would not be consistent with the spirit of the Bigelow vote, which prevented a giant downhill ski resort from being built on the mountain. This area is one of the most beautiful wild regions in the state. It is part of our heritage as Maine citizens. It should not be given over 26 years after the referendum, to commercial interests.

Friends of Bigelow is also asking LURC to evaluate the entire Western Mountain Corporation proposal, before they decide to allow any one lodge to be built. This commercial cross-country ski trail and lodge system would extend throughout Western Maine and impact several areas of the Unorganized Territory, which LURC is mandated to protect.

At a projected cost of several million dollars the WMC lodges will not be able to support both the cost of debt service and operating costs. LURC should consider what future use this development might serve in case of WMC insolvency.

Friends of Bigelow urges all interested citizens to voice their concerns about this proposed development to Sara L. Brusila at LURC, 22 State House Station, Augusta, Maine, 04333-0022.

For more information, contact:
Dick Fecteau, Chairman
Friends of Bigelow
284 Ramsdell Rd.
Farmington, Me. 04938
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Groups Send Letter to Forest Service Supervisors

A number of regional and grassroots environmental groups have signed on to a letter sent to Paul Brewster and Tom Wagner, Forest Supervisors for the Green Mountain/Finger Lakes and White Mountain National Forests urging that they exercise their option to keep to the existing planning process regulations. Both White and Green Mountain National Forests are in the draft stages of the 10 year plans.

The letter read in part: "We are deeply troubled by many aspects of the planning regulations proposed recently by the Bush Administration and worry about the effects of applying these regulations on New England's national forests. The proposed regulations weaken environmental protection, reduce the role of science in planning, and, most troubling of all, they make citizen participation in planning essentially meaningless.

We oppose strongly the many ways that the proposed planning regulations deprive citizens of their right to understand and comment knowledgeably on national forest management decisions."

LANDSCAPE SCALE CONSERVATION IN THE NORTHERN APPALACHIAN/ACADIAN FOREST

A Special Section of the Northern Forest Forum

The following pages offer a cross-sectional glimpse of landscape scale conservation projects in the greater region. They range from land preservation to sustainable forestry efforts and embrace predator population conservation and habitat protection. Some are on-the-ground and others offer a mountaintop vision of what the next decades may bring. By looking at such efforts from a landscape perspective, however, the need for joint actions is clear.

These project summaries were kindly offered to the readers of ***The Northern Forest Forum*** *by many participants in the ANEW conference of this past November, described by Emily Bateson on the page opposite. Several were also represented at an October meeting of the Canadian Parks and Wilderness Society held in Wentworth, Nova Scotia. Others have crept in from the underbrush, as it were. The* ***Forum*** *is grateful to all who have offered up their work for public consumption.*

Thinking — and acting — on a landscape level does require and will promote changes in public consciousness. We need to recognize that we share and are imbedded within natural systems more than we are separated by political bounds. Most fundamentally, the fact that these systems are living makes it imperative that we cooperate in their defense.

Contents

A Y2Y Conservation Initiative for the Northern Appalachians?

By Emily M. Bateson

In November, 2002, ANEW (A Network for Eastern Wilderness) convened a two-day meeting of approximately 40 conservation scientists and policy advocates in Montreal to discuss landscape scale conservation in the Northern Appalachian-Adirondack region of the U.S. and Canada. The meeting was also co-sponsored by the EJLB Foundation, the Henry P. Kendall Foundation, and the Fine Family Foundation.

The meeting was a follow-up to a smaller gathering hosted by the EJLB Foundation and the Henry P. Kendall Foundation the previous year, and also culminated three years of discussions under the ANEW umbrella among numerous organizations interested in working cooperatively together to protect large, linked wild landscapes across the region while we still have this wondrous chance.

In order to create networks of linked wild areas, as dictated by the growing body of conservation science, we must first build networks of people and organizations dedicated to this goal. It is only through working more closely together that we will be able to protect and restore the ecological health of the vast and vital Northern Appalachian ecosystem, so that it now and forever operates as an interrelated and healthy web of life, fully supporting and enriching the human and natural communities that reside within it.

Our region remains a bright spot of ecological optimism for protecting, restoring, and connecting our rich ecological heritage.

The November meeting included key presentations by Dr. Mark Anderson on The Nature Conservancy's cross-border ecoregional planning progress; Dr. Graham Forbes of the University of New Brunswick on habitat protection and core reserves; Dr. Justina Ray of the Wildlife Conservation Society on Canada Lynx; Jym St. Pierre of RESTORE: The North Woods on the Maine Woods National Park; Bill Ginn on TNC's recent land acquisition and easement protection; Terri Monahan of the Ruiter Valley Land Trust and Dr. Louise Gratton of Nature Conservancy Canada on the Appalachian Corridor Project; and Dr. Karen Beazley of Dalhousie University on Nova Scotia landscape-scale conservation planning efforts.

The presentations and discussions reaffirmed that all wilderness is not out west; that all biodiversity is not in the tropics; and that our region remains a bright spot of ecological optimism for protecting, restoring, and connecting our rich ecological heritage.

In the northern reaches of these eastern wilds reside caribou and wolves, Canada lynx and pine marten, cougar and coyote. Moose have wondered down from Canada and across from Vermont, coming back to repopulate the Adirondacks where they hadn't been seen in decades. Neotropical migratory birds find vital haven in these vast woods.

Shortly after the close of the November meeting, newspapers reported that a small pack of wolves might be living on the south side of the St. Lawrence River, "within about 20 miles of the US border," and that "if true, it's almost certain the wolves or their offspring will find their way to the forests of New England." These are exciting days for protection and restoration of eastern forests and the species that depend on them.

The meeting discussions also highlighted the increasing threats to regional habitat, and the need to focus on: more and larger core reserve protection, cross boundary ecosystem processes and species movement, climate change, and high quality, permanent protection of the habitat connections being steadily eroded crossing the U.S./Canadian border, across to Nova Scotia, and elsewhere.

A central focus of the meeting was to provide opportunity to discuss at length the potential benefits of 1) creating a recognizable identity for the Northern Appalachians as an important ecological region (including a name that resonates with the broader public); and 2) working more closely together to protect this vital ecosystem.

Overall, participants agreed that there would be substantial benefits to creating a recognizable regional identity for the Northern Appalachian-Adirondack region and working more closely together within this ecological framework and joint vision, somewhere along the continuum from broad networking to the possibility of crafting a collective action plan with joint strategies for protecting and restoring ecological integrity.

Participants noted that there is little public understanding of the ecological region; it is thus essential to provide this ecological backdrop and vision and "cement it in the public imagination." If we are to restore ecological integrity to the region, people need to see it as a vital ecological system, with real needs, threats, values, and opportunities.

There is currently no common ecological vocabulary or vision to describe this interrelated area to different audiences and catch their attention and stir their imagination. Our work is to create them.

Education must include advancing beyond common misconceptions such as the belief that there is "no wilderness in the east," that "all the biodiversity is in the tropics," and even that "there is a blank space above Maine." People need to see the potential of protecting and restoring habitat for climate change; movement of lynx, wolf, and caribou; forest health; and other. Big ideas unite people and build support in myriad (sometimes unforeseen) ways. The Northern Appalachians need an identity; a notion of place and ecological richness that all can embrace.

Participants focused on the numerous substantive benefits that a shared regional vision would help achieve. Current opportunities to protect both core reserves and habitat connectivity will not last forever, and tremendous permanent loss will result if opportunities are missed in part because of a collective failure to articulate the region's ecological values and escalating threats.

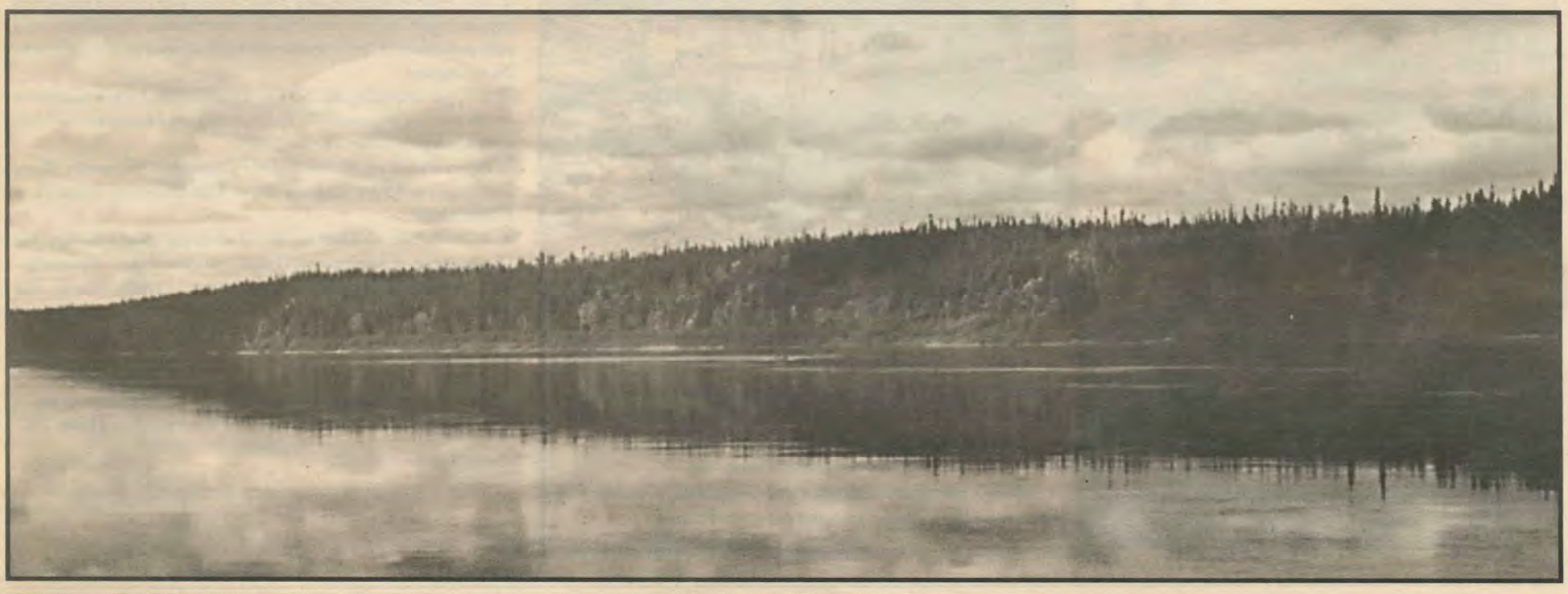
To seize these opportunities, the conservation and science communities need to "connect the dots" between ongoing wilderness campaigns, research agendas, mapping projects, core reserve acquisitions, and timberland easement projects. Individual initiatives would benefit all from being put within the context of an overarching regional vision and action plan for ecological integrity.

Individual project goals would be strengthened as a result, and specific initiatives would get more widespread support once explained within a regional ecological context. New initiatives could be launched to fill the identified conservation gaps. Progress could be tangibly measured against collective regional goals.

Participants noted the myriad substantive benefits that have accrued from such high profile regional initiatives such as the Yellowstone to Yukon (Y2Y) Initiative and the Southern Utah Wilderness Coalition in terms of collaborative work, raised public awareness, additional resources, efficient goal setting, and positive results. The Northern Appalachians too would benefit from an ecological identity, shared conservation vision, and purposeful conservation network.

It is early, and the form that this network will take is by no means certain. But participants are working on some preliminary projects, and plan to meet again in six months to more fully define their shared mission and goals, and to identify tangible opportunities for working together to achieve them. Gaspé to Greylock? Marcy to the Maritimes? Stay tuned.

Forest Watch, the New Brunswick Protected Natural Areas Coalition, and the Wildlands Project comprise the executive committee of ANEW, a cross-boundary initiative that involves more than 20 founding members and a growing list serve network. For further information about this evolving effort to create a network of people across the Northern Appalachian region dedicated to ecological integrity and connected, wild landscapes, please contact Emily Bateson at embateson@aol.com.



Using History To Identify Opportunities for Conservation
A New England Example

The study of landscape history in New England suggests a three part conservation strategy. Culturally derived patterns of biodiversity, the resilience of the natural forest and the imperative to produce what we consume are three aspects of landscape conservation in the region today.

by David Foster

How can we use an historical perspective to understand the context and directions for conservation and to devise a regional plan that fits this landscape history? New England affords an example of a landscape with multiple histories and current directions. In large part as an outgrowth of its dynamic but geographically varied cultural history, there are at least three major conservation voices that are easily heard in New England today: wildland preservation, cultural restoration, and intensive natural resource use. Although these different voices and the directions that they lead may seem incompatible they are easily understood within the historical context of the land. In fact, using an understanding of landscape history and its geographical variation it should be possible and advantageous to accommodate all three directions for conservation and forge a broad vision and coordinated strategy for New England's future.

The wildland orientation arises from long-held American appreciation for wilderness and a simple historical fact: despite a lengthy history of intense human activity, immense tracts of northern Maine and the mountains of Vermont and New Hampshire have remained uninhabited, and even larger areas of these states and southern New England are forested and becoming wilder with time. (1) As forest areas in southern New England have coalesced and begun to mature and as the human population has concentrated in suburban areas, vast semi-natural forests have emerged that offer an unprecedented opportunity for preservation and the enhancement of natural characteristics.

Many of these areas are rather unexciting from the perspective of biodiversity: they tend to harbor few species and even fewer rare or threatened species. However, as native wildlife have reappeared as the land recovered from 300 years of persecution and deforestation, the value of these extensive forestlands has become clear. These areas offer the potential to support natural ecosystem processes and wide-ranging mammals, large birds, and anadromous fish that require wide expanses, clear water, and minimal fragmentation by human land use. Our historical studies admonish us not to conceive of these landscapes as reverting to primeval conditions or representing true wilderness. Nonetheless, these lands, ecosystems, plants and wildlife are assuming an increasingly natural appearance and function through time. Consequently, they have the potential to support most of the major deep woods species and processes that New England has experienced in the past. It is this potential that drives such movements as the effort to establish a 4 million-acre National Park in Maine.

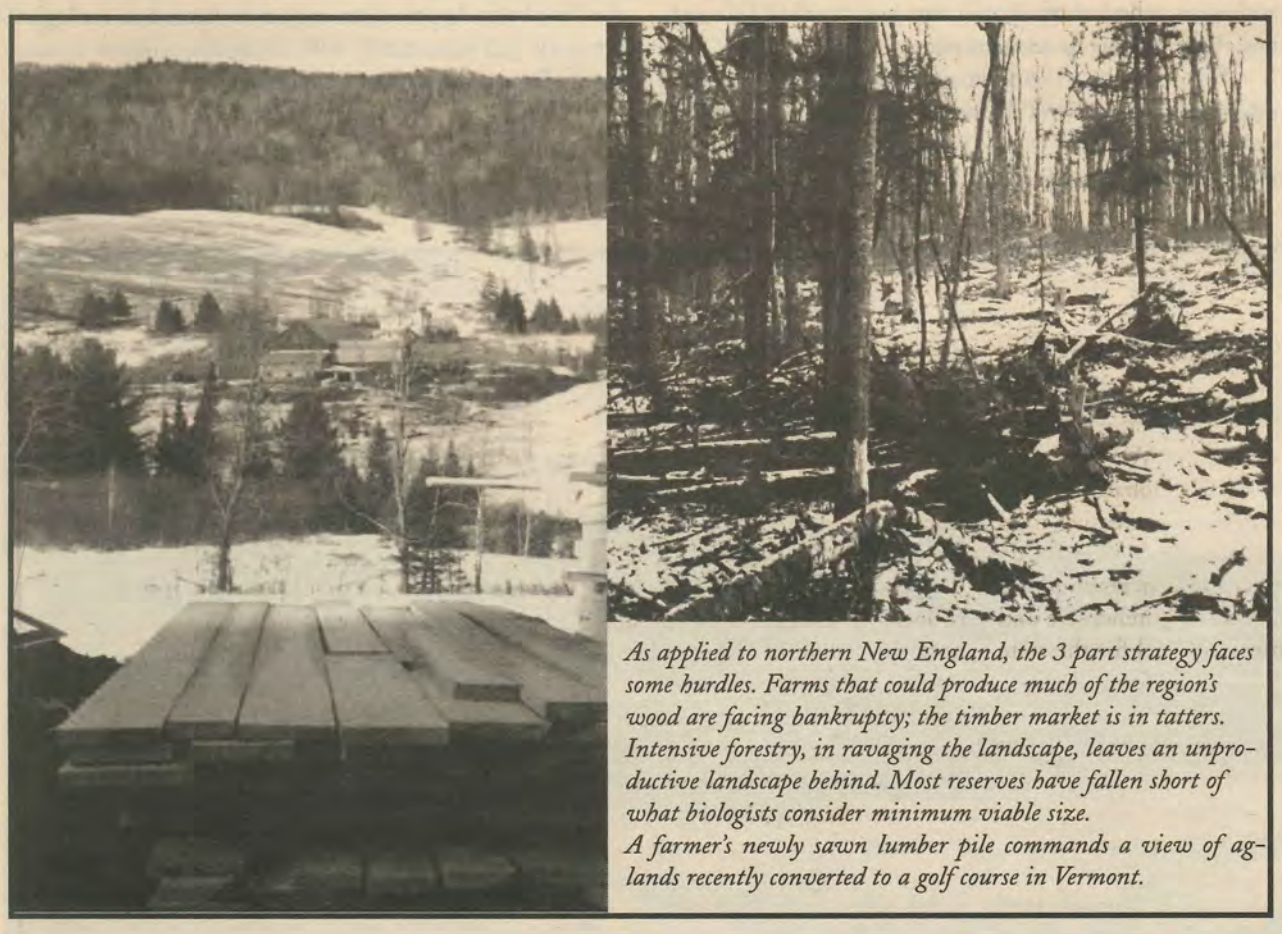
The historical resurgence of forest also yields another opportunity, one that some would call a moral imperative, to derive more natural resources from the New England landscape. (2) The argument for conservation (and active use) of wood resources from the Northeastern U.S. has found recent environmental support in the global analysis of natural resource utilization. History confirms that New England forests recover rapidly from intense human impact. Currently this region supports immense tracts of maturing forest lands precisely because most of its resources come from other parts of the earth. In general the livelihood of most New Englanders is completely separated from the land. Consequently, the large and prosperous population of this region, and indeed the Eastern U.S., is heavily subsidized by global resources. With regard to wood products, the result is that a variety of external sources — southeastern U.S., the Pacific Northwest, Canada, Malaysia, Brazil and other tropical sources — are supplying materials to New England, where the forests continue to mature. The environmental argument posits that second-growth forests of the Northeast are a resilient source of wood, that increasing local supply might relieve some pressure on more sensitive, oftentimes old-growth sources, and that this would place the responsibility for natural resource extraction under the local eye of an environmentally conscious public.

Although much of the attention on wood production in New England is focussed on the large industrial forest lands of Maine, the opportunities for sustainable forestry extend across the entire region to include a diverse range of products and forest types. (3) Not only do extensive woodlands cover the rural areas of central and southern New England but the suburbs are heavily forested as well. In these populated areas, the logistics of coordinating many private landowners, agencies, and municipalities are immense, however they also present interesting opportunities to use approaches like community-based forestry to manage and to reconnect a large suburban population with the land and the responsibilities of resource utilization. Concentrating logging on the more fragmented areas also enables retention of contiguous blocks of unmanaged wildlands.

A final direction in conservation that emerges from New England's history is the effort to conserve the species and to maintain biological and aesthetic elements of the region's cultural history. Much of this activity focuses on grasslands, shrublands, and early successional forests — habitats that are disappearing rapidly, that often-times form a fine-grained landscape mosaic, and that support a high diversity of organisms and many unusual and highly valued species. Although many of these species are probably native to the eastern U.S., they maintained low populations in the landscape of the Woodland Indians as their habitats — grassy freshwater meadows, coastal scrub, abandoned Indian fields and burnings — were uncommon. (4) All of this changed with European arrival and disturbance by fire, cutting, and grazing animals. The proliferation of lowland and upland pastures, hayfields, meadows, and scrublands supported a major increase in the plants and animals of open and successional landscapes. Today, many openland species are in jeopardy due to the predominance of the even-aged maturing forest, the conversion of sandplains, wetlands and coastal areas to industrial and residential uses, and the loss of native habitat such as prairies elsewhere in North America. These include important though under-appreciated insects including many butterflies, moths and dragonflies, birds such as bobolinks, meadowlarks, upland sandpipers and grasshopper sparrows, and some better known animals such as bog turtles, New England cottontails, and woodcock.

Efforts to protect and restore populations of these species have been diverse although they oftentimes emphasize "natural" processes like fire under the guise of restoring "native" habitat. Recognition of the cultural origins of these habitats based on sound historical studies may encourage the use of other approaches including some traditional land management activities, such as grazing, intense timber cutting, and mowing.

Given the size and diversity of the New England landscape it should be possible, and perhaps desirable, to attempt to accommodate all three directions for conservation. Success in achieving this will obviously require a regional vision and planning, for example with large wildlands surrounded by extensive managed forests and separated from the open, cultural landscapes and areas of intensive human activity. But, it will also require recognizing that the history of the land enables such diverse approaches to be accommodated. That New England retains upland sandpipers and bobolinks while the populations of moose and bear are increasing is a consequence of history. If it is to continue to support all groups, lessons from ecological history will need to be applied.



As applied to northern New England, the 3 part strategy faces some hurdles. Farms that could produce much of the region's wood are facing bankruptcy; the timber market is in tatters. Intensive forestry, in ravaging the landscape, leaves an unproductive landscape behind. Most reserves have fallen short of what biologists consider minimum viable size.
A farmer's newly sawn lumber pile commands a view of aglands recently converted to a golf course in Vermont.

Notes

1. Any issue of the *Northern Forest Forum* will provide numerous articles regarding the potential for preservation of wildlands and reintroduction of large mammals such as cougar and wolf into New England.
2. See, for example, M. Berlik, *The illusion of conservation: an environmental argument for forest cutting in Massachusetts.* Harvard College Honors Thesis (1999).
3. Brian Donahue, *Reclaiming the Commons: Community Farms and Forests in a New England Town.* Yale University Press, New Haven (2000).
4. Robert Askins, *Restoring North America's Birds: Ecology and Conservation of Native and Agricultural Landscapes.* Massachusetts Audubon Society, Lincoln, Mass. (1997). Foster and Motzkin, Ecology and conservation in the cultural landscape of New England: lessons from nature's history. *Northeast Naturalist.* 5 (1998) 111-126.

Excerpted from ***Conservation Lessons & Challenges from Ecological History****, first printed in* ***Forest History Today****, Fall 2000.*

Two Forests, Two Futures
The Acadian Forest

An Acadian Forest campaign directs itself to consciousness, consumption and priority

By Martin Willison

The world demand for "forest products" is such that the world's forests cannot meet the demand placed on them, and so forests are being liquidated to feed the human consumption machine. In this unsustainable rush to the end, trees that are essential parts of living ecosystems are reduced to "resources". The resultant wood becomes capital for some people, and sources of livelihood for others.

North American forests are equally caught up in the rush to liquidation. Louis Belanger, a professor of forestry at Laval University in Quebec wrote recently in the newspaper ***Le Soleil*** that the boreal softwood forest of Quebec is being over-harvested by 15% more than it can sustain — and the government knows it. A large part of North America's primeval boreal forest is in Quebec. This forest is as wild as can be found, and the Quebec forest industry is not notably aggressive. If these forests are being liquidated, can we imagine that any forest is immune?

The global forest liquidation scenario is playing out too slowly for it to be evident for all to see. Human time scales tend to be too short. But judged against the time scale of trees, there is no doubt about it. A great Eastern hemlock in Nova Scotia will live for 400 years or more. For such a tree, the European conquest of North America began when its parent was alive. At that time, the primeval forest was supreme. As a young one, it watched the axe-wielding pioneers move into the Acadian forest seeking the finest trees for ships' masts in the late 1700s. It endured the land clearance fires of the nineteenth century, and is watching now as the industrial machine reduces the forest to uniformly young trees that are cropped on a rotational basis. The industrial management plan is simple: all of the forest is a resource to be cropped.

The softwood-dominated boreal forest stretches as a band all around the world's northern latitudes. This forest is under attack just now, but until recently it had been mostly wild. In wetter regions to its south lie patches of hardwood-dominated forests. Over thousands of years, the several types of hardwood forests have been much reduced to make way for human settlements and tilled fields, such that they are now entirely fragmented.

There is no clearly defined boundary between the boreal softwoods and the mid-latitude hardwoods. Instead, they grade gently from one to the other, in regions described as "transitional forest types". One of the most exceptional of these transitional forests is the Acadian Forest. It lies in a broad arc that runs roughly from the Adirondacks to southern Nova Scotia, taking in all of the three Maritime Provinces of Canada. In the United States, the Acadian Forest is called the "Northern Appalachian Forest". Just as the Acadian Forest is part way between a hardwood and a softwood forest, so its status is part way between wholeness and fragmentation. Most of it is still there, but it has endured several rounds of assaults.

The great Eastern hemlock that is watching over its forest in Nova Scotia is sitting in a "protected area". If it had not been there, it would have gone to the saw mill long ago. Although there are many protected areas throughout the Acadian forest zone, they are small and isolated. Nova Scotia has the highest level of outright protection of its wild landscapes, but less than 9% is secure according to public policy. Elsewhere, the liquidation machine is busily at work feeding pulp mills, saw mills, field clearance, tree farms, road construction. If the forest isn't being actively cut down, then someone is making plans to ensure that it is.

A few small protected patches do not make a forest. In order to protect the integrity of the Acadian Forest and all the types of creatures that depend on it, we need to keep much more than 9% intact. No-one knows how much is necessary to maintain this distinctive element of biodiversity, though conservation biologists have estimated that perhaps half of what used to exist would be enough. This estimate does not include a large safety margin — even at that, we must exercise caution in the management of the resources that we assume dominion over.

> *The global forest liquidation scenario is playing out too slowly for it to be evident for all to see. Human time scales tend to be too short. But judged against the time scale of trees, there is no doubt about it.*

There is no moral or logical justification for not seeking to maintain the distinctive biodiversity of the region in which we live. Indeed, there is a clear moral imperative to do so. Human beings have developed the power to change Earth's life system, without having the knowledge to predict the outcome of these changes. It's unlikely that the outcome will be beneficial either to ourselves or to other creatures, as shown by the accelerating pace of extinction in the world. Indeed, we can reasonably predict our own demise as a species should the current course not change radically. For this reason, we have a moral responsibility to seek to protect the integrity of the Acadian Forest. The issue is not whether we should, but how we should.

The Nova Scotia chapter of the Canadian Parks and Wilderness Society decided to embark on a campaign for the Acadian Forest simply because the national CPAWS organization had begun a campaign for better protection of the boreal forest — a Canadian emblem. We had been invited to join this campaign, but our region isn't "boreal". When we thought about this, we realized that no-one was beating a drum about the beauty and wholeness of the Acadian Forest. In each of the States and Provinces of the region there were organizations and individuals who were moving to a similar rhythm, but there was a lack of synergy, in the Maritimes at least.

Martin Willison eyes a Queen Triggerfish captured on Brown's Bank, July 2002 by fisherman Terrance Nickerson. A tropical fish, QT's are extremely rare in the temperate waters off Canada. Photo by Gordon Smith.

The Acadian Forest campaign is envisioned to be as diverse as the Acadian Forest itself, held together by a sense that we must collectively care for "our" forest. We share this forest with all the creatures that live in our region, and so we humans do not have an independent right to liquidate it.

The Acadian Forest campaign cannot be something that will happen in a couple of years and then be done. It cannot be achieved by following a business-as-usual agenda, with conservation added on as an afterthought. We need to transform our economy from one that is simply human-centered to one that takes account of the needs of the greater living community of the forest region. We need to design and implement a protected areas system that is scaled for the Acadian Forest. We need to find ways to utilize forest resources so that the forest ecosystem is able to absorb the assaults and injuries without cascades of degradation being initiated. These challenges are fundamental, but we cannot shy away from them, for to do so would be to settle for the loss of something that is good.

Martin Willison is the Canadian Parks and Wilderness Society Nova Scotia chapter president

The Illusion of Preservation

An Argument to Reduce Consumption & Increase Production of Wood Domestically

The Illusion of Preservation: ***A Global Environmental Argument for the Local Production of Natural Resources*** by Mary M. Berlik, David B. Kittredge and David R. Foster. Harvard Forest Paper No. 26. Petersham, MA.

A compelling argument: why preserve our own forests in large wilderness areas if the net effect is only to increase forest destruction elsewhere? We use it, we should produce it. The argument unites a spectrum of philosophies: globalizing one-worlders and localizing village people. A mix of motives is evident: increasing local production can head in contradictory directions.

A clear articulation of values and goals is necessary if policies of increasing local production are to achieve intentions. Moreover, policies must be comprehensive and directed to a common end. A new Harvard Forest paper offers a model for the state of Massachusetts that evaluates strategies for decreasing — globally — forest destruction and its transfer from one area to the other.

Chiefly, the paper points to the need for decreasing paper and lumber consumption in the United States, to at least European levels. We consume 2.5 times European and 3.5 times world averages. Recycling and decreasing home size are suggested; I might throw in curbing the contagious urbanite appetite for newspapers, especially the behemoth Sunday ***New York Times***.

Population increase however poses the same built-in increase of demand that dogs our effort to cut energy consumption. Importation of wood threatens forests of British Columbia and Siberia and the tropics that happen to be ecologically more sensitive or distinct than ours. Preservation of large forested habitats domestically remains a worthy goal. The paper concludes therefore that augmented local production in under-harvested/ over-consuming places like Massachusetts should be part of our program.

The paper does not offer a sorely needed analysis of the ECONOMIC obstacles to local production, focusing instead on preservationist attitudes of the public. We note the failure of many noble local production efforts in northern New England, macroeconomic pressures, chief of which is that production goes to the regions that value humanity (labor) and environment (fiber) most cheaply. Massachusetts may be growing bigger timber after decades of benign neglect, but much of northern New England and the Maritime is in the late stages of being wrung dry of fiber and of hope for a sustainable forestry.

In agriculture, the fishery, energy, as well as forestry, we have few models for fostering integration of economy and ecology. Quite frankly, our politics offers little leadership for an integration of ecological and economic sanity. Papers like these may help; would that they were printed on domestically produced, recycled fiber.

Vermont Biodiversity Project

The Vermont Biodiversity Project is completing the first phase of its work and will be conveying information gathered to towns and land trusts. The project has endorsed an ecological reserve system that includes unmanaged core areas.

The Vermont Biodiversity Project (VBP) is a "landscape-based approach to identifying priorities for the conservation of biological diversity in Vermont." The Vermont Biodiversity Project is a collaboration process of agencies and organizations in the state that have the management of natural resources as a central part of their mission. VBP promotes a system of ecological reserves throughout the state to ensure long-term viability of all native species and natural communities in Vermont within their natural ranges. The goal is to protect all levels of biological organization—including genetic, species, and natural community levels—and the interactions among them, using the natural dynamics of biological systems as guidelines.

The VBP Steering Committee includes representatives from the Vermont Agency of Natural Resources (ANR) (including both the Department of Fish and Wildlife and Department of Forests, Parks, and Recreation), The Nature Conservancy (TNC), Vermont Land Trust (VLT), US Fish and Wildlife Service, USDA Forest Service, the US Environmental Protection Agency, the Natural Resources Conservation Service, University of Vermont, Middlebury College, the Orton Family Foundation, and the National Wildlife Federation.

In 1995, two separate processes converged to create the VBP. First, the idea of the VBP grew out of the work of the Northern Forest Council and their recommendation that "through the use of scientific assessment and analysis, ecological reserves should be created as one component of state public land acquisition and management programs." As well, TNC, VLT, ANR, USFS, and the USFWS were either identifying or refining their land conservation priorities or reevaluating land management plans. It was recognized that the work of each group could contribute more to conservation efforts statewide if the individual efforts were "considered in the context of a comprehensive description of priority conservation areas."

A Recommendation for Core Reserves

VBP's conservation goals include three levels of biological diversity: enduring features, natural communities, and native species. To meet the goals of all three levels of biodiversity protection, VBP recommends an ecological reserve system for Vermont "that includes core reserves where natural processes can work over large areas without human interference; natural areas where particular natural communities and species are protected on smaller parcels; stewardship lands where logging, farming, and other human activities compatible with certain biodiversity values can be pursued; and connecting lands to hold the reserve system together" (Thompson 2002).

Phase One of the Vermont Biodiversity Project included the following steps:

To identify the important biodiversity resources in the state,

To develop an aquatic community classification system,

To develop a physical landscape classification system, and

To conduct surveys to assess presettlement forests.

This process was meant to identify the range of natural biodiversity across the state, regardless of current conditions or human presence. Issues of condition will be superimposed later in Phase Two of the project.

Goals Specific to Each Level of Biodiversity

The technical working group gathered background information for the creation of a comprehensive GIS mapping project. An aquatic working group headed by Rich Langdon from DEC pulled together twenty years of site-specific, inventory-intensive data to develop a classification system for aquatic resources in Vermont. Charlie Cogbill, an old-growth ecologist, conducted the study of presettlement forest surveys, and biodiversity in Vermont was assessed using Natural Heritage data for species and natural communities.

As a move towards the completion of Phase One, Liz Thompson has written a report for the lay public summarizing the Vermont Biodiversity Project's mission, methods, findings, and recommendations thus far. For each of the three levels of biodiversity mentioned above, the report lays out conservation goals, past conservation successes, and needs for each.

For enduring features, the goal is "to conserve a full representation of the mountains, cliffs, clayplains, and moist hollows" of Vermont. The need is to protect more land in the under-represented regions of the state.

> *"For native species, the goal is 'to conserve all native plants and animals in such a manner as to sustain their long-term viability.'"*

For natural communities, the goal is "to conserve representative examples of all Vermont's upland, wetland, and aquatic natural communities." The need is to protect and restore more Valley Clayplain Forest and to protect water quality across the state by controlling pollution and nuisance species.

For native species, the goal is "to conserve all native plants and animals in such a manner as to sustain their long-term viability." Certain species, like the white-throated sparrow and the calypso orchid, are declining for unknown reasons and are in need of special research and conservation attention.

Future Work

The Vermont Biodiversity Project is now preparing to package the information gathered in Phase I so that it is easily understood and applied to on-the-ground conservation problems. They hope to hire a conservation planner to take this information to towns and local land trusts who need both the data and assistance in using it.

Physiographic provinces of Vermont, one of the data layers in the comprehensive inventory of biodiversity in the state.

Vermont Biodiversity Project

- Partners from universities, non-profit conservation groups, federal and state agencies.
- Completed inventory of Vermont's physical and biological resources.
- Created framework for developing plan to conserve and restore Vermont's biodiversity.

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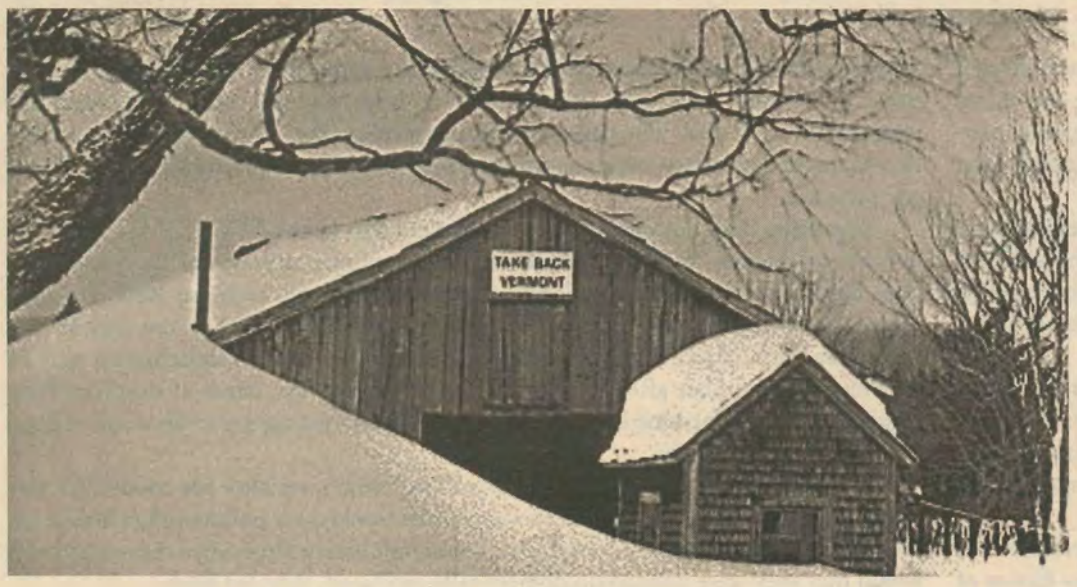


New Hampshire Ecological Reserves

The newly named Living Legacy Project seeks to provide New Hampshire land managers the information they need to protect the state's biodiversity. The project offers criteria for reserve design.

The New Hampshire Living Legacy Project (previously known as the Ecological Reserve System Project) is a statewide partnership of private conservation organizations, state natural resource agencies, scientists, land managers, and a diverse group of large and small landowners. It was formed to address opportunities for conservation of biodiversity in the state. Ellen Snyder of the University of New Hampshire Cooperative Extension currently coordinates the project.

In 1994, the Northern Forest Lands Council submitted to the governors of NH, ME, VT, and NY its report "Finding Common Ground" which outlined recommendations for supporting the traditional patterns of land ownership and uses of large forest areas in the Northern Forest. The report was the culmination of six years of research and public input and highlighted the importance of protecting biodiversity. It recommended that states "develop a process to conserve and enhance biodiversity across the landscape" and that the state conservation agencies take the lead in carrying out these actions.

In 1995, in response to these recommendations, the New Hampshire State Forester and the Director of New Hampshire Fish and Game established the Ecological Reserves System Project and appointed a 27-person steering committee to coordinate all aspects of the project's planning process. The steering committee's mission was to assess the status of biodiversity in the state and the extent to which it is protected under the current system, to provide a blue-print for the selection, establishment, and management of a reserve system, to ensure representation in the planning process, and to disseminate findings. The project focuses on balancing biodiversity values with economics and timber values. They are socially, ecologically, and economically driven.

In 1996, the steering committee commissioned a Scientific Advisory Group (SAG) to conduct a biodiversity assessment, evaluate the current system of conservation lands, and outline principles that should be incorporated into a blueprint for an ecological reserve system. This assessment was completed in June 1998. It concluded that portions of the biodiversity of NH, at the species, natural community, and landscape levels are threatened by incompatible uses and development, and that the current system of conservation lands in the state is not sufficient to protect biodiversity at its current levels. The Steering Committee incorporated the SAG findings into the 1998 publication Protecting NH's Living Legacy: a blueprint for biodiversity conservation.

From 1998–2000, ERSP partners worked with others to urge the New Hampshire Legislature to establish and fund a new land conservation program, the Land and Community Heritage Investment Program (LCHIP). These efforts resulted in funding for LCHIP and recognition that ecological values, among others, are part of the state's heritage worth protecting through LCHIP.

Since 2000, the Project Coordinator and Core Team have moved the ERSP through a refinement of the scientific criteria for identifying areas of greatest ecological value and a pilot phase to test and evaluate the criteria and project principles. Project partners unveiled a new name in May 2002 – NH Living Legacy Project (LLP). The new name more fully represents the Project mission: to establish and support a well-coordinated, comprehensive system of public and private lands voluntarily dedicated to protecting the full spectrum of biological diversity in the state. The LLP has the following six goals to help achieve its mission:

Guide land protection and public and private investment in biodiversity conservation by fostering the development of new conservation tools (e.g., statewide ecological assessment) and by sustaining and enhancing existing programs (e.g., LCHIP).

Measure and acknowledge our success in conserving biodiversity by working with state agencies to develop and sustain a cost-effective, practical tracking mechanism.

Enhance the capacity for NH's natural resource agencies to conduct field inventories and research and to manage the data to make it more useful and available for conservation planning.

Increase public understanding of the values of biodiversity and opportunities for conserving these values.

Continue the LLP as an effort based on and integrated into existing programs, agencies, and conservation lands.

Assess the impacts of particular land uses and activities on biodiversity and assess the impacts of biodiversity conservation on particular land uses.

The NH Living Legacy Project works within the framework of existing state programs, agencies, and private conservation groups. One goal is to foster and maintain extensive and productive cooperation among public agencies, private conservation organizations, and individual landowners. Participation by private landowners is voluntary. The program strives to conceptually change the way protected lands are established and managed in New Hampshire by providing greater access to statewide scientific information to all groups involved in land use decision making. It also aims to create an integrated system of lands that will protect as many viable rare species, exemplary natural communities, and critical wildlife areas as possible.

Reserve Design

The Scientific Advisory Group developed scientific principles for the design of an ecological reserve system. A fundamental design concept was of an integrated system of reserves that would be managed as a whole, to provide "comprehensive representation of New Hampshire's biodiversity." Criteria from the 1998 blueprint to assess areas for inclusion in a system of ecological reserves included the following questions:

Are there globally rare or state-rare species or natural communities?

Does the area have high physiographic or natural community diversity?

Does the area support exemplary examples of common natural community types?

Does the area support critical wildlife habitat?

Are rare features likely to be viable over the long-term?

Is the area within or adjacent to a core forest area that has the size and shape needed to effectively buffer the area against incompatible human disturbances?

Does the area expand or connect existing conservation lands?

Does the area contain features of biodiversity and ecosystem types that are under-represented in the current?

> *"...an integrated system of lands that will protect as many viable rare species, exemplary natural communities, and critical wildlife areas as possible."*

Future Work

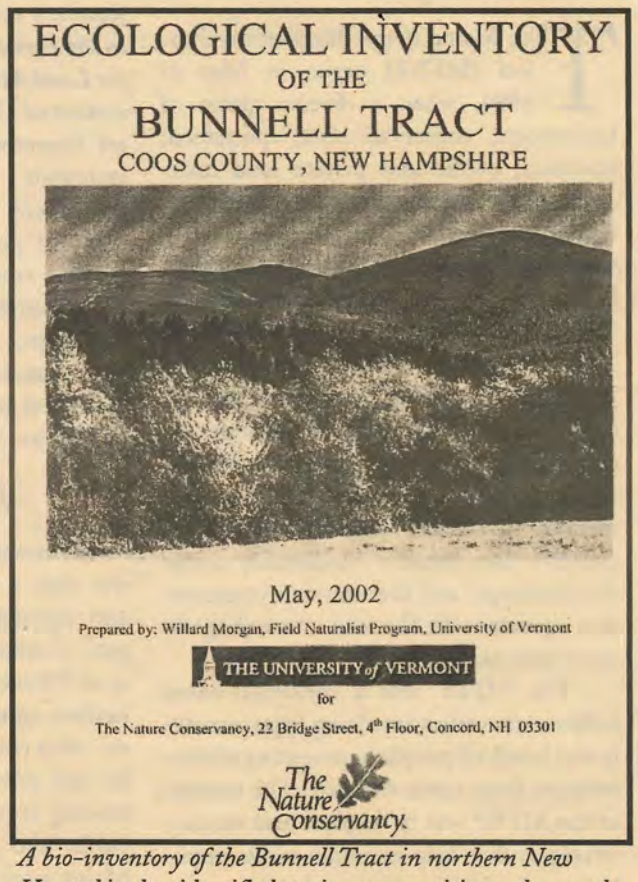
The New Hampshire Living Legacy Project seeks to develop a statewide Comprehensive Conservation Plan that includes compilation and analysis of current knowledge and data sets, creation of dynamic and up-to-date databases, and assessment and mapping of the state's most ecologically significant areas. To accelerate the conservation of at-risk species, habitats and ecological systems in New Hampshire, the natural resource agencies and conservation community need additional science-based information and tools that strengthen existing information resources and advance our knowledge and understanding of the distribution and status of the State's ecological systems. The proposed Conservation Plan will:

- provide a statewide framework for understanding ecological systems, habitats and natural communities, and plants and animals of conservation concern
- integrate wildlife habitat and natural community inventory and monitoring
- build capacity to manage and monitor our progress in conserving biological diversity
- guide public and private land and aquatic habitat conservation and stewardship

The plan will aid in integrating ecological values into land use planning and management decisions including forest management, recreation, transportation planning, and development at local, regional, and statewide scales.

Presently the availability to conservation planners of rare species information in the NH Natural Heritage Inventory database is limited as a matter of state policy. In addition, there are ample historic or outdated records of rare species occurrences that are unconfirmed or incomplete and that require updating to provide a scientific basis for understanding the status and distribution of biodiversity in New Hampshire. There is little current information on the land base necessary to support rare wildlife populations and exemplary natural communities of conservation concern.

The Comprehensive Plan will provide land trusts, communities, and state and federal agencies the guidance they seek on the location of New Hampshire's most outstanding natural areas, and strategies for their conservation. The Plan will provide science-based information on ecologically significant areas that can then be used by the Forest Legacy Committee, Land and Community Heritage Investment Program (LCHIP), Town Open Space Committees, and landowners interested in pursuing voluntary permanent conservation options. In addition, the Plan will enable state and federal agencies to establish a baseline for tracking success at conserving biological diversity on and off permanently protected lands over time and to evaluate the impact of development, road projects, and other land uses on biodiversity.



A bio-inventory of the Bunnell Tract in northern New Hampshire has identified species, communities and research priorities on the 18,000 acre area. (8,000 acres are reserved.) Pine marten is one of the rare species noted.

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Maine Forest Biodiversity Project

History and Goals

The Maine Forest Biodiversity Project (MFBP) began in May of 1994, when a diverse group of landowners, conservationists, sportsmen, scientists, public and private land managers, and educators met to discuss biodiversity in the state. This meeting resulted from the report, "Finding Common Ground," that the Northern Forest Lands Council submitted to the governors of New Hampshire, Maine, Vermont, and New York in 1994. This report was the culmination of six years of research and public input and highlighted the importance of protecting biodiversity. It recommended that states "develop a process to conserve and enhance biodiversity across the landscape" and that the state conservation agencies take the lead in carrying out these actions.

The MFBP was a consensus-based collaborative effort involving approximately one hundred people representing diverse interests from across the state. The mission of the MFBP was to "explore and develop strategies that help maintain viable populations of existing species and viable representatives of existing ecosystems in Maine." This group agreed to assess the status and trends of biodiversity in Maine, to identify forest practices that help maintain biodiversity, and to define and assess the potential for an ecological reserve system on Maine's public lands and private conservation lands.

The idea for a system of ecological reserves began in the mid-1980s when a group of scientists, conservationists, and natural resources managers recommended the establishment of a reserve system for Maine. In 1989, the Maine State Legislature passed a resolve to fund a study on ecological reserves for the state. The State Planning Office published the results of that study, An Ecological Reserves System for Maine: Benchmarks in a Changing Landscape (McMahon, 1993), but due to funding constraints the inventory was only partially completed.

The Maine Forest Biodiversity Project completed the inventory of public and private conservation lands initiated by the State Planning Office in 1989. From 1994 to 1998, the MFBP steering committee commissioned several reports. These products included an assessment of biodiversity in Maine; a landowner and forester's manual on "***Biodiversity in the Forests of Maine: Guidelines for Land Management***," an examination of U.S. Forest Service Forest Inventory data as a tool for statewide measurement and assessment of forest biodiversity; and a study of potential ecological reserves on existing conservation lands in Maine. A public outreach program on the Biodiversity Project and biodiversity in Maine was also created. This summary focuses on the ecological reserve aspect of the work the MFBP has done since 1994.

Reserve design

A key assumption by the MFBP group was that a combination of reserve lands and managed forests could achieve the goal of maintaining the biological diversity of Maine. This diverse group of stakeholders agreed that it made sense to first see what could be done with existing public and private conservation lands before looking at private lands, therefore existing public and private conservation lands in Maine were inventoried for potential ecological reserves (about five percent of the state).

The goal of reserves, as understood by this project, was that they would have three important functions:

- *They would contribute to the conservation of Maine's biological diversity;*
- *They would serve as unmanaged benchmarks or controls against which changes in the state's environment could be measured; and*
- *They would serve as outdoor laboratories and classrooms for comparative and baseline research and environmental education.*

The selection strategy focused on protecting representative ecosystem types, not on animal populations or rare and endangered species. The study of potential ecological reserves focused on the following issues:

- *To examine the extent of variation that may occur in Maine's ecosystem types in different locations across the state;*
- *To see how well Maine's varied ecosystems are represented on the state's public lands and private conservation lands; and*
- *To evaluate whether some of these lands could potentially function as ecological reserves.*

Reserve Inventory & Selection

From January 1995 to September 1997, 99 areas were selected from 796 possible public and private conservation sites and were inventoried by professional field biologists. The main criteria for this selection was to find sites that had had relatively little human disturbance (e.g., timber harvesting and roads). Since most of Maine's public lands are fewer than twenty-five thousand acres, 5,000-acres was chosen as the minimum reserve threshold large enough to adequately represent matrix-forming communities. A main assumption of the project was that the reserves in this system would work in concert with the surrounding managed forests. This meant that the reserve size requirements identified by the MFBP scientific advisory panel were smaller than reserves that might be designed within a highly developed landscape. The panel expected the size of reserves to cover a wide range, including some more than 50,000-acres, but felt that an appropriate average would be 5,000 to 12,000 acres.

> *The Scientific Advisory Group proposal included 19 potential reserve sites encompassing nearly 150,000 acres.*

The inventoried lands made up only five percent of the state, and relatively little was and is currently known about the other 95 percent of Maine. It is unlikely, therefore, that the inventoried lands would effectively represent the state's full range of biodiversity. For example, some areas in the state have little or no public or private conservation land and are thus not included in the system. Parts of southern Maine are so developed that the potential reserve sites are small and surrounded by incompatible land use, and other parts of the state have public land but no qualifying reserves.

From the inventory, 69 sites were initially identified as potential reserves. These sites encompassed 498,700 acres and represented approximately 45 percent of the state's public and private conservation land and approximately two percent of the state's total land area. It also included 115 of the ecosystem types found in Maine, with only eight types not found on the inventoried lands.

An analysis of selected ecosystem types indicated that significant variation within these ecosystems existed across biophysical regions. According to an ecoregional classification system developed by Robert Bailey of the US Forest Service, Maine contains 19 distinct biophysical regions based on differences in climate, landform, soil, and vegetation. The MFBP analysis indicated that to effectively represent the range of ecosystems across the state, it would be necessary to represent each ecosystem type in multiple bioregions. This drove the study's main question: How well are Maine's ecosystems represented on the state's public lands and on private conservation lands? After analyzing the field data from each of the 69 inventoried sites totaling 498,700 acres and comparing them in different ways, they found that:

"When variation within communities across biophysical regions is not considered and the question is evaluated statewide, 92 percent of Maine's 115 terrestrial and wetland ecosystems are represented at least once on the inventoried lands.

When variation within communities across biophysical regions is considered and the question is evaluated biophysical region by biophysical region, only 46 percent of Maine's ecosystems are represented at least once on the inventoried lands in each of the 19 biophysical regions (in which they occur)" (McMahon 1998).

Only 16 of these 69 potential reserves were self-contained, i.e., the ecosystems represented were well within the potential reserve boundaries. Forty-two sites were not self-contained, and 11 more lacked the potential since the surrounding landscape was heavily developed. Thirty-seven percent of the acreage of the 69 potential sites, excluding Baxter State Park, was under a form of management recommended by the scientific advisory panel as appropriate for reserves. Another 37 percent are managed as commercial timberlands.

Only 25 percent of the potential reserves contained the minimum acreage recommended by the scientific advisory panel. The size of the potential reserves ranged from 83 acres to 181,360 acres (i.e., Baxter State Park). The median potential reserve size was 2,075 acres, which is considerably smaller than the average range of 5,000 to 12,000 acres that the scientific advisory panel recommended as a minimum threshold. The reserves identified were disproportionally located in mountainous terrain and in wetland areas. The mountainous areas tended to be much larger (~20,000 acres) and those centered on wetlands tended to be smaller (~2,000 acres). Of those in wetland areas, none was large enough to include the entire watershed of the wetland ecosystem.

> *When finally designated, there were 13 reserves encompassing nearly 70,000 acres, with an average size of 5,300 acres per unit.*

Results to Date

The MFBP Scientific Advisory Group presented the Maine Bureau of Parks and Lands (MBPL) with a reserve design proposal based on the inventory and on McMahon's 1998 report ***An ecological reserves system inventory: potential ecological reserves on Maine's public and private conservation lands.*** The proposal included 19 potential reserve sites encompassing nearly 150,000 acres.

The MBPL came back with a counter proposal for 16 reserves totaling 61,000 acres. Aside from Baxter State Park, most of the state lands are MBPL public reserve lands that are managed for recreation, wildlife, and timber. The Maine Department of Inland Fisheries and Wildlife also holds state lands where timber harvesting occurs. Given that both the Bureau of Parks and Lands and the Department of Inland Fisheries and Wildlife are partially funded by timber harvesting on the state lands they manage, there was some concern regarding the removal of land from

the timber base for reserves. Several sites were identified on wildlife management areas, but the Department of Inland Fisheries and Wildlife has deferred a decision on this issue until a later time.

In 2000, the Maine State Legislature passed LD 477 that authorized the Bureau of Parks and Lands to designate up to 15 percent of Maine's public lands as ecological reserves. When finally designated, there were 13 reserves encompassing nearly 70,000 acres, with an average size of 5,300 acres per unit. Some project participants indicated that a smaller number of somewhat larger reserves were preferred. LD 477 capped the amount of MBPL land ecological reserves could include and limited the amount of land that could be taken out of the timber base to 6 percent. The act does not apply this cap to additional lands acquired by the state specifically to be added to reserves, but it limits the Maine Bureau of Parks and Lands to include no more than 15 percent of its lands or 100,000 acres (whichever is less) in an ecological reserve system. Since the initial designation of reserves in 2000, two new reserves managed by MPBL have been added, totaling 7,232 new acres.

Most of the reserved areas were previously classified as "non-regulated" (i.e. designated as off-limits to timber harvesting).

Under this bill, hunting, fishing, trapping, or snowmobiling are not to be restricted unless there is compelling evidence for a need for restrictions, and the Bureau cannot reduce its level of timber harvest as a result of taking land out for a reserve system. The Bureau also cannot cut less each year than the average cut from the preceding last ten years, effectively forcing the Bureau to cut more on remaining lands.

Most of the reserved areas were previously classified as "non-regulated" (i.e. designated as off-limits to timber harvesting). Management of the thirteen reserves currently prohibits timber harvesting and new roads. Passive recreation, hunting and fishing, and mountain bikes, ATVs, and snowmobiles on existing corridors are allowed. When possible, trails will be relocated to outside the reserves in the future.

Monitoring

The Maine Natural Areas Program is developing a long term monitoring protocol for the reserves. The program recognizes that it is imperative to quickly develop a long term monitoring on each reserve to further establish its importance as a control. An oversight committee that includes staff from state agencies, the University of Maine, and environmental groups is evaluating monitoring strategies and protocols. The monitoring effort is funded by the Maine Outdoor Heritage Fund, and three levels of monitoring have been discussed: species, stand, and landscape. Examples of species-level monitoring might include specific species like the red-backed salamander that are relatively common as well as other vertebrate and invertebrate species. A committee of twelve scientists are helping to establish the protocol and monitoring methodology.

Stand level monitoring examines parameters such as vertical structure, coarse woody material, and crown closure using protocols adapted from the nationwide USFS Forest Inventory Analysis (FIA) data methods. There are already about three thousand FIA plots on public and private land in Maine that have been monitored for several decades and will serve as comparison sites for the ecological reserves. Some broader scale and coarser resolution sampling methods, similar to BPL cruise data methods, may also be incorporated.

Plots were established on three reserves in the summer of 2002, and three additional reserves will be monitored in 2003. Landscape level monitoring is being used, through the use of air photos and remote sensing, to capture disturbance events and large-scale stand changes over time, both within and adjacent to the reserves. There are change detection software systems that use GIS and satellite images to track stand change over time. The technology is still evolving, and the Program is looking for ways to analyze a finer scale than is currently available. MNAP is digitizing the natural communities and create a digital database for comparing landscape change over time.

The Bureau also cannot cut less each year than the average cut from the preceding last ten years, effectively forcing the Bureau to cut more on remaining lands.

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Photos these pages offer several views of an old growth stand on Elephant Mountain, along the Appalachian Trail. The heavy lichens and striated canopy are striking features. The stretch of trail from Grafton Notch to Rangeley has other areas of mature growth worthy of study. Red pine and oak make cameo appearances on the lower slopes of Old Blue.

National Wildlife Federation Predator Recovery Work Plan

By Peggy Struhsaker

For the past three years, NWF's Northeast Natural Resource Center (NNRC) has been working with our members, activists and affiliates to move wolf and predator recovery forward in the Northeast. We have met with affiliates, private landowners, tribes, politicians, and the general public to jump start the wolf recovery planning process and introduce the need for predator restoration across the region.

Our plan recognizes the uniqueness of the northeast region and our efforts to integrate wolf and lynx recovery into NWF's regional forest conservation work, since the lack of predators has significantly altered forest composition and habitat over time.

Over the last two years, we have worked to "establish a base" for NWF's leadership and potential for activist recruitment around wolf recovery through a variety of advocacy and educational events. Two of the highlights include:

• Holding two comprehensive wolf recovery conferences in Maine in 2000 and Hew Hampshire in 2001.

• Conducting a successful southern New England outreach program on wolf recovery in the Northeast that reached over 40,000 NWF members.

In July, 2000, the USFWS released their long awaited proposal to reclassify wolves across the country. For the Northeast, the USFWS has proposed to reclassify wolves from "endangered" to "threatened" and create a Northeast "distinct population segment." NWF supported this proposal and ran a strong public outreach campaign in the Northeast to gain support for the Service and their efforts, while at the same time implementing our long term educational and outreach goals for predator recovery that transcends any particular agency actions. *But with the new administration, this proposed rule is in jeopardy and the final rule will likely be different from what was initially proposed — including a lack of recovery efforts in the Northeast. Therefore, it has become even more imperative that we move beyond the Service's proposal and further our efforts to develop a state-based, private approach to wolf recovery in the Northeast that will provide support to predator recovery efforts with or without the national rule in place.*

To better involve citizens in helping to determine the presence (or absence) of wolves and lynx in the Northeast, NWF will develop a citizen tracking network. We held and will hold a series of 2 day comprehensive canid tracking workshops. 15-20 participants will develop tracking skills and then, with their new skills, conduct tracking surveys in specific identified regions of Maine. NWF will provide on-going support for this network of volunteers. NWF has contracted with Jim Hammill, retired wolf biologist from the Michigan Department of Natural Resources to teach these workshops and lead the monitoring project this coming winter season.

NWF believes it is imperative that we work with and actively involve our Canadian neighbors on species recovery. Presently, a strong activist-based environmental movement in Québec appears to be in its infancy. Although we have identified several interested and sympathetic individuals, there is no organization or coalition as of yet that has made cross-border predator protection a priority. We hope to assist in changing this situation, but with the humility of knowing there are significant cultural and political differences to overcome.

Peggy Struhsacker is the National Wildlife Federation's Northeast wolf project coordinator. You may contact her through the NWF's Montpelier, VT office at 58 State Street, tel. 802-229-0650 or via email: struhsacker@nwf.org

Editor's Note: NWF is also a member of the Coalition to Restore the Eastern Wolf, comprised of over 30 groups committed to wolf recovery in the region. CREW is encouraging the US Fish and Wildlife Service to complete and implement a wolf recovery plan for the region as well as conduct a 4 state (Maine- VT-NH- New York) environmental impact or environmental analysis of wolf recovery prospects, in partnership with those states. CREW also works toward cooperative efforts between the US and Canada. Contact: Lisa Osborn-Northeast RepresentativeDefenders of WildlifePO Box 756 Shelburne, Vermont 05482losborn@defenders.org 802-985-9989 www.defenders.org

The three reports from Vermont, New Hampshire and Maine are excerpts from a 2002 paper entitled ***Landscape-Level Conservation Initiatives in the Northern Forest*** *written by Cynthia Fleming, the northeast ecologist for The Wilderness Society. The complete paper is available on the Northern Forest Alliance website* http://www.northernforestalliance.org/ under 'reports and maps.'

PROTECTED AREAS IN NEW BRUNSWICK

"We are not convinced that the landscape between the protected areas, even on Crown land ... will be compatible with the goal of the protected areas."

By Roberta Clowater

In May, 2001, the New Brunswick government announced the establishment of 10 new protected areas, totaling approximately 140,000 hectares (over 355,000 acres), about 1.8% of the province. They range in size from the Spednic Lake protected area at 25,900 hectares to the Caledonia Gorge at 2,900 hectares. The list of new protected areas includes an 11,900 hectare expansion to the existing Mount Carleton Wilderness Provincial Park - creating a protected area in the north-central part of the province that is almost 29,000 hectares - and a 20,000 hectare wilderness area called Loch Alva, protecting the largest roadless area in southern New Brunswick. These areas will be protected from logging, mining, hyrdo-electric development and road-building. Low impact recreational activities will be permitted, with motorized vehicle access limited to specially designated existing roads and trails.

New Protected Natural Areas Act in the Works

The provincial government is currently drafting the proposed Protected Natural Areas (PNA) Act. Some of the items that we expect to see in the legislation include the following:

There will be two classes of PNAs. Class A - existing Ecological Reserves and Conservation Areas - will be given more strict protection (e.g. entrance to these areas will only be allowed with permit, for scientific and educational purposes). The 10 new protected areas will fall into Class B, where protection will still allow for limited recreational activities. Any protected areas established in the future could be assigned to either class, depending on their ecological sensitivity.

There are no surprises about the prohibitions - all industrial activity will be prohibited, as will motor vehicles (except on certain designated roads or trails, which will be identified for each area.). Recreational activities, including traditional wilderness recreation and hunting and fishing, will still be permitted.

Overall, the direction proposed for the legislation seems to address most of our concerns. The Department of Natural Resources and Energy has promised the new legislation will be brought before the house in autumn of 2002.

Protected Areas Committees - Coming Soon to a Community Near You

Legislation will set out a framework to establish three levels of committees to help administer the PNAs. A provincial PNA committee will be the umbrella committee, advising government on PNA management and the protected areas system in general. A scientific advisory committee will provide guidance and advice regarding scientific research to be undertaken in these areas, and will also have a member sitting on the provincial steering committee. A local advisory committee will be established for each PNA, to provide input regarding the management/conservation plans for the areas. Although the original plan was to have all of these committees up and running by now, this hasn't happened. Government now intends to have the committees established in the autumn of 2002.

Special Harvest Zones Next to Three of the Protected Areas

One of the more unsettled parts of the decision regarding the 10 protected areas was the identification of special harvest zones next to the Jacquet River Gorge, Kennedy Lakes and Loch Alva protected areas. It was agreed that limited harvesting would be allowed to continue in parts of these zones, then they would become part of the protected areas in 2012. Together, these three zones total almost 14,000 hectares. The licensees involved are UPM Kymenne- formerly REPAP- (the harvest zones next to the eastern part of Jacquet River Gorge and the northern edge of Kennedy Lakes), J.D. Irving Ltd. (the harvest zones next to the northwest corner of Loch Alva, and the southwestern edge of Kennedy Lakes) and Bowater (next to the southern portion of Jacquet River Gorge).

When the agreement was made, it was the understanding of the environmental representatives that harvesting in these zones would be very different from the harvesting done on the rest of Crown land, and that environmental input on management guidelines would be sought and used. The main objective for these zones needs to be the conservation of ecosystem and species diversity, and the ecological structure and function of the forests, wetlands and rivers in the zones.

In January 2002, the licensees showed us their draft management plans for these zones. Of the 14,000 hectares in the zones, the companies plan to cut in 2,634 hectares. After comparing the plans with the forest stand information for each area, and consulting with several forest ecology advisors, we submitted our recommendations to the provincial Department of Natural Resources and Energy (DNRE) and the licensees. We were most concerned about UPM Kymenne's plans to clear cut 1206 hectares in the harvest zone next to Jacquet River Gorge, over the next ten years. Many of the stands located in the proposed clear cut blocks contain a significant amount of tolerant hardwoods (sugar maple, beech and yellow birch), cedar, red spruce or white pine. These are the kinds of long-lived forest types that do not respond well to clear cutting. We are also concerned about the 39 km of new roads that UPM Kymenne plans to build to harvest in the zone.

In February, 2002, DNRE outlined the principles they have decided upon for these special zones, which do not address our concerns about the inappropriate clear cutting planned for cedar, white pine or maple-beech forests. We consider the government's response to be unacceptable. There is a possibility that changes can be made in the plans at a stand by stand level, as the companies prepare their annual cut plans. However, we would prefer to see DNRE establish strong ecological guidelines for the harvest zones, in recognition of their special status as "protected areas-in-waiting."

What Happens Next?

The next step for government will be to identify smaller natural areas that will be protected in the "fine filter" phase of the Protected Areas Strategy. Government has announced that they intend to add only another 5000 hectares to the system on Crown land. This was a political decision made by the Department of Natural Resources and Energy, without any science-based information regarding the amount of land that needs to be added to the protected areas system.

Government has also not given any indication that they will take action to determine how the protected areas can be linked with corridors. Designating corridors of natural habitat is an accepted tool to ensure the ecosystems within protected areas do not become isolated from one another. We are not convinced that the landscape between the protected areas, even on Crown land, will be managed in a way that will be compatible with the ecosystem conservation goal of the protected areas.

The NB Protected Natural Areas Coalition will continue to do our own research about the ecological needs for more smaller and medium-sized protected areas and for designated functional connections among the protected areas. Northwestern New Brunswick remains unrepresented in the existing protected areas system, so we are placing a priority on protecting the wild areas in the Restigouche River watershed, including the Upsalquitch River, Stillwater Brook and the Kedgwick River. This area is one we share with the Province of Quebec, so future work will need to be done to encourage cross-boundary cooperation.

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10 New Protected Areas for New Brunswick — Brief Descriptions

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Black River (next to Kouchibouguac National Park) (3,946 hectares)

This area will be protected by the provincial government in a way that complements conservation of ecosystems in the national park. It encompasses part of the Black River and its tributaries, and outstanding ecologically significant bogs located to the northwest of the national park boundary.

Caledonia Gorge (2,856 ha)

The Caledonia Gorge contains the steeply sloping Crooked Creek Gorge and nearby brooks, which are dominated by large, old hardwood forests and old-growth red spruce. The area could be connected by a habitat corridor to nearby Fundy National Park, in the future, in an effort to prevent species in the gorge from being isolated from larger populations. The Caledonia Gorge area has been noted by regional economic planners as having great potential for nature-based tourism, due to its wild and scenic appeal.

This protected area contains rare species of lichens and mosses. In the rushing brooks off Caledonia Creek, and the western parts of Crooked Creek, these rare mosses are especially found in the splash spray zone where water tumbles over rocks. The Crooked Creek watershed is the only place in New Brunswick that the long-tailed shrew has been found. This rare insectivore lives in mossy, forested areas, often on boulder slopes with mature forest cover, at higher elevations.

Canaan Bog (20,726 ha)

The Canaan Bog natural area is largely flat, with bogs dominating the area, interspersed with a complex network of streams and forested islands. It contains the greatest amount of significant roadless habitat among all 10 protected areas. It is known to contain significant populations of moose, and could be a good destination for wildlife watching (birds, beaver colonies, reptiles and amphibians).

Canoose Flowage (3,990 ha)

This natural area encompasses the wetlands around the Canoose Flowage and Canoose Stream. It includes several bogs and swamps that are home to rare and uncommon plants, and provide excellent waterfowl habitat.

Grand Lake Meadows (11,617 ha)

This protected area contains the largest wetland meadow in the province and parts of the floodplain of the St. John River. The virtually undisturbed Bull Pasture Bog, a large raised bog which is home to several rare orchids and rare butterflies, is in the protected area. Also included are the Portobello Creek National Wildlife Area, and an unusual forest community of mixed northern and southern tree species, such as Yellow Birch, Red Oak, Bur Oak and Basswood. The area may support one of the largest populations of Yellow Rails in North America (difficult to estimate number of breeding pairs due to their secretive nature) and is heavily used by inland waterfowl during spring migration. It is an important area for aquatic furbearers, breeding ducks, great blue heron, and osprey.

Jacquet River Gorge (18,429 ha now, will be expanded to 26,026 ha in 2012)

The deep gorge created by the Jacquet River and its southern branch dominates

Continued Next Page

FUNDY LANDSCAPE CONSERVATION NETWORK

"If biodiversity is to be conserved at the landscape and regional level, it will be critical to develop tools for involving landowners in large-scale conservation planning."

By Mathew Betts and Graham Forbes

A large proportion of forest land in New Brunswick, Canada and eastern North America as a whole exists in small private holdings. If biodiversity is to be conserved at the landscape and regional level, it will be critical to develop tools for involving these many landowners in large-scale conservation planning. The main purpose of this project is to initiate a community forest project for small private woodlots that encourages the implementation of landscape ecological objectives. To accomplish this, the Greater Fundy Ecosystem Research Group (GFERG) and the SNB Wood Coop Ltd. (SNB) (representing 6000 woodlot owners in southern New Brunswick), are cooperating to create landscape ecological management plans for two watersheds.

Geographical Area of Interest

The Fundy Model Forest (FMF) extends north of the Bay of Fundy in New Brunswick. The Greater Fundy Ecosystem Intensive Study Area (ISA) includes all watersheds that connect to Fundy National Park. Landownership in the FMF is 63% small private woodlots, 17% large private holdings, 15% provincial Crown (public) land, and 5% National Park. All of the FMF lies within the Acadian Forest Region. The forest cover is primarily composed of intolerant hardwood or tolerant hardwood and mixedwood communities. However, pure softwood communities exist in low-lying areas and along the Bay of Fundy coast. Intensive forestry activities are common in all areas of the FMF except for Fundy National Park.

Project Objectives

To identify areas of significance to the conservation of biodiversity in southeastern New Brunswick.

To develop landscape-level plans for the conservation of Acadian Forest biodiversity in southeastern New Brunswick.

To develop woodlot-level plans for private owners that are congruent with landscape-level plans.

To educate small and large landowners about the importance of landscape-level conservation.

Progress to Date

In the two years since the initiation of this project we have developed landscape-level plans for two third-order watersheds in the Fundy Model Forest (Pollett River and Washademoak). The cumulative area of these two watersheds is over 600,000 ha. Landowner meetings are scheduled on a regular basis in both watersheds. The GFERG and SNB act as a clearinghouse for information on private woodlot management and biodiversity conservation. We are in the process of developing detailed woodlot management plans for woodlots in both watersheds.

Anticipated Timeline

We intend this project to be on-going. As we complete more plans in these watersheds we expect to accumulate a 'critical mass' of landowners. We expect that a local watershed-forestry committee will be established that, in conjunction with the GFERG and SNB, will oversee planning for biodiversity over the long term. At the present time, the FMF is considering the application of our methods to all watersheds in the region. This would expand our definition of landscape beyond the watershed scale.

Project Challenges/Barriers

Our primary obstacles are as follows:

The conservative views held by some local landowners regarding forestry and wildlife make implementation a challenging task. There is a commonly held view that clearcut Acadian forest will simply 'grow back' with no negative impact to local wildlife.

Despite recent declines in markets for timber, the rate of timber harvest continues to be very high. Our challenge is to identify key landowners and provide plans before they can be convinced by local contractors to liquidate their timber resources.

The woodlot management plans that we are developing are also directed towards maintaining forest communities and ecological processes at the stand level. Forest management treatments recommended to accomplish this goal are often lighter than traditional forest practices and thus offer less profit to woodlot owners in the short term. We are currently seeking additional monetary incentives for woodlot owners to engage in sustainable forest practices.

Success of this project will require the participation of large landowners and the province of New Brunswick. Our next challenge is to involve these groups.

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10 NEW PROTECTED AREAS FOR NEW BRUNSWICK

this wilderness area, a scenic mix of spruce/fir, pine, hardwood and cedar forests, gulches, streams and waterfalls. The area has high recreation potential for canoeing along the main Jacquet River, and for hiking and snowshoeing in the gulches west of Antinouri Lake. Antinouri Lake is a good place for canoeing and trout fishing.

Significant ecological features of the protected area include some of the largest freshwater wetlands in northeastern New Brunswick, excellent salmon nursery habitat in the Jacquet River System, and old-growth forests along the steep ravines.

Kennedy Lakes (17,024 ha, will be expanded to 20,665 ha in 2012)

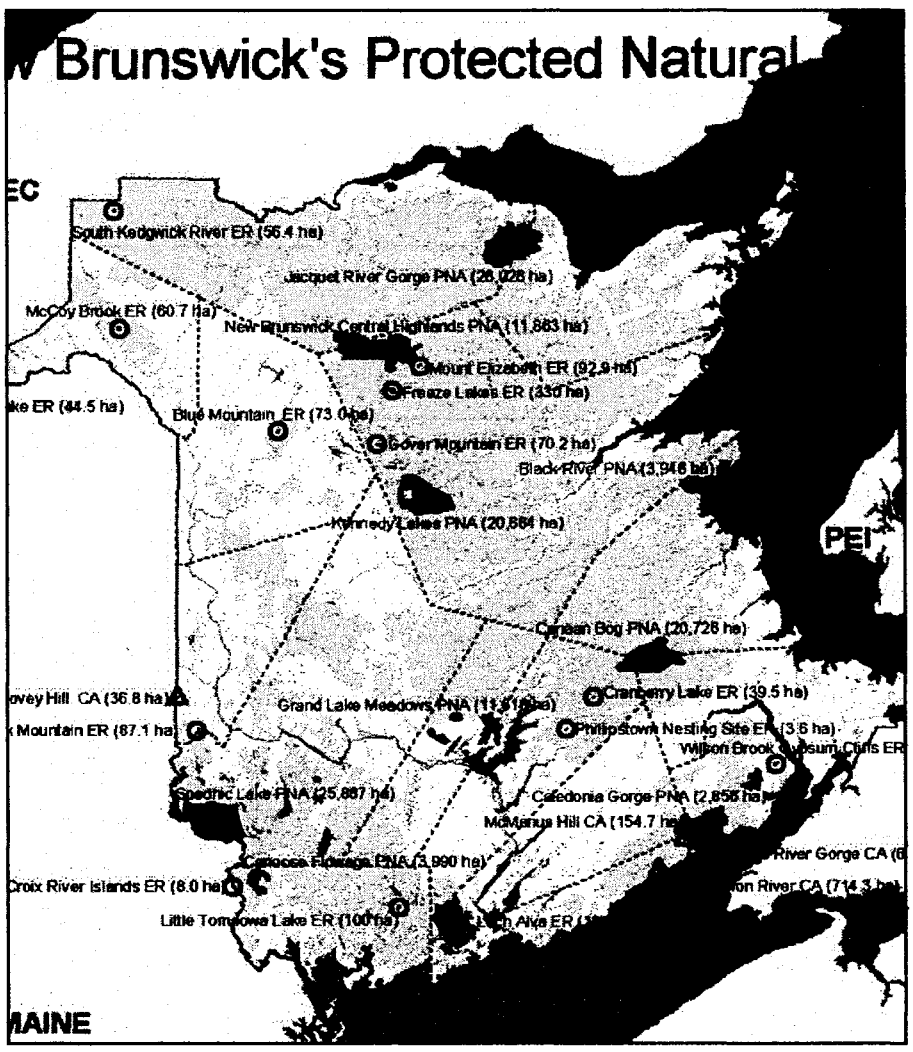
The Kennedy Lakes wilderness area is a combination of high rugged terrain to the west and gentler ridges and valleys with tolerant hardwood forests on the hilltops of the east. A large boulder field amid lakes dominates the central portion. This area would appeal to those seeking a back country wilderness experience for canoeing, hiking, fishing or snowmobiling. It is reasonably accessible from the Plaster Rock - Renous highway, although the terrain away from the roads can be challenging.

The North Renous Lake provides quality salmon and gaspereaux spawning habitat and osprey nesting sites, and the bogs, swamps, spruce-tamarack and beech forests along the North Renous River are home to several rare butterflies and moths.

Loch Alva (19,415 ha, will be expanded to 21,925 ha in 2012)

The Loch Alva Wildland is the largest roadless natural area in southern New Brunswick. The area is dominated by Turtle Mountain - a rounded boulder mountain, the large lake of Loch Alva , and an extensive network of lakes, wetlands and forest-covered hills. The Musquash River watershed in this candidate supplies drinking water for the city of Saint John. Together with other marine/coastal conservation efforts in the Musquash estuary, Loch Alva will contribute significantly to a much larger protected area complex.

This protected area provides habitat for some of the richest concentrations of Atlantic coastal plain flora in New Brunswick, and several other rare plants. Large wild cat sightings in this area are common.



Mount Carleton Extension (11,863 ha)

The Mount Carleton Extension is located east of Mount Carleton Provincial Wilderness Park, protecting more of the rugged, mountainous terrain of the Missionary Mountains and a significant portion of the headwaters of the Nepisiguit River (a major salmon river and habitat for a unique gene pool of brook trout). The Nepisiguit River is considered by many canoeists to be the jewel of New Brunswick wild river routes, winding through mountain ranges, slower marsh areas, remote mountain streams with clear, rocky bottoms, and past waterfalls.

Spednic Lake (25,887 ha)

This area takes in the extensive system of wetlands, lakes and brooks that feeds Spednic Lake, building on the existing Spednic Lake Provincial Park. It encompasses part of the St. Croix Heritage River, which is also one of Maine's Wild and Scenic Rivers. Significant ecological features in the protected area include an old hemlock stand with very large trees, bald eagle nesting sites, and rare plant habitats. There is considerable recreational use of the river and surrounding lands for canoeing, boating, bass fishing, camping, snowmobiling, ATV use and hiking.

Prepared by:
NB Protected Natural Areas Coalition

A RESERVE DESIGN FOR NOVA SCOTIA

Designing a Biodiversity Conservation System Plan: An Example from Nova Scotia, Canada

Karen Beazley, with Peter Austin-Smith, Jr., Marty King, Lara Smandych, Tamaini Snaith. School for Resources and Environmental Studies, Dalhousie University, Halifax, N.S., B3H 3J5, Canada. Contact: karen.beazley@dal.ca

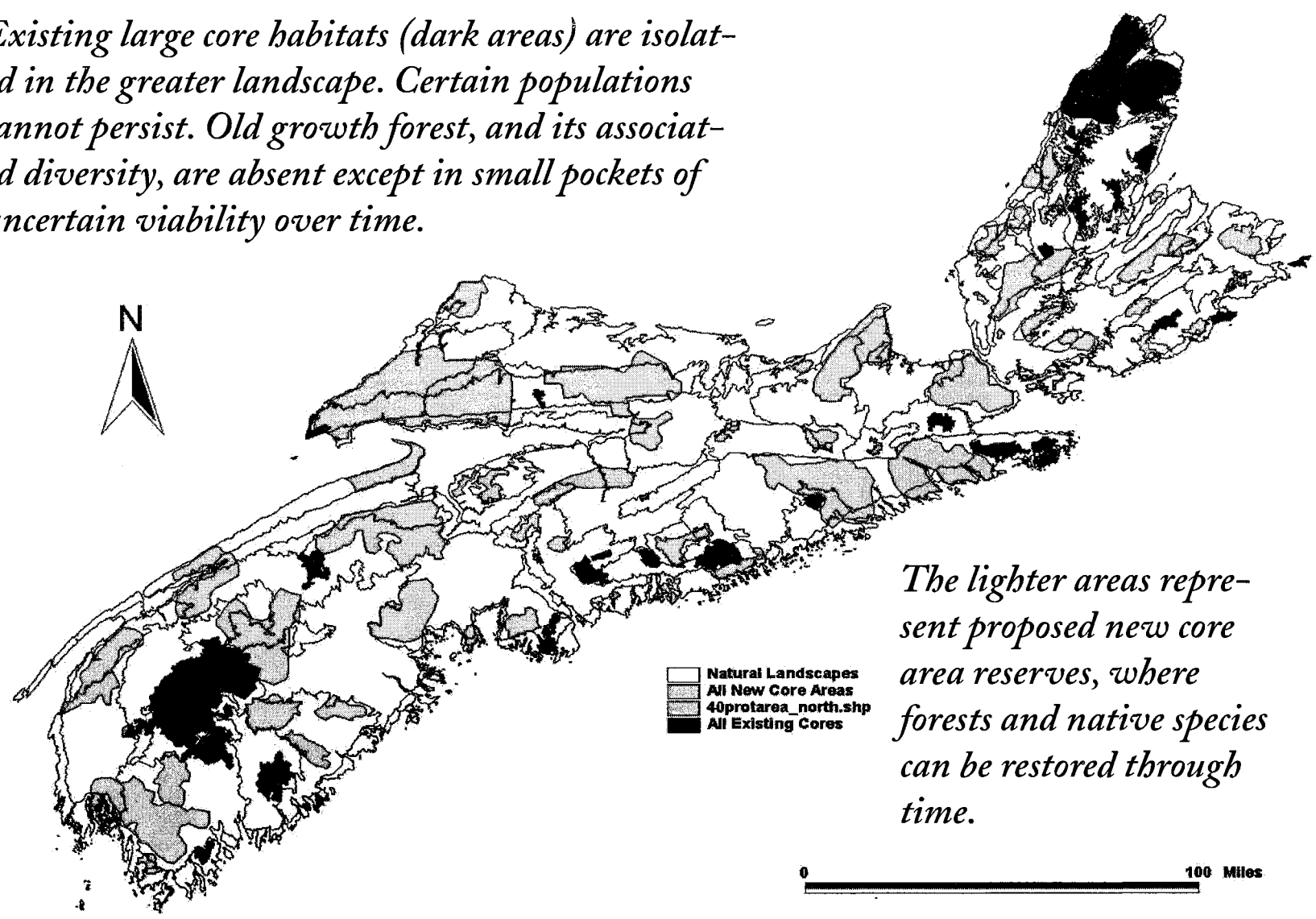
Existing protected areas are generally not sufficient to maintain biodiversity on their own. Increasing pressures on a limited land and water base require that precise prescriptions be given for how much area is enough. In this study, reserve design principles were used to develop a GIS/map-based ecological vision for terrestrial and marine biodiversity conservation in and around Nova Scotia, Canada. Coverages were created to identify representative samples of natural landscapes and seascapes on the basis of degree of naturalness. Special elements such as hotspots of diversity and rarity were incorporated. Habitat area coverages for viable populations of selected terrestrial and marine focal species were determined through life cycle, habitat suitability and population viability analyses. By overlaying these mapped data layers, core areas were identified on both public and private lands, and in the marine regions. Areas for species migration and dispersal among these core areas were delineated through cost distance analyses. Buffer zones were created around these core and linkage areas. These ecological considerations indicate that approximately 53% o Nova Scotian lands and seas should be managed primarily as a system for biodiversity conservation for its maintenance over the longer term. Future research priorities include freshwater aquatic and coastal considerations.

Nova Scotia Ecological Reserves Highlights

- *Over 50% of Nova Scotia land identified for some landscape role; 32% in reserves*
- *Sustainable management of habitats outside reserve necessary*
- *Regional effort key: Nova Scotia cannot act in isolation to maintain or restore some species*
- *This study sought to determine minimum areas needed to maintain natural diversity through representation of typical and unique habitats; identification of special elements such as existing old growth; and habitat needs of focal species such as pine marten and moose.*

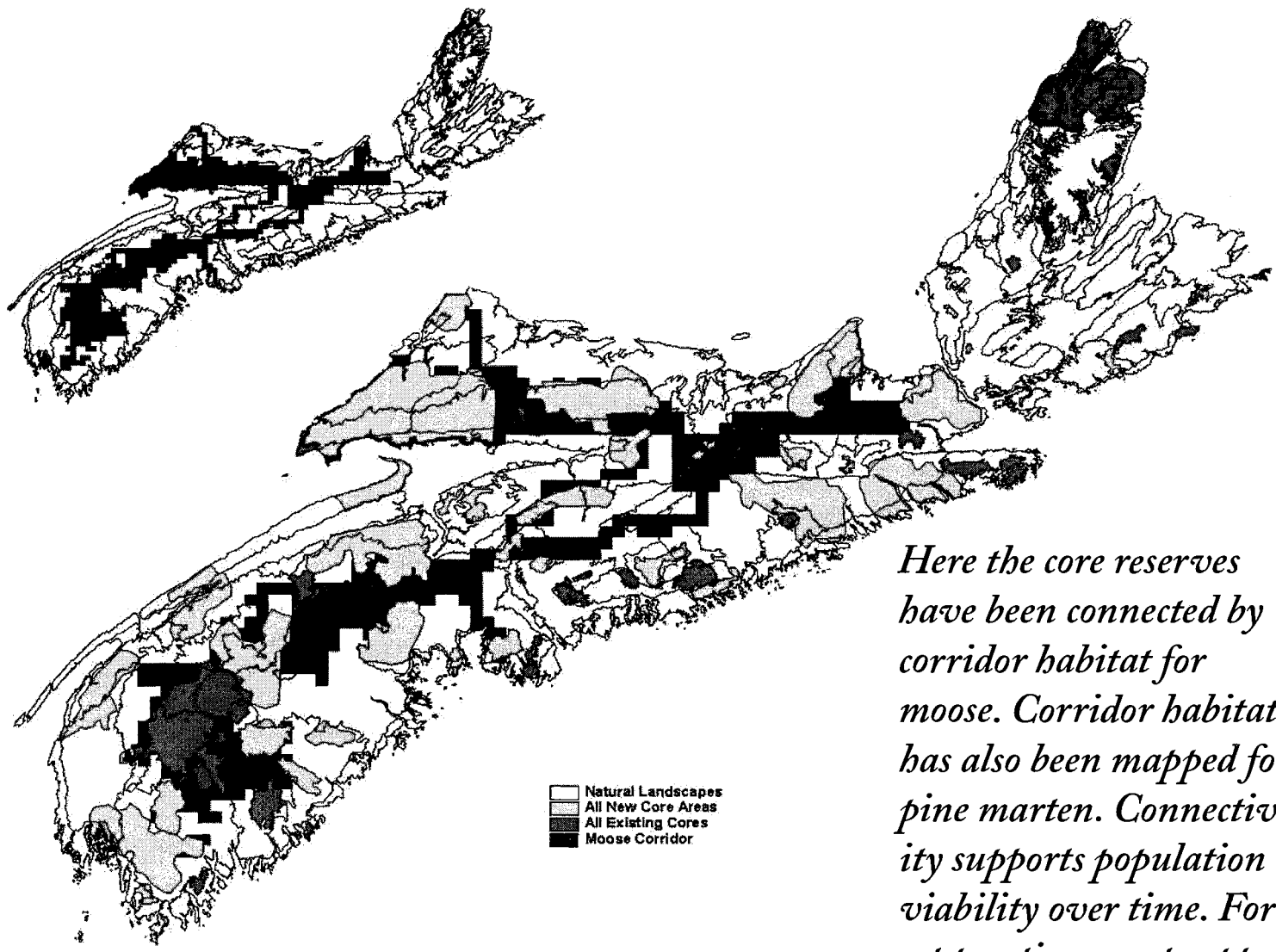
Proposed and Existing Core Reserve Areas

Existing large core habitats (dark areas) are isolated in the greater landscape. Certain populations cannot persist. Old growth forest, and its associated diversity, are absent except in small pockets of uncertain viability over time.



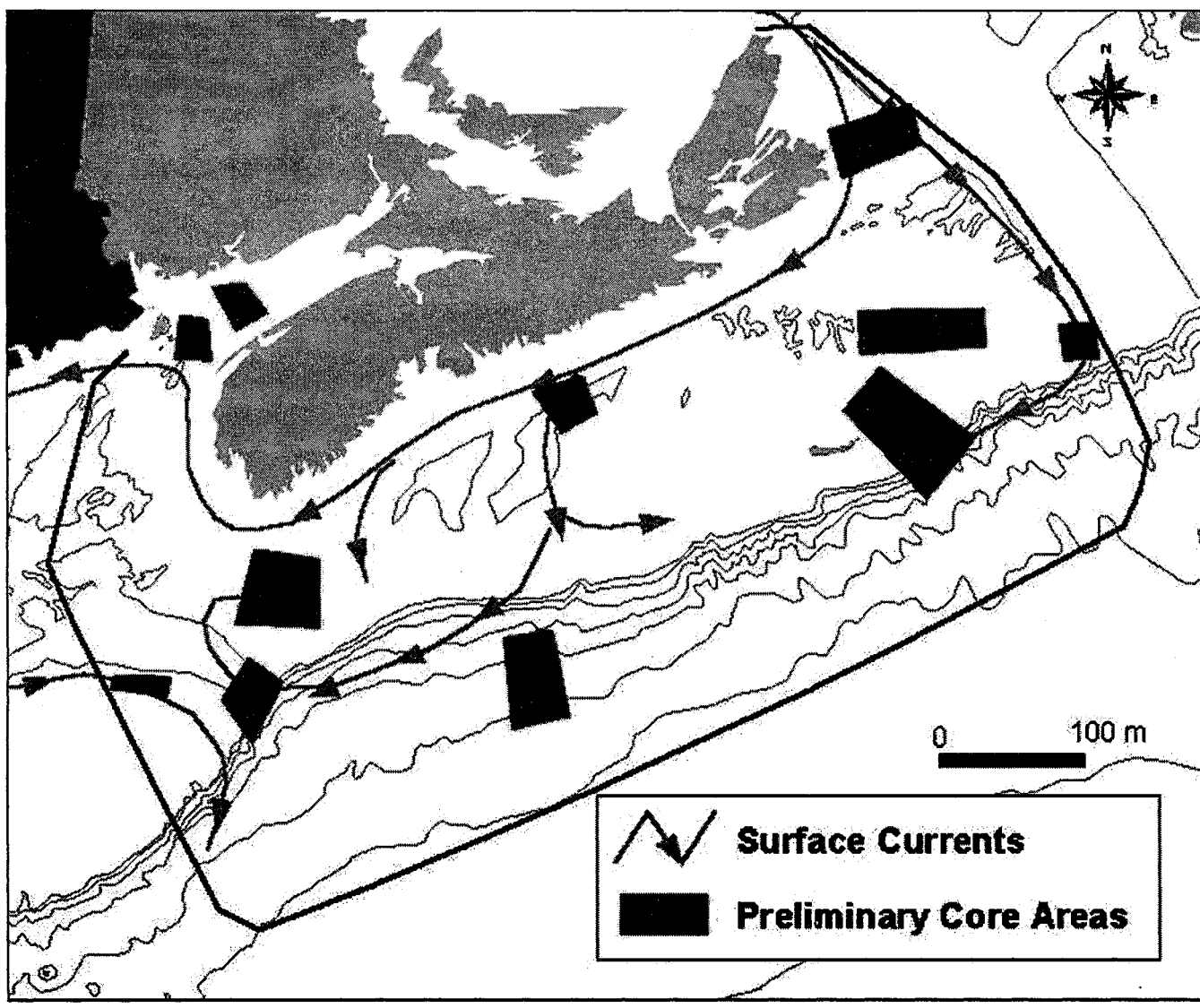
The lighter areas represent proposed new core area reserves, where forests and native species can be restored through time.

Proposed and Existing Core Reserves with Connective Corridors for Moose



Here the core reserves have been connected by corridor habitat for moose. Corridor habitat has also been mapped for pine marten. Connectivity supports population viability over time. Forest practices must support biodiversity.

Marine Core Reserves



Reserves move offshore: Similar methods applied to the marinescape as the forested landscape look to the establishment of core areas — based on protection of special elements like hotspots of groundfish diversity or distinct geology; and representation of known habitats. Core areas are also based on focal species habitats: right whale and northern corals. Surface currents (arrows) offer avenues for protecting connectivity.

A Trans-Boundary Approach to Lynx

Report on the Northern Appalachians Lynx Science Workshop held in Portland, Maine, April 2002

by Justina Ray, Wildlife Conservation Society
John F. Organ US F&WS
Michael S. O'Brien, Nova Scotia Department of Natural Resources

Recently declared "threatened" by the U.S. Fish and Wildlife Service under the Endangered Species Act, and either listed or scheduled to be listed as a Species at Risk in several eastern Canadian provinces, there are numerous knowledge gaps with regard to the conservation status of the Canada lynx (*Lynx canadensis*) and their critical prey species, snowshoe hare (*Lepus americanus*) in eastern North America. Conservation of northern species at the southern end of their ranges presents particular challenges.

With populations confined to the southern extensions of boreal-like forest habitat that exist primarily in large upland plateaus and at higher elevations, lynx habitat quality is naturally lower in the southern periphery. This situation may become compounded further by the pressures on habitat brought about by resource extraction and human settlement. Connections between the Northern Appalachian region and contiguous boreal forest north of the St. Lawrence Seaway are tenuous at best, and there is little idea at present whether genetic interchange across this relatively hostile area is sufficient to prevent isolation of Northern Appalachian lynx. Not only is research increasingly demonstrating that the ecology of southern populations differs from that of the north, but few generalizations about western lynx populations (which have been the focus of most research to date) can be readily applied to the East.

Canada lynx is an important flagship species and furbearer for the Northern Appalachian region straddling the border of the United States and Canada. The Northern Appalachian region is a natural conservation planning unit, and coordination of research and conservation activities in the region is critical for the large-scale ecosystem and landscape approach required for the successful conservation of wideranging species such as the lynx. Such coordination faces many obstacles, however, including monetary and personnel constraints of small jurisdictions and a lack of common regulations among states/provinces and between the USA and Canada.

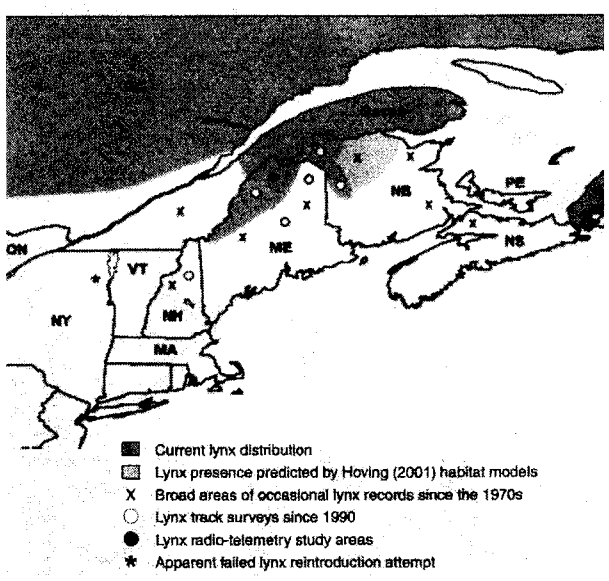
The convening of the Northern Appalachians Lynx Science Workshop was an initiative of the Wildlife Conservation Society, and was co-sponsored by U.S. Fish and Wildlife Service, and International Association of Fish and Wildlife Agencies.

The April, 2002 workshop was convened with the goal of making the first steps towards adopting a regional approach to lynx research and conservation in the transboundary region of northern New England, Québec, New Brunswick, and Nova Scotia. Such a gathering was timely due to the recent listing of lynx as a Species at Risk in Nova Scotia and under the U.S. Endangered Species Act, as well as the initiation of several research efforts directed at the species over the past few years. Scientists and managers concerned with lynx in the region attended the workshop to address issues central to achieving conservation of this species. Discussions centered around identifying critical monitoring, research, management, and conservation needs; the development of a regional and cross-border management strategy; and the potential for working closely with the forest industry sector towards lynx conservation in the private land matrix.

The general conclusion was that a group facilitating eco-regional communication, well coordinated collaborative science, and the development of regional conservation planning for lynx and hare would be far better able to drive the research agenda, secure the necessary resources, and facilitate implementation of necessary conservation measures than single-species initiatives driven by individual jurisdictions. Participants agreed that there was a need to collectively carve out the best strategies and prioritize individual actions that would lead to coordinated activities towards the conservation of Northern Appalachian lynx.

In the event that the northeastern lynx might appropriately be regarded as a Distinct Population Segment in

MAP OF LYNX DISTRIBUTION IN THE NORTHERN APPALACHIANS
(modified from Hoving [2001] with input from workshop participants)



the context of the U.S. Endangered Species Act, a creative opportunity may present itself for pulling together representatives from federal, provincial, and state management agencies, universities and the private sector (including non-governmental organizations and forest industry leaders) to proceed with the work that needs to be done to achieve conservation of this species. The Northern Appalachian Lynx Science Workshop and formation of a lynx science group could serve as a springboard for such action. Even without a D.P.S. designation, such a group operating over the transboundary region could serve well in a technical advisory role to official provincial, federal recovery teams, and to help ensure cross-border cooperation.

Much discussion focused on the nature of the guidance that the group would want to provide to ensure lynx conservation at the landscape scale. As it is so important to work from a common information base, a critical activity would be to determine what data are already available, and what meta-analyses exploring the most important questions could be performed using existing data. Participants reached the conclusion that lynx conservation needs should not be looked at in isolation of snowshoe hare — its principal prey — the distribution and abundance of which drives lynx abundance in any given area. With respect to monitoring and research, there are strong arguments to be made that hares should in fact be the priority focus, particularly in light of the fact that in this region they serve as the anchor in an otherwise depauperate prey community. The ramifications for lynx and members of the diverse predator community with which it undoubtedly competes, are not yet fully understood.

Whereas some understanding of lynx habitat associations has been attained in northeastern North America, population dynamics remain poorly understood. The extent to which hare populations actually cycle throughout the Northern Appalachians, for example — so well known in northern regions — is still very much in question. We cannot be sure at this time what is the "currency," or the specific environmental factors that lynx (and snowshoe hare) respond to, and what actually drives habitat selection at the stand and landscape scales. Moreover, we are only beginning to develop an understanding of the impacts of forest management on hare (and lynx) habitat. For example, biologists are investigating the impact of the shift that is occurring in Maine from clearcutting to partial harvesting and the implications for the entire landscape. Finally, a more comprehensive understanding of the suite of mortality factors that impact lynx in the region — ranging from roadkill, to interspecific competition, to disease and incidental mortality from trapping – is needed.

It is clear that the Québec portion of the Northern Appalachians contains the most robust lynx populations, although the extent of movement into Maine and New Brunswick, and across the St. Lawrence Seaway is unknown. There is hopeful evidence of periodic movements of lynx between Nova Scotia and New Brunswick, indicating that the possibility for successful dispersal out of Cape Breton remains open. Genetic analyses are under-

The dispersal needs of wide-ranging species like the lynx will be useful to inform the conservation community of priorities for landscape connectivity.

way to help address such critical questions as the degree of isolation of lynx sub-populations, and hence the prospects for maintaining habitat connectivity. It is important to note that hare in the Gaspé Peninsula are currently at peak levels, and that a window of opportunity exists within the next year or two to study dispersal of lynx when hare populations begin to crash.

Hare and lynx monitoring programs and protocols are poorly developed in most jurisdictions of Northeastern North America. Much discussion focused on the need to undertake a coordinated effort to monitor hare populations across jurisdictions over the long term. An immediate priority is to develop monitoring programs that are standardized across boundaries. The same is certainly true in the case of lynx; however, there was recognition that doing the job right will take tremendous resources that are currently unavailable. This will likely necessitate some creative thinking with regard to the involvement of private citizens and landowners.

The underlying context of all discussions at the workshop was the profound challenge that we face with regard to the maintenance of robust lynx populations in the East, given the rarity of true boreal habitats and abundant snowshoe hare populations. The influence of global climate change on lynx habitats and their more southern competitors (particularly coyotes [*Canis latrans*], bobcat [*Lynx rufus*], and fisher [*Martes pennanti*]) adds another layer of complexity to an already uncertain situation. Fortunately, there is tremendous potential for persistence of lynx in managed forests in the region, many of which are remote from human population pressures. This potential offers opportunities to work together with forest industry leaders in order to incorporate increasing understanding of lynx (and hare) habitat needs into management planning. The dispersal needs of wide-ranging species like the lynx will be useful to inform the conservation community of priorities for landscape connectivity. Several of the priority research action items identified in the workshop (see below) would benefit from immediate action, but success will require a collective research effort.

A summary of research priority action items resulting from the workshop includes:

Develop mechanisms for tracking hare populations in New Brunswick, a key link in the geographic picture.

Complete genetic analyses and determine what metapopulation and source/sink dynamics exist.

Compile existing hare population and habitat data into a landscape model to understand what if any synchrony exists across the region.

Use the opportunity of lynx/hare population peak in Québec to better understand dispersal and metapopulation dynamics.

Develop standardized lynx detection and survey protocols appropriate for administration in all appropriate habitats throughout the Northern Appalachians region.

Work towards a greater understanding of lynx population dynamics (demographics) and causal factors (e.g., habitat, prey, competition).

Attain better understanding of lynx mortality factors.

Develop harvest-independent lynx population and demographic indices.

Synthesize existing data into meta-databases to allow for synthesis and pattern analysis.

Maintain communication between biologists, managers, forest industry leaders and conservation groups, concerned with Northern Appalachian lynx conservation.

For additional information or copies of the full Workshop report, contact:
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THE SOUTHERN CANADIAN SHIELD AND NORTHERN APPALACHIANS WILDLANDS NETWORK

by Conrad Reining

Despite its predominantly wooded condition, the southern Canadian Shield and northern Appalachians region has been severely damaged by logging, development, and the legacy of hundreds of years of human habitation. The forests we see today are far younger and less diverse than those that used to dominate the landscape, and the pockets of natural habitat that remain are too small, too isolated, and represent too few types of ecosystems to maintain native biodiversity at all levels. In Vermont, for example, a state recognized for its natural beauty, five mammals and eleven birds are listed as threatened or endangered. In Maine at least thirty-two native species no longer exist in the state, with several "keystone" species—most notably large carnivores—considered extinct.

Compounding the problem in northern New England has been the increasingly rapid turnover in ownership of massive tracts of forestland brought on by changes in the global forest products industry. In many cases, quick action by conservationists has resulted in the long-term protection of thousands of acres of land. At times, however, these transactions have not protected the most ecologically important lands because no overarching, science-based land protection strategy exists to inform conservationists on what lands are most in need of protection. Without a leader capable of crafting a positive, large-scale vision of the region's ecological future, many once-in-a-lifetime opportunities to protect and preserve these critical lands may be lost forever.

The Solution

Recognizing both the need and opportunity to move large-scale, transboundary conservation planning forward, the Wildlands Project has begun to craft a science-based conservation plan—a "Wildlands Network Design"—for the Adirondacks, northern New England and ecologically linked portions of eastern Canada. The Wildlands Network Design or "WND" is a landscape-scale conservation plan—a kind of workbook—that shows in detail what lands are currently protected, what additional areas need protection, and what steps should be taken to protect critical lands.

We expect to finish the Wildlands Network Design by mid-2004, at which time the Wildlands Project and other regional organizations will use the WND to prioritize initiatives for new and expanded wilderness, protect key wildlife movement linkages, and develop innovative conservation programs for biologically important private lands.

Our Progress to Date

The Wildlands Project (operating regionally as the Greater Laurentian Wildlands Project prior to 2001) has been an active participant in the land use debate in the northeastern states of New York, Vermont, New Hampshire, and Maine and the Canadian provinces of Ontario, Quebec, Nova Scotia and New Brunswick since 1995. Following several years of work on our Maine Wildlands Network, in 2001 we decided that the time was right to expand our presence in the region by launching a new program—the southern Canadian Shield and northern Appalachians Wildlands Network—and opening a new field office in Thetford, Vermont.

Over the past eighteen months our work has proceeded along two paths: our science program, which informs the Wildlands Network Design using cutting-edge methodologies and the latest scientific research; and our education and outreach program, which aims to educate and inspire a broad-based coalition of wildlands supporters and activists from throughout the region.

Advancing our scientific understanding of southern Canadian Shield and northern Appalachians ecosystems

In June of this year we published our Maine Wildlands Network Vision, a smaller scale WND that focused on critical ecosystems in the state of Maine. The Maine plan serves as the foundation for our larger Wildlands Network Design for the southern Canadian Shield and northern Appalachians region. Our science team began work on the larger plan in late 2001, and is currently working on three distinct scientific programs: (1) "focal species" analysis; (2) natural community representation; and (3) the inclusion of "special elements."

Focal species analysis involves analyzing the habitat requirements for several of the regions most ecologically important species, including wolf, lynx, and marten. Including sufficient habitat for these "focal species" in our plan guarantees that most other flora and fauna in the region also will have the habitat necessary in order to thrive.

Natural community representation is important to our WND because it ensures that the widest possible range of ecosystem types is protected. More natural communities means more of Nature's creatures, from mayflies to moose, are protected.

Special elements are unique characteristics that make an area particularly important, such as the presence of rare or endangered species, roadless areas, or old-growth forests.

Once our science team has finished collecting landscape-scale data for these three programs, we will bring all of this information together in a single place using a geographic information system (GIS). In early to mid 2003 we will link this GIS data to a second computer program known as SITES. This powerful program provides a way of identifying an "efficient" network of conservation areas—that is, a set of areas that meet specific conservation goals while minimizing the amount of land used in the network. Our science team will use the SITES results to develop the basic components of the Wildlands Network Design: core wild areas, wildlife linkages, and compatible-use areas. This draft WND will then undergo a series of rigorous scientific reviews by some of North America's leading conservation biologists, and a final WND for the region should be complete by mid-2004.

Building a trans-border conservation movement

The science of developing a Wildlands Network Design is only one part of the solution to protecting critical eastern ecosystems. Equally important is the long process of developing an effective, bi-national network of conservation organizers and activists that will help implement the recommendations found in the conservation plan. To move this goal forward, we are actively recruiting members for a broad-based coalition of supporters from both sides of the border. Thus far, these supporters include several universities and colleges, including Paul Smith's College and the University of New Brunswick; conservation groups, like the Canadian Parks and Wilderness Society and The Nature Conservancies of both the United States and Canada; and government agencies and donor organizations.

In the coming months we will be working closely with our network of supporters to conduct a broad social and economic analysis for the planning area, with the goal of developing consensus on a conservation action strategy for the wildlands network. This work will inform our scientific research (and vice-versa) as part of an interactive process of learning and discovery. Moreover, by cultivating these relationships early on in the process we are much more likely to develop a coalition of long-term supporters dedicated to helping turn our collective vision for the region into reality. To assist us in this effort we are working closely with faculty at Middlebury College, one of the premier liberal arts colleges in U.S. and a regional leader in environmental education. The college has played a valuable role in strengthening our relationship with the local scientific community, co-sponsoring workshops, and lending regional credibility to the conservation plan.

Our long-term vision

Our vision for the southern Canadian Shield and northern Appalachians is to restore and maintain the ecological integrity of the region in perpetuity through the design and promotion of an interconnected system of wildlands in which all of wild Nature can flourish. With the continued support of scientists, conservationists, government agencies, field researchers, economists, land trusts, and concerned citizens like you, we can help turn this vision of a healthy, connected landscape into reality in northeastern North America and beyond.

Contact: Conrad Reining The Wildlands Project POB 225 East Thetford, VT 05043 Phone 802-785-2838 Email: conrad.reining@valley.net

Looking toward Elephant from a moose pasture on the Bemis Trail, summer 2002. Photo by Skanky Yankee who reports that a miscreant has left obnoxious survey thread the length of Bemis Stream — aka Water Skeeter Stream.

Appalachian Corridor Project Linking Vermont's Green Mountains and the Eastern Townships of Québec

Protecting a 100,000 acre forest one hour from Montréal and Sherbrooke

By Terri Monahan

Spearheaded by the Ruiter Valley Land Trust (RVLT), Nature Conservancy Canada, and other local organizations, the Appalachian Corridor project is implementing a trans-border conservation strategy to protect the Appalachian Corridor in the Sutton Mountains of Quebec all the way to the Green Mountains in Vermont. The strategy is based on an analysis of the region's natural features in order to identify sites of significant ecological value and develop conservation plans to ensure the protection of the natural environment, wildlife habitats, old-growth or exceptional forests, and plant and animal species. In addition, the project is intended to support the conservation actions undertaken by conservation organizations and other participants who contribute to the success of the Appalachian Corridor Project by providing biological, legal and other necessary expertise.

Geographical territory

The Appalachian Corridor covers a segment of the Appalachian Mountain range, which spans the US-Canada border. In Quebec, this includes the entire geophysical range of the Sutton Mountains, including its foothills, the Lake Memphremagog watershed and peripheral sites such as Mount Pinnacle, Alderbrooke Marsh and the Brome Lake wetlands. South of the border, it corresponds to the Green Mountains of Vermont, which extend south to Mount Mansfield and Camel's Hump.

The Sutton Mountains massif is the "heart" of this natural area. Located just one hour from Montreal and Sherbrooke, this area of approximately 100,000 acres constitutes one of the last remaining wilderness areas in southern Quebec that still boasts large, unfragmented forests.

These vast wooded areas are essential to the survival of many bird species, such as the Red-shouldered Hawk, and mammals such as the Bobcat, Black Bear and, potentially, the Mountain Lion. Numerous ravines, streams, lakes, ponds, and wetlands also contribute to the richness of this area, which according to recent data is now home to some forty vulnerable or endangered plant and animal species.

Affected ecosystems

Matrix ecosystem is northern deciduous forests mostly composed of Sugar Maple, Yellow Birch and Beech; large patches of Fir/Red Spruce forests at higher elevations and successional Red Spruce/Red Maple/Gray Birch Forests at lower elevations on abandoned farmland; small-patch ecosystems are mostly White Pine/Red Pine/Hemlock forests, ravines, cliffs, outcrops and wetlands associated with narrow floodplains and beaver dams.

Larger landscape implications are: Limited numbers of large to very large matrix blocks (10 000 to 25 000 acres or more), all mostly located at elevation of 300 m and higher; potential still exist to establish connectivity between the "core forests" matrix blocks; contiguous lower elevations comprise a 50/50 of forest/open or abandoned farmland scarcely populated; potential still exists to maintain this landscape as a buffer zone to core blocks by conserving biodiversity hot spots, mature to old-growth forest stands and wetlands and by promoting sustainable use. Aim is to keep habitats suitable for Moose, Deer, Black Bear, Bobcat and Fisher and viable populations of interior forest birds, herps and small mammals.

Anticipated results and timeline

The protection (in perpetuity) of a core area of 25,000 acres (in Quebec) within 5 to 10 years and a larger buffer zone within 20 years.

Progress to date

Over the years, several Land Trusts and regional conservation organizations have made significant progress in the protection of wilderness areas. The Ruiter Valley Land Trust (RVLT), the Mount Pinnacle Land Trust (MPLT), the Alderbrooke Marsh Land Trust (AMLT), and the Brome Lake Land Foundation have ensured protection of more than 1,160 acres of natural environments. Since the creation of ACA in 2001, protected areas cover over 4,000 acres of land. In addition, the Parc d'environnement naturel de Sutton and the Sentiers de l'Estrie have negotiated rights of way providing access to networks of hiking trails criss-crossing more than 1200 acres on the upper slopes of the Sutton Mountains. The Township of Sutton has also participated in the conservation of certain key sectors through the acquisition of lands and the regulation of logging activities.

A communication plan and program of educational activities to sensitize landowners and the communities to the territory's ecology and the need for voluntary conservation of habitat has also been developed and put in place. These activities also provide a source of potential landowners who will eventually donate servitudes on their properties.

Issues & Priorities

The Appalachian Corridor project was undertaken following a preliminary analysis of the issues and conservation priorities in the Sutton Mountains massif. This preliminary study was done in order to examine the region's biophysical environment and ecological framework, including its vegetation and wildlife and the vulnerable and endangered species known to the area. In addition, digital maps highlighting large forest tracts, natural corridors, biodiversity and development constraints made it possible to identify the sites in greatest need of protection.

Essential Partners

Conservation organizations at the local level (MPLT, AMLT, Parc d'environnement naturel de Sutton and the Sentiers de l'Estrie) and the national level (Nature Conservancy Canada, Quebec regional section) support the Appalachian Corridor project's global vision. The collaboration of American conservation organizations such as the Green Mountain Club, Northern Forest Alliance, Nature Conservancy Vermont, The Vermont Land Trust, Forest Watch and The Wildlands Project, are also essential to the implementation of this trans-border conservation strategy.

Challenges/barriers

Situated near Quebec's most heavily populated regions, this natural corridor is mostly privately owned. With the exception of lands protected by Land Trusts, there was until recent land acquisitions by Nature Conservancy Quebec no sizable protected areas in the Sutton Mountains (4,8 km2 and 2,8 km2). And while logging and tourism are clearly both important to the region's economic prosperity, poorly controlled forestry practices and ill-advised tourism and urban development are still serious threats to the integrity of the natural environment and last large tracts of forests are at risk of fragmentation.

Implementation of a comprehensive conservation strategy is required to minimize the impact of human activities on natural communities and to preserve sufficient unfragmented forests to maintain biodiversity.

Major challenges and barriers are :

Private land, mostly zoned for residential or commercial use and therefore threatened by subdivision and development;

Poor implementation of provincial and municipal policies and regulations re: environment and species protection on private land;

Lack of adequate fiscal incentives for voluntary conservation on private land;

Legal challenge re: conservation tools;

Local groups capacity;

Funding (for establishing permanent support, monitoring land, endowment fund and acquisition…).

Action Plan

Given the size of the territory, its high real estate value and current government trends in conservation, the organizations involved in the Appalachian Corridor project will work with key partners to identify the most effective conservation options for targeted sites in order to eventually establish voluntary conservation agreements with private and corporate landowners. These can involve land donations, conservation easements, or the establishment of nature reserves on private land.

The success of these initiatives relies on the combined efforts of all stakeholders in the area: conservation organizations, Land Trusts, governments, regional county municipalities, municipal authorities, landowners, and the general public. The Appalachian Corridor project favours this collaborative approach to laying the groundwork for a trans-border conservation strategy, and for structuring the conservation actions to be taken throughout the territory with local, national, and US partners.

Contact: Terri Monhan, Ruiter Valley Land Trust. Phone 450-243-5411 or email: terri@pixelweb.net

Some Conservation Guidelines for the Acadian Forest

"... animals and plants, along with rocks, oceans, streams and mountains, and not just humans, have spiritual and ethical standing"

By David Orton
Coordinator of the Green Web

"It is we who must adjust to the forest, not the forest to us."

"If you want the trees to stand, you have to stand with the trees."

The most fundamental conflicts in forestry are over values: "How do we use the forests?" An Acadian forest strategy must focus on the need for a new environmental ethic and the corresponding environmental economics.

Those of us who care about the Acadian forest, as shown by various initiatives, have not turned things around, so previous methods of organizing have been unsuccessful. We need a new course and vision, that many people can grasp, internalize, and use to defeat those powerful interests who consider all of Nature as a collection of "resources" just waiting to be consumed by the industrial maw. "Working the existing political/economic system", with all the necessary compromises, humiliations and defeats that this entails, which perhaps characterizes the CPAWS approach to conservation in Canada, cannot and has not worked. A sustainable forestry requires a sustainable society. If the society is unsustainable, this also has to be clearly said and not ducked. Industrial consumptive lifestyles and growing populations are a major part of the forestry problem, whether for the Acadian or any other forest type.

Anyone who looks around at the forests in the Maritimes sees an ongoing deterioration at the hand of industrial forestry. The priorities of industrial capitalist forestry—pulp and paper mills and large saw mills — determine the forest priorities set by provincial and federal governments, hence how the forests are utilized. Industrial forestry interests want to maximize, not minimize, wood consumption. Such priorities, for an Acadian conservation strategy, can either be accepted or repudiated. We believe they must be totally repudiated.

The biodiversity and the forest canopy of the Acadian forest must be kept. Clearcutting, herbicide and insecticide spraying and the use of capital intensive destructive machinery, which degrades the forest and also eliminates the jobs of forest workers, must be opposed. Those who destroy the forests, whatever their scale of operation, should suffer definite social and criminal sanctions. This should apply to pulp and paper mills, sawmills, and also to those who do this among the 'owners' of the approximately 30,000 woodlots in Nova Scotia, 16,000 in Prince Edward Island and 35,000 in New Brunswick.

Industrial forestry orients to a world market, so there can never be enough wood supply. Such forestry is part of a larger "grow or die" overall industrial ideology. Any existing "protected areas" eventually become coveted for their trees. Crown (public) land is basically "spoken for" with this industrial model, another reason that the model itself has to be repudiated. Unionized forestry workers — e.g. those working in pulp and paper mills, with their relatively high wages, come to have an economic stake in the existing industrial forestry model.

John Livingston, in his profound 1981 book ***The Fallacy of Wildlife Conservation***, pointed out that there can be no 'rational' argument for wildlife conservation within the industrial scheme of human-centered values. Wildlife will always eventually lose out, unless there is an entirely new scale of values. Thus, for an Acadian forest strategy which is respectful towards wildlife, we need to re-sacralize Nature, similar to past hunter-gatherer societies. We need to bring back the sense that animals and plants, along with rocks, oceans, streams and mountains, and not just humans, have spiritual and ethical standing. We need an identification and solidarity with all life, not just human life. The overall and ultimate ethical community is not the human community but the ecological community. Ours should be a deep ecology perspective.

We need to oppose the current absolutist concept of "private property" in woodlands for industrial or individual landowners, as well as rejecting overall the viewpoint that the Earth is human property. It is the utmost human arrogance to claim that one species — humans — can give itself the "right" to own living Nature and other species. No one can own the Earth, whether from a state, individual, indigenous, or collective point of view. It is only with a new set of values by humankind that the forests can have a future. We need to advocate new concepts of usufruct use, the right of use but not "ownership", responsible and accountable to communities of all beings. It is our job to articulate such values in an Acadian forest campaign. Our social justice concerns must be assessed in this context. When there is a clash of species interests, or clash of interests within the human species, then generally the human/corporate interest should give way to the overall interests of the forests.

Some immediate particular suggestions:

•Start to promote and apply ecocentric values, that is a deep ecology perspective, in forestry matters, to ensure the survival of the Acadian forest. For example:

•Support those low impact forestry initiatives now underway in many small woodlots;

•Call for phasing out the industrial forestry model in the Maritimes, in favour of low impact, locally focussed, value-added, worker-intensive, full-canopy-retention selection forestry, etc. This period of change to an ecologically appropriate forestry, for the workers involved, needs to be compassionately supported by the state.

•Call for no more wood harvesting from crown lands and the cancellation, without compensation, of all industrial leases. Such crown lands must be allowed to "re-wild", basically becoming non-exploited, connected protected areas, that is, plant and wildlife sanctuaries, with any human intrusion done in a respectful manner. It is from such crown lands that aboriginal land claims in the Maritimes will eventually be settled, and what this means from an ecocentric and social justice perspective has to be fully debated. Also, private woodlot 'owners' will achieve much better economic returns in the transition period out of the industrial forestry model, if those who economically exploit the forests are forced to only purchase non-crown land timber and pulp.

•Among ourselves, forestry activists in the Maritimes need to make common cause with the work of The Northern Forest Forum, published in New Hampshire, which for the last ten years has tried to uphold the overall interests of the Acadian forest on the other side of the border.

October 14, 2002

The following people are generally in support of the above suggested conservation guidelines for the Acadian Forest and have contributed to their formulation:
Sharon Labchuk, Earth Action, Prince Edward Island
Billy MacDonald, Red Tail Nature Awareness, Pictou County, Nova Scotia
Mark Brennan, Forest and Protected Areas Campaigner, Pictou County, Nova Scotia
Ian Whyte, CPAWS, Ottawa
Visit the Green Web Home Page at:
http://home.ca.inter.net/~greenweb/Our e-mail address is now <greenweb@ca.inter.net>

Two train window views of clearcuts in Nova Scotia

END OF SPECIAL SECTION: LANDSCAPE SCALE CONSERVATION IN THE NORTHERN APPALACHIAN/ACADIAN FOREST

Grade Inflation

Certifying J.D. Irving Green

Highlights from ***Grade Inflation? SCS Certification of Irving's Allagash Timberlands*** A Report prepared for Sierra Club of Canada in May 2002 and released by Sierra Club, Maine chapter, November 2002

In 2000, Scientific Certification Systems (SCS) certified around half a million acres of J.D. Irving's Allagash Timberlands (in northern Maine) under Forest Stewardship Council (FSC) standards as a "well-managed natural forest." Soon after, the Sierra Club challenged the certification, but both SCS and FSC upheld the certification.

In the Spring of 2002, FSC did an audit of SCS's certification. In anticipation of this audit, the Sierra Club asked me to write a report to determine what were SCS's standards for grading J.D. Irving, and to what degree the final scores given by SCS followed both the SCS and FSC guidelines. While the Sierra Club did not give the FSC auditors a copy of my report, Sierra Club representatives and I did meet with the FSC auditors and did raise many of the issues from the report, often in the form of questions. The auditors, however, upheld the certification, though they did admit there had been some grade inflation, and they did recommend corrective actions for Irving to follow.

On November 6th of 2002, Martin von Mirbach, a representative of Sierra Club from Canada, expressed deep disappointment in the FSC auditors' report, which, Martin claimed, failed to deal with many of the issues that we had raised at our meeting. He stated that Sierra Club would drop its appeal, not because the appeal lacked merit, but, rather, "based on the report prepared in June we lack confidence that the FSC appeals process will be rigorous enough."

The following are some of the highlights of the 40-page report that I wrote for the Sierra Club. — *Mitch Lansky*

TO READ THE FULL REPORT, TRAVEL TO WWW.MEEPI.ORG AND FOLLOW THE LINKS TO NOVEMBER 22ND.

Grade Inflators

SCS awarded some high grades to Irving grades in the 90s for harvest regulation, pest control strategy, forest access, harvest efficiency, management plan, fish and wildlife, watercourse management, pesticide use, financial stability, public involvement, public use, investment in capital and personnel, and employee and contractor relations, most other scores were in the 80s). How did SCS come up with such high grades, especially when so many of Irving's practices were controversial (such as their dependency on herbicide use or their relations with logging contractors)? I identified a number of grade-inflation themes, which I summarize here:

A. Giving high grades based on promises, rather than practices (cut will equal growth—in the future).

B. Giving high grades based on process or policy, rather than practices on the ground (great computer program to project growth, even if the cutting is mediocre).

C. Setting such low non-certification thresholds that it is difficult not to pass, even when practices veer far from the ideal performance (one would have to have no management plan, or cause species to go extinct to go below 80, the non-certification threshold, in some instances).

D. Ignoring or discounting negative information (wages may be low, jobs may be lost, some of the contractors may complain, but "we are inclined to lay more emphasis on the investment and employment creation we have seen, than on the negative points and complaints uncovered.").

E. Using the few percent fix, where an unacceptable practice becomes "acceptable" through token mitigation that does not change the basic thrust (clearcut with retention, or spraying herbicides on only 95% of plantations, rather than 100%, for example).

F. Marking on the curve—i.e., comparing Irving to some other landowners that are doing worse management, rather than comparing practices to the ideal performance.

Highlights

1. The Forest Stewardship Council is not supposed to certify the replacement of natural forests with plantations if they were established after 1994. Since 1994, however, J.D. Irving has clearcut many thousands of acres in the Allagash Timberlands, crushed the regeneration and slash, planted mostly white and black spruce (which are boreal species, species more naturally abundant much farther to the north) and sometimes Norway spruce (which is an exotic) and sprayed these stands with herbicides. Scientific Certification Systems and FSC contend that these are "planted forests" rather than plantations. While Irving has recently started leaving scattered trees (dead and live) and small islands of trees (for each 25 acres of clearcut) these are recommended practices for improving plantations. Calling these plantations a "natural forest" fails the straight-face test.

Bob Seymour, one of the SCS certifiers, has written (along with Alan White and Philip deMaynadier) elsewhere that, "boreal species [...] Rarely form extensive monocultures in the northeast, except after rare large-scale, stand-replacing disturbances to which they are well adapted." Also, from the same document, Seymour et al. wrote that short rotations (less than 100 years) are very unnatural and that "leaving a few scattered reserve trees [...] could offer only limited benefits." "Management that deliberately produces such stands thus cannot claim to be emulating natural disturbances..." Yet, Irving was certified as a "well-managed natural forest.."

2. J.D. Irving was cutting more than growth for its softwoods at the time of certification. SCS accepted the heavy current cutting of softwoods based on computer projections of future growth as a result of planting, thinning, and herbicides—thus rewarding the very practices that much of the public does not expect from certified forests. This strategy (called ACE, or the accelerated cut effect) is questionable for a forest certified as "natural." Despite a landscape that already is too weighted towards young stands, J.D. Irving's heavy cutting strategy will lead to even less acreage of mature softwoods in 25 years than there

are now. Irving got a 90 for harvest regulation.

3. Irving's clearcutting rate on its Allagash Timberlands, as a percentage of land base, is among the highest for large landowners in the state. Maine's Bureau of Parks and Lands, on similar forest types, does very little clearcutting, thus indicating that Irving's rate of clearcutting is not a necessity.

4. Irving is one of the biggest herbicide users in the state. Choice of management regimes that heighten dependency on pesticides is supposed to be a non-certification threshold. Yet Irving's choice of plantation-style forestry creates a clear dependency on herbicides. Irving sprays 95% of its plantations. Irving's 25 year plan calls for continued herbicide dependence. SCS claims that Irving's policy calls for spraying only when absolutely necessary. In contrast, the Bureau of Parks and Lands uses insignificant amounts of herbicides in similar forest types in the state, thus showing that Irving's rate of spraying is not necessary. Irving got a 90 for pesticide use.

5. Most certified ownerships hire 2 to 4 times more foresters per land area as Irving. Irving foresters do not mark trees for partial cuts, even though SCS recommended that at least 40% to 60% of partial cuts should be marked "to do consistently high-quality work."

The choice of which trees to cut is left to loggers, who have to determine the crown conditions, stem quality, basal area, and other criteria from inside the cab of mechanical harvesters. These loggers are not paid extra for being forest technicians.

6. Between 65% and 70% (depending on which page of the certification summary document you are reading) of cutting is done with feller bunchers and grapple skidders, removing whole trees. The contractor guidelines, if followed, would lead to around 1/4th of the forest being taken up in just trails for machines, let alone area needed for yards for whole trees.

The team that certified Public Lands (the company, SCS, was the same and most of the certifiers were the same) stated that, "...the push to skid large hitches of whole-tree stems with wide, powerful grapple skidders can all-too-easily result in excessive area in trails, soil damage (rutting), damage to residual trees, excessive area in roadside yards, and unsightly accumulations of residues at roadside. Hauling slash back into the woods after roadside delimbing, a common practice to avoid the latter problems, can actually magnify the former, as it merely increases the amount of traffic of loaded grapple skidders and rarely accomplishes a uniform distribution of residues." Some certification systems don't allow whole-tree logging. Irving got a 90 for harvest efficiency.

7. SCS praised Irving's riparian zone management guidelines, which, it claimed, went way beyond state standards by requiring 200 foot buffers around streams. While the Maine Council on Sustainable Management, which Bob Seymour was on, recommended that streams have buffer zones of 75 feet of forest with 65%-70% of full crown closure, and 250 feet with no clearcuts, Irving allows overstory removals (where all mature trees can be cut if there is advanced regeneration) to within 15 feet of streamside. For this, Irving got a grade of 95 for watercourse management policies.

8. Large certified landownerships are supposed to have ecological reserves—especially if these are limited in abundance in the landscape (which is the case in northern Maine). Irving has a small percentage of its land in "unique areas," but Irving cuts in much of these areas. Indeed, although only around 2% of Irving's Allagash Timberlands are in "unique areas," this is where Irving plans to get 3% of its spruce-fir volume. The more intensive the management, the more the need for truly protected areas to maintain habitats that might get lost where rotations are short and herbicides and thinning are used. Irving got an 88 for ecological reserve policy.

9. Allagash is one of the few towns in the state where you have to pay a fee to get from one side of the town to the next. The reason for these fees is that most of the roads are private, owned by J.D. Irving, and gated. Many people in the town of Allagash are irked by the location of the gatehouses. There are some houses beyond the checkpoints. Some townspeople, last spring, burned down two gate houses to Irving land. Ironically, SCS gave Irving a 95 for public use management.

10. Many of Irving's contractors have complained about one-sided contracts, pressure to run equipment on two shifts (day and night), increased responsibilities to perform for a certified landowner, but lowered payments that put the contractors in a squeeze.

At the time of certification, truckers blockaded the border with Canada because, they claimed, that Irving's payment policies pressured them to drive overloaded trucks. Some loggers, in an unrelated blockade of Canada, protested the export of raw sawlogs and importation of bonded Canadian loggers. As a result of the logger blockade, the Department of Labor did a $100,000 study on the bonded logger issue.

One of the authors of this study, Lloyd Irland, was also a certifier of Irving for SCS at the same time. The study concluded that big landowners were using their economic power (in an area with few alternatives for employment) to lower their costs for labor below levels that would occur in a free market. The study concluded that for the whole state, over the last several decades, logger productivity went up 74%, landowner profits went up 169%, but logger wages (inflation adjusted) went down 32%. It also concluded that small independent contractors and subcontractors are a class of workers who are not subject to protections such as Workers Compensation, OSHA, FICA, or Unionization. "...from the standpoint of US labor law," this study stated, "these workers do not exist." Irving has moved to smaller contractors who have big investments in equipment and are at the mercy of Irving who can fire them for any reason, any time.

Irving uses Central American guestworkers to do its planting and thinning. These workers come from some of the poorest countries in the hemisphere and have to pay large fees for visas and entrance to the US. They also have to pay for transportation and housing, and so end up with big debts. Bruce Kyle, Bangor Daily News editorial writer, called these workers "indentured servants."

A September ***Bangor Daily News*** article by Susan Young about the guestworker program gave evidence that since Central Americans have started working in the Maine woods, wages for thinning and planting have gone down. She quoted Chuck Gadzik, Irving forester, who stated: "The rate we'd have to pay to get people to do the work at 3 percent unemployment [in Maine] would not be economically feasible," indicating an unwillingness to allow wages determined by a free market. Irving got a 92 for employee and contractor relations.

Note:In ***Forest Ecology and Management***, 155 (2002/ 357-367)

To read an in-depth article about FSC certification in the tropics, and critics' concern about the certification of plantations go to this website:
http://www.wrm.org.uy
WORLD RAINFOREST MOVEMENT MOVIMIENTO MUNDIAL POR LOS BOSQUES
International Secretariat Maldonado 1858; Montevideo, Uruguay E-Mail: wrm@wrm.org.uyWeb page:

Photos these pages by Mitch Lansky. Taken in Irving's Blackstone district, near Westmanland.

Forest Notes

Summer Rambles in the North Woods of Maine, Québec & New Hampshire

August 2002

By Jamie Sayen

In early August I explored a variety of forests and forest management regimes in Maine. In the latter half of the month I rambled through some old forests in Quebec about 70 miles north of Quebec City. These Quebec forests have undergone some logging in the past century, but I believe that substantial tracts remain essentially old growth. While direct comparisons between the industrially managed forests of Maine and the relatively old, undisturbed forests of Quebec are not always possible or advisable, relative comparisons are, I believe, instructive.

MAINE

Champion/St. Regis forests in eastern Maine

A mile from my host's house in Aurora, Maine, the liquidated industrial landscape begins, and rolls on with scant relief for mile after mile. The clearcuts were conducted over a three decade period, so the older clearcuts now sport low value hardwoods, but little of high quality. Overall, the re-growth is shockingly poor, even on the older clearcuts. There were some plantations of white spruce planted six to eight feet apart. Nearly every one of these seedlings (approximately 2-5 feet high) had multiple leaders, instead of one vigorous leader. The leaders were rarely straight, sometimes they were horizontal. I saw more than one such tree that looked like a head with dreadlocks. The cause of the multiple, deformed leaders appears to be the herbicide spraying that is done to suppress broad leaf vegetation.

Baskahegan Lands in eastern Maine

One or two miles south of the paved road to Baskahegan Lake from Route 1, I took a logging road a mile into Baskahegan lands, owned by Roger Milliken, Jr. and family. Milliken, a past president of the Maine Forest Products Council and Northern Forest Lands Council member, is the pre-eminent voice for responsible industrial forestry and he also serves as chair of the board of the Maine Chapter of The Nature Conservancy. He is widely viewed as a responsible steward of over 100,000 acres. Baskahegan's practices in the past have included some low impact horse logging, however, the area I randomly selected had been managed a good deal more intensively.

Baskahegan practices shelterwood logging whereby it leaves select softwoods and essentially clearcuts everything else. A typical stand had a few white pine (approximately 12 inches dbh), an occasional cedar (8-10" dbh) and a few other softwoods roughly 15-20 feet high. Every 40-60 feet there was a "strip" cut that took everything (and served as a road to extract from the area between strips. Almost all hardwoods have been removed to favor softwood growth. A recent thinning operation removed fir about 10-12 feet high. I observed fairly extensive residual damage to some remaining pine trees. The understory was spruce, fir, hemlock, white pine & some cedar.

While I acknowledge that Baskahegan's more respectable clearcuts do not appear as butchered as industry lands, I searched in vain for trees older than I.

Irving Plantations in Fort Kent area

A tour of Irving forests about 15-20 miles southeast of Fort Kent was a real eye opener. In 1999 Scientific Certification Systems (SCS) and the Forest Stewardship Council (FSC) certified Irving's northern Maine operations. Candidates for certification pay a lot of money to the certifiers to secure certification that their practices meet high standards of ecological sustainability and are beneficial to local communities and their economies.

We drove for about four hours through a sea of liquidation cuts generally much larger than 20-40 acres. Even the so-called buffer zones between clearcuts had been logged heavily. Regulations require only that 50 square feet basal area per acre be left behind in the buffer zones adjoining tracts that have been liquidated. Strip cuts are made every 40 feet into the buffers.

Irving re-plants extensive areas with black, white, and occasionally Norway spruce. Plantations are a multi-step process: clearcut; preparation for planting (a big crusher grinds up the slash and destroys any understory seedlings); plantation of exotic species in straight rows by migrant (Honduran and Guatemalan) laborers; and one or more herbicide sprayings to kill competing vegetation. FSC and SCS have "certified" these plantations as sustainable, exemplary forestry. FSC standards call for the "natural" restoration of forests, but these spruce plantations hardly resemble the uncut forest edges that are a mix of mostly hardwood with some softwood. They certainly do not resemble old growth forests of Maine or Quebec.

A recent Irving clearcut: the trail was 20 feet wide (compared with 13.5 feet in a low-impact operation in Baxter State Park's Scientific Management Area). Irving cut all softwood and left lots of big hardwood slash. It also left a few spindly trees that will be crushed by the crusher. On several clearcuts we observed "clearcuts with retention" which are little clusters of spindly softwood and hardwood scattered around a large clearcut. We saw extensive evidence of blowdowns of retention trees. Yarding areas were much larger than we observed at Baxter because Baxter cuts its logs to shorter lengths. Signs listed names of Fort Kent fifth graders who had planted seedlings for some of Irving's showcase plantations.

We did not see much evidence of protection of deer winter yards, and our logger-guide (who has cut on Irving lands since 1987) told us that landowners try to locate them in riparian areas or cedar stands so as to minimize economic impact. White spruce plantations, probably the majority of plantations we observed, are very vulnerable to spruce budworm outbreaks. White spruce kept the 1950s outbreak going.

After several hours of driving along Irving's certified forests, we felt queasy. The destruction is ubiquitous, relentless. There are no significant forest stands with closed canopy such as we had observed a few days earlier at Baxter's managed areas.

Baxter Park Scientific Management Area

Low Impact logger Bob Matthews, using a light machine to skid trees out, was cutting a half cord an hour, or five cords a day. Forwarder trails were 400 feet apart and 13.5 feet wide. Twitch trails were only 8-9 feet wide and one could barely detect the footprint of his machine. He had been instructed to cut 70 foot diameter circles (or gaps) in an ordered pattern (generated by computer). The distance between gaps was 280 feet. The plan calls for 140-year rotations. Every ten years the logger will enter and conduct another series of 70 foot gap cuts. He thins non-spruce species to favor spruce growth and regeneration. He is not cutting hemlock. Within the management zone are substantial "reserve" blocks of 10-100 acres where no cutting will occur. The patch cuts, approximately one-tenth of an acre, are designed to mimic natural openings, although the computer-generated uniformity of the openings clearly does not mimic the patchiness of natural disturbance. After Bob finished for the day he showed us a single-tree selection job he had done the year before. There were lots of big old trees of all species standing in the FOREST. He had removed most fir and about equal amounts of spruce and hardwoods. The bigger hardwoods had been cut for logs, the smaller for shade. Then we crossed a logging road to visit a site cut a couple of years earlier by a logger using heavier equipment, but under the same directives of single tree selection. Gaps in the canopy were larger, there were many more raspberry patches, and significantly greater residual damage to trees than at Bob's site. Although Bob's low impact job was clearly superior, even this heavier cut left behind a FOREST, not just a jumble of economically desirable softwoods. I saw no evidence of a forest in the aftermath of cutting on Champion, Irving, or Baskehegan lands.

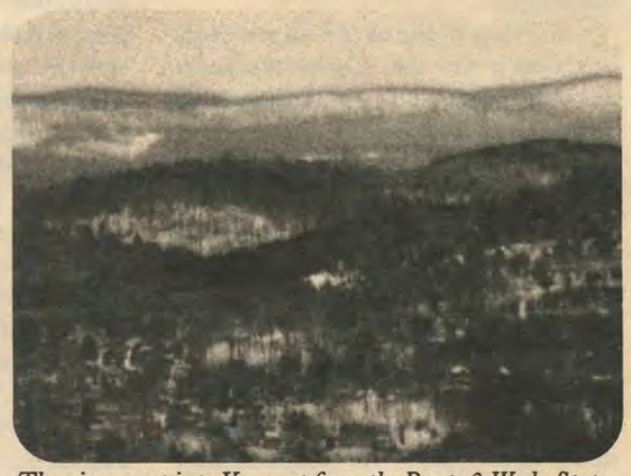
Big Reed Pond Old Growth

In late June I had made a quick visit to Big Reed Pond, accompanied by two seven year olds and two teenagers. My observations were necessarily rather quick and skimpy. Nevertheless, on the north shore of the Pond I observed some large red spruce (25-28" dbh) and a few large fir (one was 12-14" dbh). As we moved uphill from the pond, we found more yellow birch in the understory, some hemlock. Beaver had been cutting small birch. Nearer the shore, the understory was mostly spruce and fir, with a bit of cedar. Spruce dominated the overstory. The spruce and fir seedlings had single leaders that were straight and not as long as the leaders growing in the open in plantations.

On the hiking trail from the car to the Pond, there was a lot of sugar maple, some very big yellow birch (including a 36" dbh on the trail), and some smaller birch. There was lots of beech in the understory, but very little white birch.

A forest ecologist who visited Big Reed this spring wrote me that damage to the understory by moose was "incredible." He speculated that the high moose population in the "surrounding wasteland" might be responsible. I submit that the smallness of this reserve—about the size of the average "reserve" contemplated in Maine eco-reserve circles these days—is another factor.

Continued Page 26



The view west into Vermont from the Route 3 Weeks State Park scenic overlook. Clearcut ridges and mountains extend both sides of the Connecticut River to the north; the Kilkenny District of the White Mountain National Forest affords some relief.

"Sustainable" Forestry in Nova Scotia?

A review essay by David Orton

"The Earth enemy wears a cloak of decency." - Anonymous

Forestkeeping: A History Of The Department Of Lands And Forests In Nova Scotia 1926-1969, Dr. Wilfrid Creighton, Department of Government Services Publishing Division, 1988, paperback, ISBN 0-88871-075-5

Forests of Nova Scotia: A History, Ralph S. Johnson, Department of Lands and Forests and Four East Publications, Halifax, 1986, paperback, ISBN0-920427-08-1

Introduction

On September 28th, 2002, I took part in a rainy field day in Middle Musquodoboit, well organized by the Nova Scotia Woodlot Owners' and Operators' Association. There was a good turn-out of about 60 people. I was accompanied by two friends who share similar, ecocentric environmental values. This field day was held at the 1,400 acre "woodlot" of Dr. Wilfred Creighton, a 98-year-old professional forester and former deputy minister of Lands and Forests. "Woodlot" is one of those commonplace taken-for-granted terms, which, like "resources", is a significant part of the industrial forestry problem. It conveys, through the use of particular language, a "growing timber", human-centered world view of the living Acadian forest. Notwithstanding their titles, this is also the view expressed in the above two books, **Forestkeeping** and **Forests of Nova Scotia**. It is not a view that "nature knows best", but that woodlots need to be "managed" and brought, through human intervention, into industrial forestry production. Non-managed woodlots are called "idle" and "stagnant" in the Ralph Johnson text, and this is seen as a major problem in N.S. (Johnson, p. 355) Any "management" perspective towards forests or any "restoration" forestry, rests on an implicit or explicit set of values about how humans should relate to forests. It also rests, even if unconsciously, on a perspective about the desirable nature of the society that we all live in, and which will heavily impact any forestry - whether industrial, "low impact" or "certifiable."

Sustainable forestry has been the party of opposition for some time in Nova Scotia, as these notices of organized protest indicate.

This field day was a "first" for the Woodlot Owners' Association. We were told by Tom Miller, the president of the Association at this event, that Wilfred Creighton's woodlot represented the kind of forestry values that the Association was after. The woodlot, presented as a role model for others seeking alternatives to industrial scale forestry, sometimes employs up to a dozen local people. The invitation flyer for the field day used the environmental card and was headlined "The Old Man and the Trees." (There did not seem to be any awareness by the Association of the contradiction of having a commercial blueberry operation since 1953, with its heavy biocide use, as part of the Creighton "sustainable"/low impact woodlot. People for the field day actually assembled in a building at a neighbour's commercial blueberry operation.) The flyer informed that we were invited to:

"View work in progress by woodlot operators and consider the options,

-Horse logging and extraction trails
Forwarder/porter
Small harvester/processor
Skidder and tree length method
Pre-commercial thinning choices in mixed hardwood stands"

We rotated through all the above project sites at the Creighton woodlot. It was clear to me and my two friends, that this woodlot operation, with its five miles of "all weather" roads, was much better than the massacre of the regular industrial-capitalist forestry in the province. There was obvious care to minimize site damage in taking out the wood. So this was a "soft' or allegedly low impact forestry. But the wood WAS being taken out and not left. The economic interest was the dominant one in this woodlot and, it seemed, for its "interpreters" at the project sites during the field day. Wildlife and non-forestry environmental concerns were at best footnotes in our group discussions, as we rotated through the various sites. There was one site, a riparian zone, where wildlife concerns were prominent. But the focus remained, even at this site interpreted by a biologist, human/corporate-centered; accepting the legitimacy of the overall industrial forestry frame of reference, so that our job was to fit to this, while fighting for "wider" forest leave strips along stream banks.

We were proudly told at the field day that the Association is now a member of the Forest Stewardship Council in the Maritimes, although no individual woodlots of members have yet been "certified." This first field day for the Association was also meant to be the start of a counter trend to the "woodlot owner of the year" award/field day. The woodlot owner of the year prize is handed out annually by the provincial Department of Natural Resources and has become part of the ongoing celebration of industrial forestry within Nova Scotia, with compliant media PR coverage and plaque awarded.

Creighton and Johnson

I decided to read Creighton's book, a slim volume of 154 pages, as background preparation for the field day. Creighton retired from the government in 1969. After I had read his book, I became interested in reading Ralph Johnson's 400-page history of forestry in Nova Scotia. This book is co-published by the Department of Lands and Forests. Johnson's book, which should be called "Forest Industry of Nova Scotia: A History" - as opposed to "Forests of Nova Scotia", is dedicated to Wilfred Creighton. Both these individuals have been chief foresters over long periods of time within Nova Scotia, although Johnson worked for the Bowater Mersey Paper Company for 37 years, 31 of them as chief forester. What is highly instructive is that this more or less official history of forestry in Nova Scotia is written by a long time pulp mill employee! The foreword to Creighton's book Forestkeeping, by Lloyd Hawboldt, describes both this author and fellow forester Ralph Johnson as having earned "The title of father of forestry in Nova Scotia."(Creighton, p. x) To complete the round of plaudits, we are told by Hawboldt in the same foreword: "Under William Creighton the Department of Lands and Forests entered a period of expansion and expertise that moved the reputation of Nova Scotia into the front ranks of forestry." (Creighton, p. xi)

A contemporary perspective was demonstrated at a meeting of the "Standing Committee On Resources" at the Nova Scotia Legislature on October 29th, 2002. In the Minutes, posted on the internet, one of two spokespersons (Ms Nancy McInnis-Leek, Director of the Forestry Division), appearing for the Department of Natural Resources, noted:

"If you look back, the chief foresters of our time, in the past, have always written a book at the end of their 25 years in government. Each one reads similarly. It reads such as, we are running out of wood, there are bad practices, the industry is going to collapse, we have to find a way to do things better.

What we found is, the industry adapts, people adapt and things change. We hope that we are not ever walking down a path that is going to lead us to the fisheries issue. It is easier to see the trees, it is easier to manage the trees."

Both the forestry books discussed in this essay are written by authors who are in some sense "setting the record straight", and in the process are establishing their critical credentials. Yet both writers have had an important role to play in ESTABLISHING the forestry record in Nova Scotia. Both books are published (blessed?) by the provincial government department responsible for forestry. The books are celebrations of government, with some secondary mention of contradictions. Both are human-centered books, with an economic, "production of timber", focus. The books acquiesce to the basic government view that the orientation of forestry in the province is to be determined by the main industrial users of the forests. This is how Johnson put it:

"Industry requires reasonable assurance of adequate raw material in order to establish mills which may cost millions of dollars." (Johnson, p. 253)

Both books show examples of how industry has economically shafted the government, taxpayers and small woodlot owners, for example, through low stumpage rates on crown (public lands) leases. Crown forestry land on long term leases has been handed over to the pulp mills. Creighton's book shows how in the 60s, stumpage for the Scott Paper 230,000 acre crown lease was $2 per cord for softwood and 50 cents per cord for hardwood. (Creighton, p. 132) During this same time period, Stora was paying $1 per cord stumpage from their crown lease. (Creighton, p. 130) Once any crown land is tied up in a pulp lease, alternative land use - say for parks or protected areas - becomes totally constrained. Creighton points out that for the Scott crown lease, "withdrawals" by the province could not exceed one per cent of the lease. (Creighton, p. 133)

Both books accept the use of biocides on forests (see Creighton, p. 144), with Johnson inveighing against "so-called environmentalists" who opposed this. (Johnson p. 350) Creighton accepts biocide use on blueberry fields. (Creighton, p. 96) Johnson, unlike Creighton, makes critical comments about clear cutting. Yet Johnson himself worked for a pulp mill which used clear cutting:

"I am reasonably certain that clearcutting as commonly practised here offers little or no economic advantage over partial cutting systems when all costs are added in; and, furthermore, that over the long run it is ecologically unsound. Yet clearcutting with planting is the chief method practised in Nova Scotia today." (Johnson, p. 356)

The strength of Johnson's **Forests of Nova Scotia** is that it is a well documented, illustrated, history of the forest industry in the province. I recommend it for this purpose. His is an economic, not an ecological, perspective on the forests of Nova Scotia. Creighton's book shows the same viewpoint. For Creighton to claim in the title of his book, that the Department of Lands and Forests in N.S. has been in the "Forestkeeping" business is a travesty of existing forest realities. "Forest-destroyer" would more appropriately characterize any true history of the Department of Natural Resources. Creighton's book, with its misleading title, feeds the ongoing public deception by the Department and forest industry that all is basically well with contemporary forestry in Nova Scotia.

Johnson opposes "extensive parks" in favour of the "multiple use" of forested land, because parks are to be "inviolate by man forever." (Johnson, p. 327) So Johnson would have no problem with some literature distributed by the Woodlot Owners (also distributed by mainstream environmental groups) at the field day - "Forest Accounts: Reporting on the state of Nova Scotia's forests", which holds up for emulation the selection logging being carried out in Algonquin Park in Ontario. Creighton and Johnson also have a traditional human-centered perspective of wildlife in forests. Wildlife is presented in their view, not as having its own intrinsic

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Forest Notes, Continued

QUEBEC

In August I spent two weeks in Quebec about 70 miles north of Quebec City and due west of the western tip of the Laurentide Provincial Park. The area has been subjected to very light logging over the past century. The last operation, in 1969-1970 took out a few yellow birch, but did not touch the small lake we stay at. That lake, Lake Austin, is about three-quarters of a mile long and a quarter mile wide. It is ringed by four relatively steep hills (two on western and two on eastern shores) that rise about 300-500 feet above the lake.

Relatively Undisturbed Site

At the southwest end of the lake is a steep slope that is shielded from prevailing weather from the west and north, and is, consequently, remarkably undisturbed, except for extensive beaver cutting of white birch within 200 feet of the shore. Once beyond the zone of beaver cutting, there is significant large yellow birch (24" dbh and greater) and white spruce (24" dbh). As the terrain gets steeper, white spruce dominates, with some fir. I could find no recent blowdowns and surprisingly few blowdowns at all. Mostly there were broken branches. The understory was generally dominated by spruce and fir, although often mixed in with mountain maple, ferns, clintonia, and lower down, by raspberries (mostly where beaver had been at work). The leaders of spruce and fir were straight and 8-10 inches long, a couple of inches shorter than leaders growing in the open sunlight. The flat top of the hill had a cluster of big spruce, the largest was 28-30" dbh. It had no branches for 35-40 feet and was at least 80 feet high. (Later I measured a down white spruce nearer our camp and found it to be at least 100 feet long.) Generally the canopy was closed. Openings were invariably small.

A More Disturbed Site

Across the lake on the northeastern hill, there was a good deal more disturbance, reflecting the prevailing winds. Again, beaver have been extremely active up to 200 feet from shoreline, which is covered with black spruce. Blowdowns were much more frequent, but even here, it is usually a single tree or a single tree and a couple of smaller trees that it took with it. Hardwoods were much more abundant. Above the beaver zone, yellow birch (24-36" dbh) dominated. White spruce (24") was less common than on the western hill, but still plentiful. The large yellow birch rarely had branches for the first 20 feet. A dead yellow birch (38" dbh) had no branches for 25 feet. Disturbance increased as I moved south along the summit (and was even greater on the southeastern hill). But even in the most disturbed areas, canopy openings are not large, much, much less than a quarter acre. The ground was never bare; soil was not eroding; hiking was often treacherous. In most disturbed areas, new growth was largely fir, mountain maple, and hobblebush.

The understory was dominated by fir, with some spruce. Where the canopy was closed, wood sorrel, ferns, and fir seedlings predominated. Where it was fairly open, there was spruce, fir, and mountain maple. Leaders were straight, and shorter than on seedlings growing in open sunlight. I did notice that the leaders of spruce and fir seedlings growing in open areas tended to have a "crook" and were not as straight as leaders on seedlings in a closed canopy. But I did not see multiple runners encountered in sprayed plantations in Maine.

The cabin we stayed in was built in 1921. It is almost 100 feet long and the long roof beam is 52 feet long. At its base, it is 19 inches in diameter, and I counted 185 rings, making it a contemporary of George Washington and John Adams. At its other end, its diameter was 11 inches and I counted 75 rings. Its diameter at age 20 was one-half inch. At age 40 it was less than 1.5 inches. Its most impressive growth occurred between ages 100-160.

Major Disturbance Agents

Beaver: Beaver are one of the most important disturbance agents, along with wind, ice, and pathogens. In 1983-1984 they dammed the outlet to Lake Austin and raised the lake's water level more than a foot, killing the black spruce along the shoreline. A series of additional dams in the next couple of years raised the lake at least two feet overall. They mostly cut white birch and alder within 200 feet of the shoreline, so their greatest impact in on a narrow ribbon around the lake.

They also dam streams and create ponds that periodically revert to meadows. Over the past 40 years I have observed a pond, "Mud Pond," go from pond to meadow to pond three different times. It is once again a pond. There is alder, but very little white birch (except in the band 100-200 feet around Mud Pond).

Rock Slides: On the southeastern hill, there was a rock slide in the 1950s and 1960s that is now largely overgrown, although there is still some bare rock after 40 years. In July 1994, after several days of torrential downpours, the very thin soils on the steepest section of the southeastern hill weakened and collapsed. Three inverted V avalanches stripped the hillside bare of vegetation and soil from near the summit all the way to the lake, depositing many trees and much soil into the lake. These slides were probably 50-75 feet wide at their base and a couple of hundred feet long. Mostly they are bare rock, but some soil did remain. Raspberries, fireweed, and other early successional species quickly colonized. Now white birch is overtaking some of the raspberry patches. It will be a long time before soils recover this steep slide.

Human Caused Fire: Surprisingly, natural fire seems to play a relatively minor role up here, even though this is essentially a boreal forest. This August was exceedingly dry, yet the leaf litter was always damp under the forest canopy. There have, however, been some notable human caused fires within about 5 miles of Lake Austin. I do not believe that Austin was burned by any of them, but would need someone with better training to verify this.

Almost 30 years ago I noticed that there was relatively little white birch on Lake Austin, whereas on the next lake the southern shores were white with birch. I wanted the birch for firewood, and was always able to secure enough, but the contrast was striking. I also noticed that there was a significant amount of big aspen (12-15" dbh) mixed in with the birch. This summer I came upon a brief history of the territory and learned that there had been several severe fires in the area between 1903 and 1921. The area with the most aspen had probably been burned two or three times. The fires were caused by a railroad (about 8 miles away to the west) and possibly logging. I hiked the half-mile trail with the aspen, and found that the aspen is starting to thin out. There is a good deal of mid-sized white birch (6-10" dbh) and fir (12-16"). The understory has a considerable amount of spruce and fir. There is also a good deal of spruce and fir that is 15-20 feet high.

I did not find any Yellow Birch or big white spruce. The biggest trees were only around 14". The absence of any big white spruce or yellow birch in the burned area persuades me that Lake Austin never suffered a significant fire when the area to the south and west did burn.

Conveyoring of trees down the sloping side of the Moisie River, eastern Québec similar to the Lake Austin slide noted by Jamie Sayen.

Some Additional Observations & Comments

Comparisons between Maine & Quebec: Comparisons are tricky. Maine's dominant spruce is Red which does not grow in the Lake Austin region. Austin does not support sugar maple, beech, hemlock, and white pine is so rare that I can point out most of the big white pines on each of several lakes. Nevertheless, many important species grow in both places, and disturbance regimes are often similar. I have seen no evidence either in Maine or Quebec that large catastrophic disturbances occur frequently. Most disturbances affect a very small area only. Exceptions, such as the 1938 hurricane, the 1998 ice storm (in northern New England) and the rock slides on Lake Austin, can affect large areas, but are very rare.

Black & White Spruce Plantations vs. Black & White Spruce Old Growth (or almost old growth): Here, I think some comparisons are valid. Since Irving has opted to eliminate naturally-growing red spruce in favor of black and white spruce (which are much less common in Maine, except in wet places where black spruce grows), I feel it is fair to contrast its plantations with naturally-growing stands. The comparison is not a flattering one for Irving, and raises serious questions about a Green Certification process that rewards such unnatural, destructive practices. The most obvious differences: at Lake Austin, there is an all-age, mixed species forest, not a monoculture moonscape; seedlings in a closed canopy are healthier than in the plantation with its weird leaders; natural disturbance is very small, whereas industrial disturbance mimics human-caused disasters and the most extreme and infrequent catastrophic natural disturbance events. Growth of plantation spruce will be rapid, with wide rings, severe taper, and branches to the ground. Vertical diversity is nearly non-existent in the plantations. Wildlife habitat diversity is impoverished

Growth of understory old growth spruce is slow, taper is very modest, and there are few branches in the first 30-40 feet. Soils are protected following natural disturbance, except after avalanches. Erosion is minimal. Biocides are not sprayed.

Abuses of the Certification Process: Certification has hurt loggers who are expected to be more careful, even though pay has not increased. In effect, certification represents a pay cut for loggers. Irving increased herbicide spraying in certified areas in 2001, following certification. Is this the message the certifiers want to send to the public? FSC claims that most clearcuts are less than 25 acres, but we saw many clearcuts much larger than that. FSC says no exotics can be planted in certified plantations, but we saw a 1999 plantation with white, black, and Norway spruce. Norway spruce is a European species. But even the white and black spruce are exotics in the sense that they would not naturally be growing where they are planted: red spruce would be the dominant spruce species.

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"Sustainable" Forestry in Nova Scotia?

"An ecological perspective is ultimately subversive, challenging the direction, values, and the institutions of industrial society."

Continued from Page 25

value, but as a "resource" to be managed for human hunting, fishing and trapping.

The fundamental critique of industrial forestry in Nova Scotia has not come from its supporters/practitioners within government, or from the forest industry itself, but from the outside. Any critical comments made by Creighton or Johnson in their books seem tepid compared to the past work done by environmentalists like Charlie Restino, Geoffrey and Elizabeth May, Rudi Haase, Neal Livingston, myself and other dissidents. See for example, Paul Webster's 1991 Dalhousie University MA Thesis, ***"Pining For Trees: The History Of Dissent Against Forest Destruction In Nova Scotia 1749-1991."***

Industrial "sustainable"' forestry

Jorg Beyeler, Manager of Forest Planning for the Department of Natural Resources, in the Minutes mentioned previously, said in response to a question from a politician concerning the new so-called "Sustainable Forestry Fund" in Nova Scotia: "The silviculture program is targeted at growing timber. There is no question about that."

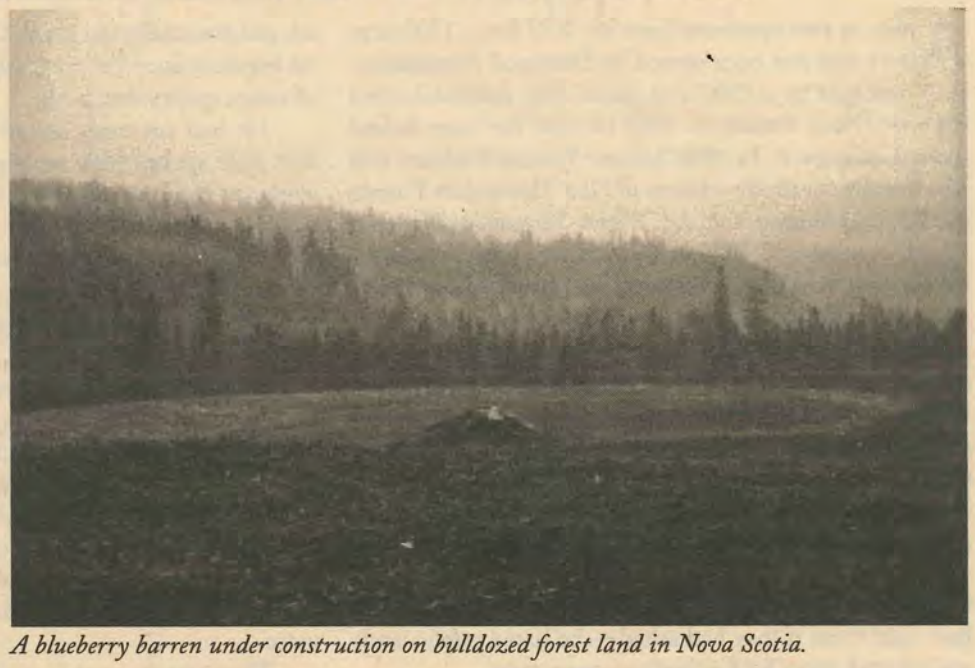
This industry/government silvicultural initiative is the latest attempt to keep the wood supply coming, without seriously challenging any of the basic assumptions of the existing industrial-capitalist forestry model in Nova Scotia. The regulations of the alleged Sustainable Forestry Fund dealing with silvicultural programs (which include "weed control", i.e. chemical/biological spraying, planting, thinning, etc.), came into effect in the year 2000 and now cover privately owned woodlands (about 75% of forested lands) within the province. (There is however, no legal requirement that a private landowner conduct silviculture on what is considered their "property" after cutting has taken place.) "Registered buyers" of the living forest must either conduct a silvicultural program themselves after cutting (which is mainly what is happening), or contribute $6.60 per cord for softwood and $1.20 per cord for hardwood to the Sustainable Forestry Fund, for the Fund to administer such a program. According to testimony given to the NS Standing Committee on Resources, there are about 350 registered buyers in the province, but about 50 of them are responsible for 95% of the wood either bought, used or exported.

Nova Scotia Woodlot Owners' and Operators' Association

I have had some relationship with the Woodlot Owners' Association for about the last ten years. This has included sometimes attending the annual meetings and occasionally taking out an annual membership. This relationship from my perspective has been supportive, yet critical. I have always personally felt welcomed by the main activists in the Association at meetings that I have attended. Historically, the Association, which goes back to the mid-60s, has tried against the unrelenting opposition of the pulp mills and of their allies in the provincial government, to be an economic voice for the small woodlot owner. However much it wanted to be THE oppositional voice, the Association still couldn't bring itself to break totally free and continued to seek "recognition" from the industry and government, e.g. inviting the appropriate minister to address annual meetings, seeking government grants, joining forest industry dominated phoney "coalitions", etc. But in the last few years there has been an evolution in the direction of "low impact" forestry. Perhaps there has also been a hesitating search for a different social base of land "owners"', to include those who do not orient to feeding the forest industry, as well as an engagement with the mainstream environmental community. The Association eventually withdrew from the "model forest" project in Nova Scotia, because they belatedly found out it was industry dominated. There continues to be a fear of "being too radical" or "not alienating our traditional base" etc., which has been expressed to me.

I myself am unsure of whether the evolution of the Association away from straightforward "economism" - that is standing up for the rights of woodlot owners in Nova Scotia to participate in collective bargaining for roundwood- selling pulp to the mills, fighting over quota and price, etc. - is a genuine change of ecological heart, or a positioning for a "certification" response to the "green" consumer market for forest goods now opening up. Logging for a green market does not challenge the overall industrial paradigm which is destroying the natural world. This green market is what the Forest Stewardship Council, with elements of the industrial forest industry on board, is feeding/creating.

At the field day, Wade Prest, a past president of the Association who has sometimes spoken at mainstream environmental meetings, gave a short talk emphasizing how industrial forestry was "depleting the nutrient capital" of the forests in Nova Scotia. At the last Association annual meeting, Prest had talked of "An opportunity for the Association to respond to new values." The last two annual meetings of the Woodlot Owners have featured progressive talks. One was by the Buddhist forester Jim Drescher, whose "Windhorse Farm" is an alternative in the province to the industrial forestry model. The other talk was by Ron Colman, who spoke against economic "growth" orthodoxies, and of the "Genuine Progress Index" and how to apply this to forestry. Mainstream environmental groups, who have themselves embraced the Forest Stewardship Council, have rallied to the Nova Scotia Woodlot Owners' and Operators' Association.



A blueberry barren under construction on bulldozed forest land in Nova Scotia.

Conclusion

I admire Wilfred Creighton for being articulate and physically active at age 98. However, Creighton (who promoted industrial forestry throughout his life by reason of his government employment) and his woodlot have been put forward as an ecological role model for some kind of sustainable forestry in Nova Scotia. That this has occurred, illustrates the widespread confusion about what such a forestry entails. The low impact forestry seen in Creighton's woodlot has to be a minimum, not a maximum aspiration. Sustainable forestry is not a word change or a graft onto the existing industrial capitalist society. It is not a marketing opportunity, although it is being packaged as such. For example, the November 2002 issue of ***Atlantic Forestry***, a journal stuffed with ads for industrial machinery, has a picture of Wilfred Creighton on its cover. Inside is a eulogistic article about the Nova Scotia Woodlot Owners' and Operators' Association and their field day. The Association we are told, is articulating a "new vision based on sustainable forestry." But there is no NEW vision yet, from my perspective.

A new vision, rooted in an ecological perspective, must mean an opposition at some level to economic growth as an end in itself and to the consumer society which accompanies this. An ecological perspective is ultimately subversive, challenging the direction, values, and the institutions of industrial society. In a presentation to the provincial Royal Commission on Forestry, back in April of 1983 (published by the Gorsebrook Research Institute at Saint Mary's University, under the title "Pulpwood Forestry in Nova Scotia and the Environmental Question"), I noted:

"Forestry policy in Nova Scotia, as elsewhere in Canada, will be decided by organized political power, and not by the rationality of various arguments which make themselves heard."

A sustainable forestry has to be rooted in deep ecology in its attitude towards the forests and in its attitude towards industrial capitalist society. The Woodlot Owners' and Operators' Association are now positioned to make an important contribution to such a discussion, if they are willing to look deeper. Forestry role models for this vision are yet to come into being.

November 19, 2002

An Analysis of Forest Statistics for Maine, 2001

By Mitch Lansky

Some noteworthy trends:

Industrial share of Maine timberlands has declined from 7.3 million acres to 5.7 million acres between 1995 and 2001, a loss of 1.6 million acres.

Industrial owners cut 28% of acres cut in 2001 but did 82% of clearcuts, 82% of pre-commercial thinning, 83% of plantations, and 91% of herbicide release.

While clearcuts have declined greatly over the last decade (making up less than 3% of all cuts in 2001), cutting is still heavy, so that the acreage of regeneration cuts (clearcuts plus overstory removals) have not declined at all since 1994 (around 93 thousand acres in 1994 and around 94 thousand acres in 2001), and the average cut per acre per year has declined very little (from 12 cords per acre in 1996 to 11 cords per acre in 2001).

The long-term trend is towards increasing volume removals. From 3.5 million cords in 1960 to 5.8 million cords in 2000.

Most of the wood being cut (around 57%) is being used for pulp. Only around 24% is being used for lumber. Nearly 20% of the wood is going for biomass.

Certain species of sawlogs are being exported unmilled at a very high rate. The biggest examples are 61% of spruce-fir, 53% of yellow birch, and 52% of hard maple. Most of the exports are to Quebec sawmills.

The spruce-fir stand type has continued its decline, from 7.8 million acres in 1982, to 5.2 million acres in 2001. The northern hardwood and intolerant hardwood types have increased over the same period.

From 1995 to 2001, the percentage of forest in fully-stocked stands declined (as it did from 1982 to 1995). The trend of an increasing percentage of the forest in acres with low basal area also continued.

The forest continued its trend of increased acreage in seedlings and saplings. The spruce-fir type continued its trend of reduced acreage in sawtimber and especially poletimber.

Between 1995 and 2001 the MFS noted a continued trend of cut being greater than net growth (as measured in basal area, rather than volume). This led to a trend of a 1.3% decline per year in basal area for all species with around a 2.4% a year decline for spruce-fir and intolerant hardwood types.

The MFS measured more volume per acre (16 cords) in 2001 than had been measured by the US Forest Service in 1995 (15 cords), but these findings contradict the other findings (of lowered percentage of fully stocked stands, increased acreage in seedlings and saplings, and declines in basal area) noted above. This brings into question the reliability of comparisons of the 1999-2001 figures to other inventory years. As in other inventories, the methodology has changed, making comparisons difficult.

From a forthcoming full study of the Maine Forest Service statistics for 2001. Order copies via email at mlansky@nci2.net

Stratford Bog Easement

An easement is a worthless document unless its holder carefully and regularly monitors it

A mile or two upstream from my land lies a 1300-acre tract that was once owned by Diamond International. It was part of a 7300-acre parcel that was subdivided from the Nash Stream in 1988 because the state lacked funds to acquire it. In 1990 Senator Warren Rudman and The Society for the Protection of New Hampshire Forests (SPNHF) arranged for the White Mountain National Forest to acquire all 7300 acres. All that remained was for residents of Stratford to approve the transaction at a special town meeting.

In June 1990 things began to go wrong at an informational meeting. The Forest Service representative was unable to answer questions from camp owners worried about losing their camps. Many thought he was being evasive. The Coos County Executive falsely charged that there would never be any logging on the land once the public owned it. Later I learned that SPNHF had relied on the assistant to the Stratford selectmen to drum up local support for the deal. It did not know what I could have told them if they had asked—she hated public lands and blamed them for her high property taxes.

The next week at the poorly-attended special town meeting, opponents stubbornly refused to be reassured that the town would not lose any taxes and that logging would be permitted. The debate grew angrier, and in the end, the measure to transfer the 7300 acres into the National Forest failed by three votes. It was especially frustrating that at least four supporters in attendance were not properly registered.

SPNHF and The Nature Conservancy owned the westernmost 1300 acres, a mountainous tract between 2000 and 3000 feet in elevation. They could not afford to retain it. At this time, depending on one's point of view, easements were either an untested hypothesis or a cure-all. With the faith of a true believer, SPNHF and TNC placed a conservation easement on the land and sold it to a local contractor with an unsavory reputation. It wasn't long before logging trucks were rumbling past my house all day long.

The contractor abided by the terms of the easement. He did not develop the land, and he did not conduct clearcuts greater than 100 acres. Diamond had not left behind much timber value on the land, but he liquidated it as quickly as possible. The brooks that drain this steep, high elevation tract filled with silt and their banks suffered significant erosion.

Following the 1998 ice storm, the landowner secured some salvage funds the state had gotten from the Forest Service, and he hammered the remnants.

When he tried to sell the 1300 acres, a potential buyer, fearful he would be held liable for repairing the damage to roads and streams, called in the state to assess the damage. The state was slow to act, the buyer persisted, and eventually the state's Department of Environmental Services fined the contractor for five serious violations of water quality standards.

He had cut roads out of steep slopes, leaving 12-15 foot high gashes with no vegetation to stabilize the soil along the roadside. After a couple of years, there was a lot of bare rock exposed. Ruts in the roads were one to two feet deep. Stream banks were degraded where roads crossed. At stream crossings, narrow mountain streams widened significantly, and sand and gravel clogged the stream.

In the spring of 2000 I took New Hampshire's State Forester, Phil Bryce, a former paper company forester, on a hike along the Gay Brook, which drains the northeastern sector of the property. Ice still covered the brook, but a warm spell the week before had caused significant thawing and melting. By the time of our hike, a hard freeze had set in. The ice over the brook was topped with a brown coat of silt. When I pointed this out, Bryce could only grimace.

That year the state forced the contractor to repair culverts and other violations. In one place, he installed an eight-foot high culvert, made from a couple of huge storage tanks whose ends had been cut out. In September 2002 I revisited the site.

As I entered the property, a "no trespassing" sign greeted me. An odd way to assure public access on easement land, I thought. I found that the repairs had met with mixed success. Some of the worst erosion had been slowed or stopped. But new erosional problems were beginning to develop. The eight-foot culvert on Connary Brook had already failed, and water has cut a channel a foot or two under the now-dry culvert. For 25-30 feet upstream from the culvert, the stream had widened significantly and there were no trees along the bank. A good deal of sand and rocks had begun to fill in the streambed below the culvert. The road just above the culvert is collapsing into a hole, now a foot and a half wide, that drains into the brook.

I explored all major and several minor logging roads and found no big, old trees; few were more than 20-25 feet tall. Low-value, small diameter hardwoods like pin cherry, red maple, and aspen were abundant. An occasional yellow birch with a diameter breast height of ten to twelve inches remained. There was very little softwood except for occasional six-inch diameter fir.

An easement is a worthless document unless its holder carefully and regularly monitors it. This is an expensive proposition even for a well-heeled organization like SPNHF, which holds easements on thousands of acres scattered all across the state. SPNHF has found that periodic aerial inspections are the most cost-effective method of monitoring. It is easy to spot illegal development activities from the air.

It is a good deal more difficult to detect erosion problems, water quality violations, residual damage from logging, high-grading, and other consequences of unsustainable logging on a brief fly over. Proponents claim easements cost less than full fee acquisition and therefore are a better bargain. When confronted with the results of our ground-truthing on the Stratford tract, SPNHF became defensive, and asserted it would be too expensive for SPNHF to ground truth logging jobs on its easement lands.

The Forest Society's partner in this deal, The New Hampshire Chapter of the Nature Conservancy, distributes a map of "conservation lands" in the region. It tells us the deforested, eroding mountainsides of this 1300-acre tract are "conserved." The Nature Conservancy, "Map of the Bunnell Tract, © The Nature Conservancy New Hampshire Field Office, May, 2000.

The photographer's notes read: "Washburn's lot East of Tuttle. Looking over at NH clearcuts. This was a beautiful lot. Hemlock in the lowest area and throughout, many old. Some mature scattered softwood on the hardwood rises. Yellow Birch 12-14" all chipped." This and an abutting Boise lot also had significant upland wetlands degraded by bulldozing, road building and cutting. Considerable deer wintering habitat was also degraded.

Conclusion of Forest Notes

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I do not understand how one can "certify" practices that produce unnatural forests. Certification ought to convey the message that excellent, sustainable forestry is being practiced on natural forests.

I cannot believe that the cheerleaders of Irving's certification, Maine Audubon Society and Natural Resources Council of Maine, have actually visited Irving's certified plantations. I cannot understand how anyone who has seen this toxic moonscape (and spoken with locals about how hated Irving is in northern Maine communities because of their economic bullying) could look themselves in the mirror and claim that certification of Irving is anything but a willful fraud. Having seen what FSC will certify, I wonder if there is anything it will not certify.

Early in September I visited the Adirondacks and spoke with a leading wilderness advocate. His organization had just been certified by FSC to certify small operations. I have not visited the forests it is considering for certification, but I am confident that they will require excellent forestry. However, FSC has sabotaged their credibility by lumping together small, well-managed operations with Irving, Seven Islands, and other industrial-scale operations. Until there is a split, the well-managed operations will suffer a credibility gap because of the abuses by industrial certifiers.

Contemporary Conservation Strategies: In the Adirondacks, much of the work of conservationists is focused on purchasing conservation easements to thwart development and support working forests. Now, certification is becoming an important component of the Adirondack strategy. Maine, New Hampshire, and Vermont are pursuing similar strategies. Why am I generally supportive of the work of the Adirondacks and implacably opposed to a similar strategy in northern New England? Simple: easements and honest certification, coupled with strategic full fee acquisition in a Park that is already nearly 50 percent "Forever Wild" makes sense, provided that ecologically critical lands are purchased, and not merely subject to an easement. Northern New England lacks this wilderness infrastructure and is abusing easements and irresponsible industrial certification as a means to prevent large-scale acquisition of re-wildlands. I support appropriate use of limited tools such as easements and certification; I oppose the misuse of such tools as a means of thwarting responsible wilderness conservation. – *Jaime Sayen*

A denuded hillside of northern New Hampshire (Northumberland, Cape Horn). One of the many liquidation cuts that line Route Three.

COMMONWEALTH OF MASSACHUSETTS MARINE PROTECTED AREA POLICY PAPER TAKES SHOTS AT MARINE WILDERNESS

Supports designation of 'Coral Protection Areas'; opposes MPAs for "precautionary fisheries management"

By Ron Huber

On October 21, 2002, the Commonwealth of Massachusetts issued an important policy paper that may well set the direction of marine protected areas designation within the US portion of the Gulf of Maine. Should the report's policies be implemented, the US portion of the Gulf of Maine region will finally begin moving forward on marine area protection, breaking the logjam that has hitherto hindered any meaningful progress.

Produced by the Massachusetts Division of Marine Fisheries ("Marine Fisheries"), the 19 page report, entitled "Proposed Policies for Marine Protected Areas", was written with two major goals:

(1) " to engage constituents in constructive discussions regarding our MPA policies especially for fishery or ecological reserves- special types of MPAs that can be very restrictive, e.g., no-take zones."

(2) "... for Marine Fisheries to assume a lead role in assisting the New England Fishery Management Council develop its own set of MPA policies."

The report includes thirty two "Policies/Positions", preceded by a lengthy background review of marine protected areas policy and information relevant to New England. The Policies/Positions are grouped into six categories: 'general ', 'marine reserves ', 'marine wilderness ', 'marine biodiversity', 'Stellwagen Bank National Marine Sanctuary ', and 'mobile gear impact on habitat'.

Significantly, under these proposals the state "supports establishment of Coral Protection Areas (Coral MPAs) by the New England Fishery Management Council" and proposes to "have a leadership role in protecting deep sea corals from impacts of bottom trawls, gillnets, longlines, lobster pots, fish pots and other bottom-tending fishing gear, including hook fishing for groundfish and other bottom-dwelling fish and invertebrates."

(Note: earlier this year NARP's Coastal Waters Project proposed that the New England Fishery Management Council designate such a coral protected area in two locations — both in federal waters off Maine.)

At the same time, the state declares itself "unconvinced that a 'wilderness' area or national park designation is appropriate for any New England marine environment, including the suggested 'Gulf of Maine International Ocean Wilderness' a 20-mile wide band of ocean along the Hague Line separating U.S. from Canadian waters", and dubs "inappropriate for New England waters" the Ocean Conservancy call to establish at least 5% of U.S. ocean territory as wilderness. The state also draws a clear distinction between 'Marine Protected Areas' and no-take 'Marine Reserves', "to avoid confusing recreational and commercial fishing industries, other stakeholders, and citizenry of the Commonwealth".

The state does, however, support designation of MPAs to protect areas from mining drilling waste disposal , and "other large scale activities that negatively impact fisheries habitat". However, the state opposes marine reserves designated "primarily for the purposes of protecting or enhancing biodiversity" or as a means of "precautionary fisheries management through marine reserves", and suggests that the New England Fishery Management Council as the appropriate decision making body for protected area designation in the region.

Regarding the region's sole national Marine Sanctuary, the state "does not support establishing all or portions of the Stellwagen Bank National Marine Sanctuary as a marine reserve". Admitting that "trawling and scallop dredging can change or alter the seascape in sand and mud," the paper holds "that shift in faunal composition or structure is reversible"; and "an inevitable consequence of catching valuable fish and shellfish sustaining very large economic benefits from landings of the Commonwealth's seafood industry"

Below, read the 32 Massachusetts Division of Marine Fisheries' policies on Marine Protected Areas

Phrasing is from the report and abridged. NOTE: *The full report "Proposed Policies for Marine Protected Areas" can be accessed on the world wide web as a pdf file at* http://www.state.ma.us/dfwele/dmf/MarineFisheriesNotices/MPAPolicies102302.pdf

General

(1) Marine Fisheries supports MPAs to protect areas or sites from threats to living marine resources from gravel mining, oil drilling, dredge spoil disposal, and other large-scale activities that negatively impact fisheries habitat;

(2) Marine Fisheries supports modification of existing or creation of new Marine Protected Areas (MPAs) as an appropriate fisheries management and habitat protection approach;

(3) Marine Fisheries believes that establishing MPAs is a fisheries managers' responsibility when MPAs are used to help rebuild fish stocks, achieve sustainable fisheries yields, and protect essential fish habitat and habitat areas of particular concern;

(4) Marine Fisheries will not use the misleading acronym "MPA" when the intent is to establish marine reserves (e.g., no-take zones). All marine reserves are MPAs; not all MPAs are marine reserves. This distinction must be made obvious and be maintained to avoid confusing recreational and commercial fishing industries, other stakeholders, and citizenry of the Commonwealth;

(5) Marine Fisheries considers stakeholder involvement in MPA identification and support for MPA implementation as a critical element for effective MPAs.

The state opposes marine reserves designated "primarily for the purposes of protecting or enhancing biodiversity" or "precautionary fisheries management through marine reserves." It does however support reserves with targeted purpose, such as the protection of coral species such as have lately been found in Gulf waters.

Marine Reserves

(6) Marine Fisheries supports establishment of marine reserves only when there are very specific, unambiguous, attainable objectives and when there will be effective, timely monitoring to determine success of reaching reserves' objectives. Those objectives must be consistent with fisheries managers' plans to improve stock status and enhance habitat protection;

(7) Marine Fisheries does not support marine reserves in the New England area primarily for the purposes of protecting or enhancing biodiversity. This objective, while seemingly laudable and sensible, is too ambiguous and disguises some reserve proponents' true purpose for marine reserves: precautionary fisheries management and a response to their belief that fisheries managers will fail to stop overfishing and rebuild overfished stocks;

Marine Fisheries is unconvinced that overfishing of any species in New England waters threatens biodiversity however it may be defined.

(8) Marine Fisheries does not favor precautionary fisheries management through marine reserves in New England waters. Emphasis must be on reducing scientific uncertainty and not using it as justification for precautionary fisheries management and establishing marine reserves;

(9) Marine Fisheries opposes the use of reserves for "bet-hedging;"

(10) Marine Fisheries opposes establishment of any marine reserve that does not have the support of the New England Fishery Management Council. The Council may conclude that it already has the tools to achieve objectives

Continued Next Page

Massachusetts Setting the Bar High for Biodiversity, Low for Industry

The Massachusetts Division of Marine Fisheries (DMF) recently-published report, "Proposed Policies for Marine Protected Areas" is a disappointingly timid, pro-industry/anti-biodiversity effort, calling for placing all decision-making on marine protected areas in the hands of the fishing industry, and rejecting creation of any fully natural permanently protected areas.

According to the paper, DMF seeks to establish itself as the regional leader for development of Marine Protected Area (MPA) policy for the waters and submerged lands off New England. "Our intent is to engage constituents in constructive discussions regarding our MPA policies," the report, authored by DMF's Deputy Director David Pierce, states. The agency believes it "must ensure our views are known and influential."

If the proposed policies are any indication, however, DMF's 'regional leadership' will take marine protected areas policy for New England backward rather than forward. In particular, the agency's discussion points on marine wilderness or ecological reserves are strongly weighted against the establishment of ANY, whether they be to protect habitat, conserve biodiversity or as ecological reservoirs - at least within the Gulf of Maine.

Those protected areas the report does consider acceptable would need to be multiple use, and need to be designated by the commercial fishing industry itself, with said industry given authority to designate and undesignate them, and to modify such protected areas' boundaries and management regimes as industry deems appropriate.

With federal Executive Order 13158, requiring NOAA to strengthen and expand a national system of MPAs, renewed by President GW Bush. Massachusetts DMF observes that "there are very few New England state agency fisheries managers on NOAA's Federal Advisory Committee for MPAs," and, (ominously, given their anti-biodiversity slant,) believes it " must ensure our views are known and influential."

MAINE AND NEW HAMPSHIRE At the same time that Massachusetts is making its anti- reserve point of view clear , Maine and New Hampshire are cautiously tip-toeing their way through the MPA minefield.

* Maine's Ecology Division was just given funding by NOAA's Coastal Fellow Program to hire a post-graduate assistant for two years. The Fellow with be working on "integrating existing data and information on various topics from water quality, and fish communities, to cultural features" and will put that info into a GIS format "in order to develop the foundation for ....marine protected areas planning" and other coastal and marine initiatives.

* New Hampshire Coastal Program Senior Planner David Hartman will be attend a Marine Protected Areas meeting on December 9th, which should help solidify his state's nascent MPA program.- RH

5% Marine Wilderness Goal "Not Appropriate" for New England Waters

that some (e.g., National Research Council) feel reserves can address: (a) allow depleted fisheries to recover from overfishing, (b) prevent collapse of fish stocks, (c) improve sustainable yield of fisheries, and (d) reduce bycatch of non-targeted species and undersized individuals of target species. Marine Fisheries believes the states and New England Council can achieve these objectives shy of having to establish marine reserves;

(11) Marine Fisheries is critical of marine reserves for fisheries management or habitat protection purposes because they remove fisheries manager's flexibility to change MPA boundaries or allow access to the MPA, as the need arises, e.g., to allow some exploitation of increased biomass of species not the target or motivation for the original MPA designation (such as sea scallops in Georges Bank Closed Area II) or to allow fishing with modified fishing gear having minimal or no affects on habitat;

(12) Marine Fisheries will cooperate with proponents of MPAs and those seeking marine reserve designations to identify issues, clarify positions, and seek common ground. The burden of proof for establishing marine reserves of any size should be demanding since a reserve(s) likely would preclude commercial and recreational fisheries use of the area(s), and in the case of National Marine Sanctuaries, would not "ensure harmonious use" of resources within a sanctuary, a mandate of the National Marine Sanctuary Program;

Marine Wilderness

(13) Marine Fisheries is unconvinced that a "wilderness" area or national park designation is appropriate for any New England marine environment, including the suggested "Gulf of Maine International Ocean Wilderness" a 20-mile wide band of ocean along the Hague Line separating U.S. from Canadian waters. This interesting concept is being spearheaded by the American Oceans Campaign (AOC) and other environmental groups. The view that ocean wilderness should involve protection of all marine creatures down to the smallest plankton is attractive. However, it is impractical in the New England region where there are ocean currents, wide seasonal swings in ocean temperature and abundance of many marine organisms (such as phytoplankton and zooplankton), and fish exhibiting extensive inshore-offshore and north-south movements/migrations. The Ocean Wilderness Challenge made by The Ocean Conservancy (formerly Center for Marine Conservation), seeking to establish at least 5% of U.S. ocean territory as wilderness, is inappropriate for New England waters;

Marine Biodiversity

(14) Marine Fisheries acknowledges the importance of applying the concept and catch-word of biodiversity as an appropriate lever for protecting land and marine ecosystems such as old-growth forests and coral reefs, but maintains that the sought-after level of difficult-to-measure marine biodiversity (categorized as genetic, species, population, or ecosystem diversity) must be preceded by a determination of what levels of biodiversity by category are desirable and sustainable. There must be debate about what levels of species richness, evenness, composition, and interactions (four components of species diversity) are desirable;

(15) Marine Fisheries is unconvinced that overfishing of any species in New England waters threatens biodiversity however it may be defined. To threaten biodiversity on commercial and recreational fishing grounds, fishing would have to cause biological extinction or dramatic and undesirable shifts in species composition with irreversible changes in ecosystem structure. Marine Fisheries awaits evidence that either is possible on New England fishing grounds;

(16) Marine Fisheries believes relatively easy-to-enforce, large, and permanent closed areas (MPAs, but not reserves), subject to fisheries managers' timely revision in shape and size, will continue to be an important fisheries management tool to reduce fishing mortality and stop overfishing especially when latent fishing effort is large and direct controls on fishing mortality are inadequate;

(17) Marine Fisheries does not accept the postulate that federal waters fisheries management through the fishery management council process, in which Marine Fisheries participates, will be unable to comply with the National Standards of the Sustainable Fisheries Act, or that reserves are the way to achieve that compliance;

(18) Large reserves or networks of reserves tend to ignore clear consequences of large, long-term closed areas (e.g., shift of fishing effort to open areas) and the fact that there is no substitute for fisheries managers (1) significantly and permanently reducing fishing effort (including latent effort); (2) dramatically postponing age-at-first-capture through fishing gear modifications or restrictions, (3) providing substantial seasonal protection of spawning fish; and (4) drastically reducing bycatch and discard;

Stellwagen Bank National Marine Sanctuary

(19) Marine Fisheries, through its participation on the Stellwagen Bank Sanctuary Advisory Council, will focus on Sanctuary staff's expressed concern that (1) overfishing and use of destructive fishing techniques are some of the factors threatening biodiversity and habitat range, and (2) some of the biodiversity questions facing local researchers include species diversity in the face of overfishing and community diversity after trawling and dredging operations. Marine Fisheries does not classify bottom trawling and/or sea scallop dredging in the New England area as "destructive" fishing techniques threatening biodiversity, although Marine Fisheries does believe there are areas where trawling and dredging are ill-advised, and other fishing gear or modified trawls/dredges should be used;

(20) Marine Fisheries does not support establishing all or portions of the Stellwagen Bank National Marine Sanctuary as a marine reserve for fisheries management purposes. Any closures within the Sanctuary for these purposes should be established by the New England Council sanctioned by the Sanctuary Advisory Council;

Mobile Gear Impact on Habitat

(21) Marine Fisheries acknowledges that bottom fishing gear used for many decades in the New England region can affect fisheries habitat and can have an impact on epifauna such as hydrozoans, bryozoans, tube-building worms, and sponges. For this reason Marine Fisheries continues to support MPAs in areas where this epifauna, if undisturbed by bottom fishing activity, will become established and grow providing significant and widespread 3-dimensional habitat structure for juvenile fish, especially groundfish. The challenge is to identify that habitat and to determine how much and where protection is warranted;

(22) Marine Fisheries accepts impacts of bottom trawling and sea scallop dredging in most New England fishing grounds comprised of sand, mud and different mixtures of the two, as an inevitable consequence of catching valuable fish and shellfish sustaining very large economic benefits from landings of the Commonwealth's seafood industry. Marine Fisheries' acceptance is based, in part, on our belief that bottom trawl and dredging impacts are neither massively destructive nor a major threat to fish habitat and marine biodiversity in the New England region.

The "destructive" characterization appears to have originated primarily from the belief that trawling can cause massive destruction of physical and biological features of habitat (e.g. "clear-cutting") thereby dramatically and permanently changing marine ecosystem structure and function. This description, while quite appropriate for coral reefs, mangroves, kelp forests, sea grass meadows, and other very sensitive marine ecosystems, is inappropriate for most areas in New England where commercial fishing commonly occurs. Although trawling and scallop dredging can change or alter the seascape in sand and mud, that shift in faunal composition or structure is reversible;

(23) Marine Fisheries continues to be strongly committed to research on effects of fishing gear on marine bottom habitat and on how to minimize any impact, as evidenced by Marine Fisheries ' longstanding Conservation Engineering Program. This research is an agency high priority as evidenced by our current research program, plans for expansion, and purchase of advanced sonar equipment to characterize bottom habitat in state waters;

> *Marine Fisheries' acceptance [of bottom trawling impact] is based, in part, on our belief that bottom trawl and dredging impacts are neither massively destructive nor a major threat to fish habitat and marine biodiversity in the New England region.*

(24) Marine Fisheries will: (a) continue to promote use of the raised footrope bottom trawl and the sweepless trawl, developed by Marine Fisheries in cooperation with fishermen, as a viable option for keeping trawls off bottom and minimizing impact on marine habitat, and (b) promote disincentives for fishermen to fish the trawl improperly or not use the gear as designed. These disincentives will include prohibitions on possession of lobster, monkfish, and other bottom-dwelling species of high value.

(25) Marine Fisheries will encourage use of small-diameter roller gear (spinning grubber disks) instead of rockhopper gear. The latter gear is of fixed rubber disks allowing a trawl sweep to twist or spring (hop) over rocks more than one meter in diameter.

(26) Marine Fisheries supports collaboration with fishermen to determine areas where rockhopper gear should be prohibited and small-diameter roller gear or cookie sweeps should be allowed to reduce trawlers' ability to fish on rocky and irregular bottom.

(27) Marine Fisheries supports fisheries habitat research but prefers that research to occur in areas already closed to bottom trawling and dredging for fisheries management purposes. In areas where habitat research is occurring, closures should be extended until research is completed provided investigators can demonstrate their research is in progress and on a predetermined schedule working towards a termination deadline;

(28) Marine Fisheries supports establishment of new temporary MPA habitat research areas (a) when it can be demonstrated there are no other suitable alternative sites in existing closed areas for that research and (b) provided a plan for that research make a convincing and compelling case that experimental results will enable fisheries managers to improve their protection of fisheries habitat.

(29) Marine Fisheries supports establishment of Coral Protection Areas (Coral MPA) by the New England Fishery Management Council and will have a leadership role in protecting deep sea corals from impacts of bottom trawls, gillnets, longlines, lobster pots, fish pots and other bottom-tending fishing gear, including hook fishing for groundfish and other bottom-dwelling fish and invertebrates.

(30) Marine Fisheries considers submerged aquatic vegetation (SAV), such as eel grass and widgeon grass, to be essential for high production and sustainability of marine fishery resources. MPAs (i.e., year-round closures of SAV beds) will be favored as a mitigation strategy to prevent impacts of fishing gear.

(31) Marine Fisheries will help cities and towns reduce negative impacts of shellfish dredging (e.g., scallop and quahog) fisheries. This will include working with town shellfish managers and persuading fishermen, as well as boaters, through a public information/education program to voluntarily reduce their interactions with SAV. MPAs (i.e., year-round closures of SAV beds) will be favored as a strategy for cities and towns to consider for sea clam fisheries (i.e., surf clams and ocean quahogs).

(32) Marine Fisheries will continue its policy of protecting eelgrass beds from impacts of bottom trawling by strengthening existing regulations implemented for that purpose and expanding bottom trawling prohibitions to areas with SAV resources. Marine Fisheries will work with fishermen to identify those SAV areas and to assist development of mitigation strategies, including MPAs.

Coastal Waters Watch: News from around the Gulf of Maine

Energy issues Unite Fisherfolk & Envirofolk on Gas Pipeline and Windpower Proposals

By Ron Huber

Two Maine aquaculture proposals face near certain rejection

Controversial plans for two fishpen complexes in on the Perry Maine coast of Passamaquoddy Bay has received a denial recommendation from the Maine Department of Marine Resources hearing examiner. While the recommendation has yet to formalized, final acceptance of the denial is a certainty. The proposal fishpens are strongly opposed by the area's commercial fishing industry and by regional conservation organizations

Aquaculture effluent guidelines comment period extended to January 27, 2003

EPA's Office of Water has proposed nationally applicable discharge standards (known as effluent limitations guidelines and standards) for commercial and public aquaculture operations, in an effort to reduce pollution emissions from fishpen operations. Comments on the proposal must be postmarked by January 27, 2003. EPA will conduct two or three public meetings (sites not yet determined) to discuss the proposed rule. Information on the proposed guildelines can be found at: www.epa.gov/ost/guide/aquaculture. Submit written comments to Ms. Marta Jordan, Office of Water, Engineering and Analysis Division (4303T), U.S. EPA, 1200 Pennsylvania Avenue, NW. Washington, DC 20460. Comments may also be sent by e-mail to the following e-mail address: aquaticanimals@epa.gov See the Federal Register notice detailing the guidelines at: www.epa.gov/fedrgstr/EPA-WATER/2002/September/Day-12/w21673.htm

The European Commission is considering a ban on the importation of Scottish-farmed salmon and trout into Europe, due to unacceptably high levels of pesticide residues in the animals' flesh.

In a related story, the European Commission is considering a ban on the importation of Scottish-farmed salmon and trout into Europe, due to unacceptably high levels of pesticide residues in the animals' flesh. The Commission's report concludes that "serious deficiencies" have been observed in the implementation of EU Directives regarding pesticide use, by the UK's Veterinary Medicines Directorate.

Chemical Company to stop polluting Penobscot Bay GAC Chemical Company of Searsport has agreed to settle a Clean Water Act lawsuit brought against it by the Conservation Law Foundation. The company, which uses sulfuric acid to isolate alum from bauxite ore, was accused of violating state and federal limits on acidity in its wastewater discharge and of allowing spent bauxite ore to erode from a shoreside dumpsite into the intertidal flats of Stockton Harbor. Stockton Harbor formerly boasted Penobsdcot Bay's richest clam flats; the number of clams dropped precipitously shortly after the company began dumping the spent ore on its waterfront. In the settlement, GAC promised to shall comply with all General Permit requirements, implement best management practices to reduce pollutants in stormwater,r monthly routine inspections, and annual comprehensive site evaluations. The company also agreed to conduct an in-house study of potential options to stabilize the banks leading from its facility to the shores of Stockton Harbor, and has donated $20,000 to the Maine Coast Environmental Trust Fund for an environmental project(s) to benefit Stockton Harbor.

Right whale birth cheers whale huggers

Researchers flying right whale surveys twenty miles off Georgia announced a sighting of the first right whale calf of the survey season. The as-yet-unnamed calf and its mother are expected to reach the Gulf of Maine later this year.

Right whales force lobstering, gillnetting closures

The National Marine Fisheries Service has ordered an immediate 15 day cessation of lobstering and gillnetting in a 1,000 square nautical mile area centered on the Jeffreys Ledge seamount off Maine and New Hampshire "to provide immediate protection to an aggregation of North Atlantic right whales". Most lobstermen have already pulled their traps for the season; the Maine Lobstermen's Association, however, has expressed outrage at the closure. Meanwhile, in an effort to allow more lobsters to spawn at least once before being captured and steamed, the Commonwealth of Massachusetts has increased the minimum keeper size for lobsters and increased the minimum size of lobster trap escape vents. The changes "will maintain compliance with the Atlantic States Marine Fisheries Commission's Interstate Fishery Management Plan for lobster." according to state officials.

Canadian and American fishermen strongly oppose the pipeline proposal, which would facilitate numerous gas drilling operations throughout key fishing grounds, as well as damage fragile deep sea coral areas.

Gas pipeline plan panned

Canada's New Democratic Party (NDP) has come out in opposition to the proposed 'Blue Atlantic' natural gas pipeline that Texas energy giant El Paso wants to construct from offshore Nova Scotia to New Jersey. Party officials say the undersea pipeline to the US would mean "fewer Nova Scotia construction jobs, less tax revenue for Nova Scotia, fewer lasting benefits for Nova Scotia's economy and the minimum overall economic benefit our province." "We have serious concerns about any oil and gas development plan which would export most jobs, rather than maximizing the local value added to our economy by this non-renewable resource. We have made it clear that existing pipeline corridor is an environmentally and economically preferable route for natural gas from the areas that El Paso has discussed," the NDP wrote. Canadian and American fishermen strongly oppose the pipeline proposal, which would facilitate numerous gas drilling operations throughout key fishing grounds, as well as damage fragile deep sea coral areas. Conservation groups, including the Sierra Club and NARP also oppose the pipeline proposal.

Groundfishery reform to be delayed once again

Implementation of Amendment 13 to the New England groundfishing plan, set to go into effect August 2003, may be delayed until 2005. As originally proposed by the New England Fishery Management Council, the amendment would impose a combination of cuts in fishing days of up to 65 percent, fishing ground closures, quotas and gear changes. While conservation groups have agreed to a one year delay, based on problems with federal research trawl survey operations, Sen.s. Edward Kennedy, D-Mass., and Olympia Snowe, R-Maine, are drafting legislation to impose a freeze up to two years . "We need to get a time-out," John Pappalardo, a groundfish fisherman and policy analyst for the Cape Cod Commercial Hook Fishermen's Association (CCCHFA), told reporters. "An extra year is not going to devastate a fish stock."

Ill wind Splits Conservationists

The CCCHFA also opposes a Nantucket Sound wind power project, due to concerns the enormous facility would disrupt the migration of marine fish populations. Conservation groups are split on the proposal with some favoring the planned windfarm's production of pollution-free electricity, while others are concerned about the harm to habitat and the precedent of leasing vast areas of marine public lands to corporate interests.

Salmon Federation rages against Clean Air Act changes

The Atlantic Salmon Federation is "outraged" by the Environmental Protection Agency's announcement in November of changes to Clean Air Act regulations. The Bush Administration decision weakens existing clean air rules and allows polluters already in violation of clean air rules to continue polluting."This 'Clear Skies Initiative' would actually result in 125% more sulfur dioxide, 68% more nitrogen oxides, and 420% more mercury being thrust into the air," a Federation release stated, adding that "Recent research has shown that, in Maine, acid deposition contributes greatly to episodic periods of low pH in a number of the salmon's natal streams. These low pH events have been shown to have significant negative impacts on juvenile salmon and may be one of leading factors in the salmon's decline. NOTE: The number of wild Atlantic Salmon returning to Maine rivers this year has declined by 78 fish from last year's count of 940 fishes. No salmon at all were found in the Ducktrap, Machias, East Machias or Kennebec rivers this year.

The ASF also wrote that "In Nova Scotia, the Canadian province most affected by air pollution from the United States, the salmon from 14 once-healthy salmon rivers have become extinct and they are facing extinction in another 36 rivers because of acid rain produced in the USA. "

Bush Administration attacking core environmental laws

A judge has rejected a claim by the US Navy that government activities in the US Exclusive Economic Zone are exempt from review under the National Environmental Policy Act. The Navy had hoped to make an end run around opponents of an experimental active sonar system. Test runs of the system have been linked to the deaths of dozens of whales and other marine mammals. Environmentalists had cautioned the judge that if the Navy were exempted from NEPA, the Bush Administration would exempt other federally managed and licensed activities, from oil and gas pipelines to ocean dumping and commercial fishing. from the law as well.

The Federal Energy Regulatory Commission, which licenses non-federal hydropower dams across the country, is claiming in a federal court case that the federal Clean Water Act simply does not apply to dams. The Commission has asked a federal judge to rule that states cannot require a state water quality permit under their delegated Clean Water Act authority as a precondition to FERC relicensing of a dam. Twenty-one state Attorneys General have signed on to an amicus brief sponsored by American Rivers in opposition to FERC's assertion and in support of state Clean Water Act authority over dams. More info at the American Rivers website: http://www.amrivers.org

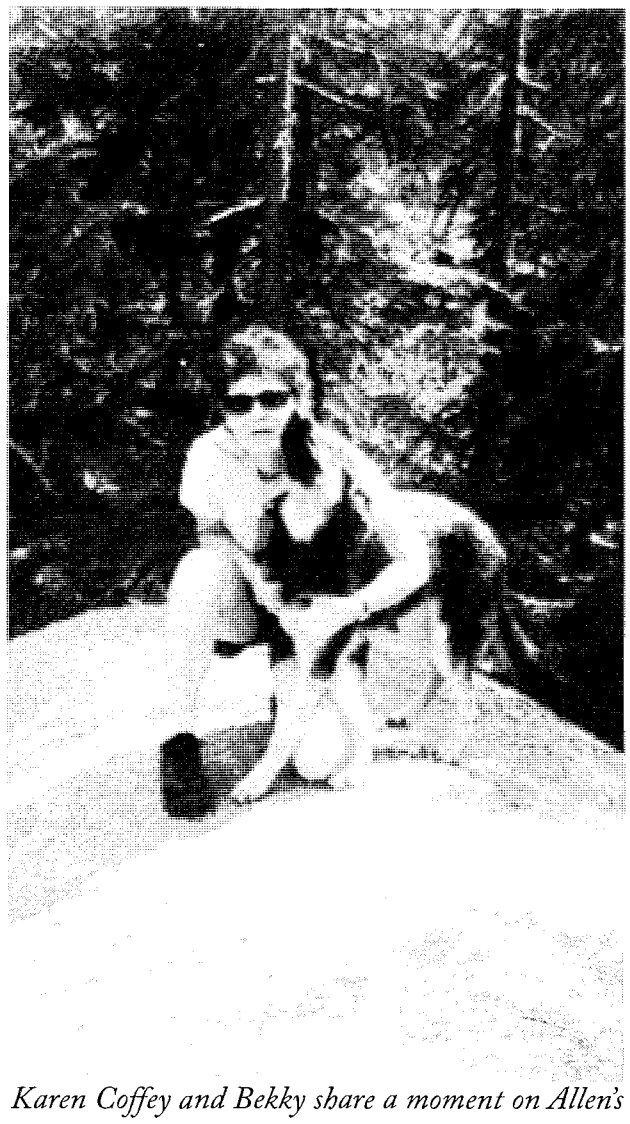
Army Corps of Engineers ordered to privatize

The Bush administration has ordered the Army Corps of Engineers to open its entire civil works program to competition from private businesses, according to government documents.

An Oct. 4 memo to top subordinates from Army Secretary Thomas White said the Army must focus its energies on "core competencies" while obtaining other goods and services from the private sector when that makes sense. Among the Army operations placed outside that core category is the Corps of Engineers civil works program, which encompasses licensing and oversight of hundreds of flood-control and river navigation projects across the country. Up to 32,500 military and civilian employees could lose their jobs. "These are positions considered to be not in direct support of the Army's war-fighting mission," White wrote.

The Northern Appalachian Restoration Project Looks Ahead

I may be a new voice in the ***Forum*** but my belief in the ***Northern Forest Forum***, and the Northern Appalachian Restoration Project that publishes it, is anything but new. I have known Jamie Sayen, the founder of The Northern Restoration Project (NARP) and former editor of the ***Forum***, for many years and we have fought some battles together. (As a past project of the Earth Island Institute, NARP has special significance for me, as Earth Island founder David Brower is my arch druid.) Jamie is now on the Board of Directors of NARP and is currently immersed in writing a book. I have also worked with Andrew Whittaker in the past. Andrew has done a great job as Executive Director of NARP and Editor for the ***Forum***. Now, however, he can spend more quality time as Editor of ***The Northern Forest Forum***.



Karen Coffey and Bekky share a moment on Allen's Ledge within the White Mountain National Forest.

For me, becoming the new Executive Director of The Northern Appalachian Restoration Project was a natural fit. I love the ***Forum*** and I have loved it for years. I love the way it looks, the way it feels, and the things that I read in it. When I was an undergraduate student years ago, I would get as many copies of the ***Forum*** as I could get my hands on and pass them out all over the campus. One year in the 90s, it was the ***Forum*** that helped convince the Student Environmental Action Coalition (SEAC) in this region, to spend the year addressing Northern Forest issues. The articles in the ***Forum*** were often used as reference for environmental science students in their papers.

The ***Northern Forest Forum*** and The Northern Appalachian Restoration Project represent people who really care about the earth, specifically in the Northeast. I have worked by the side of some of the dedicated grassroots activists associated with NARP. The Project supports a network of activists who engage in community level work with regional impacts across Maine, New Hampshire, and Vermont. These community projects are significant in the realm of environmental conservation, preservation, and restoration. The activists are on the ground and out in the community getting the job done whether it be protecting coastal waters, restoring watersheds, fighting against pesticide use, or protecting mountains and preserving wilderness, they are there to organize, educate, and work for positive change. They do more than put out glossy colored brochures about the Northern Forest and its plight. They do more than get large sums of money to put on huge conferences in expensive places with themes of continuing rhetoric. In fact, the NARP activists are often called upon by larger conservation organizations for help in defining issues within the communities and asked how to go about organizing within those communities.

The ***Northern Forest Forum*** and The Northern Appalachian Restoration Project are important voices, catalysts, and activists, in the New England, Northern Forest, and Northeast region. We can not let this shining light fade away. In order for the ***Forum*** to be published and distributed four to six times a year it takes money. In order for the activists to continue to do their important work, they need money. Yes, these are tough times. But they are tougher times for small non-profit organizations like ours than for larger ones. With the Bush administration putting us ten steps backwards in environmental policy for every step we try to take forward, it gives even more reason for keeping the ***Forum*** and NARP alive and well. One of our NARP Board Members put it best by saying, "I am proud to have been a part of the Northern Appalachian Restoration Project. NARP has shaped the dialogue in the Northeast and I deeply hope it will continue to do so. The activists are doing superb work and I think the ***Forum*** is vital to the region."

Please help keep the ***Northern Forest Forum*** and The Northern Appalachian Restoration Project going by making a donation to NARP. Large or small, this organization needed money yesterday and needs it today in order to survive. Don't let this unique and important voice of the Northern Forest falter. We need you help. Thank you. *Karen M. Coffey, Executive Director*

Consider Membership in The Northern Appalachian Restoration Project

The Northern Forest Forum is the publication of the not-for-profit, 501-c-3 Northern Appalachian Restoration Project (NARP). *The Forum* is but half of our effort! The Restoration Project supports a network of six activists who are engaged on a community level across Maine, New Hampshire and Vermont, addressing sustainable forest practices, herbicide reduction, wildlands protections and restoration efforts.

You can help! By joining NARP, you are contributing financially to an effective grassroots effort for restoration of ecological health here in the Northern Forest.

Your membership is a strong signal of support for our efforts. Membership can be had for any amount you choose to contribute over the $15 subscription rate. Larger donations have been of great significance to our work over the years and are gratefully accepted.

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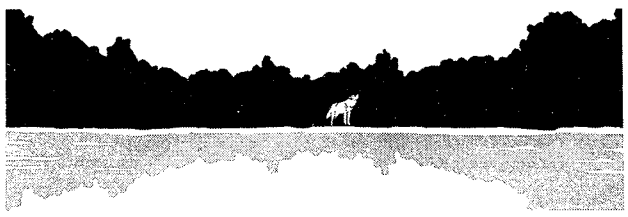

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