

The Northern Forest Forum
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The Northern Forest Forum

Working for Sustainable Natural & Human Communities

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SAVING BIOLOGICAL DIVERSITY *In the Consumption Age*

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THE NORTHERN FOREST FORUM

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The Northern Forest Forum is published six times a year by the Northern Appalachian Restoration Project (NARP).

NARP is a non-profit organization and network of grassroots activists dedicated to restoring sustainable natural and human communities across the Northern Forest Region of northern New England, New York, and adjoining regions.

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Editorial Policy

Views expressed herein are those of the writer and not necessarily those of other contributors or other NARP projects. We welcome diverse submissions on the Northern forest and related topics. Please send all material to the address above.

Please address letters for publication specifically to the editor.

e-mail: nff@sover.net

We Like Letters!



Vaccinium boreale

Editorial

Ecological Reserves in the Northern Forest: Citizens Must Advocate for Big Wilderness

IT IS WORTH REITERATING the rationale for Wilderness as a major component in a network of regional ecological reserves.

The re-forestation of New England has allowed forest dwelling creatures such as moose and bear to re-occupy habitat lost to the extensive clearing for agriculture of the past centuries. Many of these creatures never did disappear from the parts of New England never cleared for agriculture. The Northern Forest acted as refugia and source for rewilding, but at the same time, cycles of cutting eliminated aspects of biodiversity and wildness here as well.

Elements of biodiversity that have not returned, or are precluded by current patterns of human use, include top predators such as wolf and lynx, charismatic species like Atlantic salmon, and the structures and functions provided by stretches of forest left to natural disturbances such as wind and ice storm. Much of what we lack — in both the quantifiable measures of biodiversity and our spiritual experience of Nature — can only be restored through the conscious protection and establishment of large roadless areas, or Wilderness.

Moreover, the likelihood is that we will gain appreciation for landscape linkages that allow the preservation of ecological processes such as predation, seed dispersal or genetic flow across diverse ownerships and topography. Not only must we think Big, we must think Connected.

HOW WILL MEGA-RESERVES integrate with New England's rather hide-bound emphasis on the working landscape and the funnelling of funds toward easements that may remove the threat of development but not accomplish the highest protections for biodiversity?

Take the North Country region of northern New Hampshire. Although this is the region of the state most suitable for large reserves of 25,000 acres or better, a decade of public involvement in land sales by timber companies has failed to establish wilderness reserves other than on high elevation state lands or in the federally-owned White Mountain National Forest and Umbagog National Wildlife Refuge.

The Nash Stream Forest, and now the adjacent Champion lands sifting through semi-public hands, are the chief

example of missed opportunity. Together, the lands of this considerable back country region could have been assessed in the context of a Wilderness master plan — as could lands in the Pittsburg region to the North, and Androscoggin drainage to the Northeast that are certain to come on the market.

Such an approach could integrate with visions for Wilderness based on other core areas to the west in Vermont's Northeast Kingdom, to the East in Maine's Boundary Mountains, to the South in the White Mountain National Forest. It could integrate with river-based watershed corridor reserves in the Connecticut and Androscoggin basins; and indeed proceed simultaneously throughout the Greater Laurentian biosphere. In some ways, this is already happening — but localized effort must become more unified, regional, and politically expressive.

IT IS APPARENT THAT top-down conservation initiatives will remain modest and retain a focus on recreational and industrial rather than ecological attributes across the Northern Forest. The only thing that will change that is a bottom-up advocacy and vision for a series of local Wilderness efforts that spread outward from existing public lands and integrate in scientifically-informed ways across the landscape.

That is what *The Northern Forest Forum* proposes to the region: a focus by active conservationists on the lands in their backyards and the development of a wilderness vision for them through active study and outdoor investigation. Further, these localized visions ought to merge with each other and their advocates seek to influence the course of conservation efforts at the state, regional and federal level.

Maine and New Hampshire are now setting up to expend millions on land conservation. The region is seeking reinvigoration of federal Land and Water Conservation Funds. These efforts must be met by local wilderness advocates who have done their homework, networked, and taken a regional view.

We welcome your thoughts on this subject. We would like news of local plans for Wilderness and the regional networking on their behalf that is necessary for their implementation. ☺

The Northern Forest Forum has over the years viewed sustainability of both human and natural communities in the Northern Forest, wider region and entire planet as requiring three approaches:

- 1.) Ecological Reserves
- 2.) Ecologically-informed forestry, agriculture and fishing
- 3.) A society that does not out-consume its environment.

We Welcome *your* Submissions of Material on these & Related themes.

THE NORTHERN APPALACHIAN RESTORATION PROJECT publishes THE NORTHERN FOREST FORUM and supports the work of grassroots activists in the Northern Forest. Our projects seek to engage both a local and regional conservation community committed to restoring ecosystems and local economy. *The Forum* welcomes your subscriptions. *The Restoration Project* relies on your generosity and gifts of support to sustain the efforts of our activists. A subscription form is found on page 31.

Thank You!

Wild Forests, Fewer Roads, for our National Forests

Commentary by Jim Northrup

THE 380,000 MILES of logging roads that criss-cross our country's national forests amount to more than eight times the length of the interstate highway system: enough road to circle the globe fifteen times. Unbelievably, the United States Forest Service wants to build still more roads, primarily to implement its environmentally destructive, money-losing timber program. However, the President, the vast majority of Americans, and a dozen Vermont organizations believe that wild forests — not roads and clearcut mountainsides — are the legacy that should be left for future generations.

On October 13, President Clinton directed the Forest Service to "provide strong and lasting protection" for national forest roadless areas — the remaining blocks of wildland unfragmented by logging roads. In response to the President's directive, the federal agency will prepare an Environmental Impact Statement and promulgate federal regulations, both of which will be released for public comment in the spring of 2000. Conservationists across Vermont and the nation praise the President's visionary initiative.

For more than half a century our national forests have been managed primarily as storehouses for timber, minerals, livestock and other commodities. Now, on the threshold of the new millennium and as people, buildings, roads and automobiles spill across the landscape, national forests are being looked to as scarce and precious refuges from development. This fundamental shift in national priorities is long overdue.

A recent national poll indicates that more than 70 percent of Americans want to see roadbuilding, logging and other development banned on the few remaining roadless areas on the national forests. Polls conducted by the US Forest Service in Vermont and New England show even stronger results: 94 percent of the respondents support protection of all remaining roadless areas; 89 percent feel protecting fish and wildlife habitat should be the highest priority; and 75 percent favor prohibition of logging if habitats for bear or other sensitive wildlife would be harmed.

Preserving wild, roadless areas on the national forest is the ultimate public policy no-brainer. It would not diminish the wood needed to supply Vermont loggers and mills; it would save taxpayers money; it would provide essential habitats for shy and sensitive wildlife; and it would provide much desired opportunities for hunting, fishing, and hiking in wild, remote settings.

Timber is not in scarce supply in Vermont. Nearly 80 percent of Vermont is forested and the vast majority of forestland is available for and capable of producing timber.



US Forest Service/Batelle Lands
Old Growth photo © Emily Sloan

According to State of Vermont data, the amount of wood being cut annually from Vermont's timberland is about half of the volume that is growing annually. Currently, the Green Mountain National Forest supplies only 1 percent of Vermont's annual wood harvest and, according to US Forest Service data, does so at a financial loss of over \$500 per acre logged.

Wild forests, on the other hand, are in scarce supply in Vermont. Designated wildernesses — areas free from roads, motorized vehicles and logging, where hunting, fishing and hiking are allowed — amount to only 1 percent of Vermont's forestland. Wilderness accounts for 5 percent of the nation's forestland and as much as 8 percent of the forestland in regions like the Pacific Northwest.

Scientific studies reveal that the loss of large blocks of wild, unroaded forest is contributing to the loss and population decline of many wildlife species. For example, warblers and other neotropical migrant songbirds are disappearing at alarming rates because of increased predation and competition near the 'edge' habitats created by roads and clearcuts.

The Green Mountain NF offers the best place in Vermont to provide large, wild areas for recreation and wildlife. Computer analysis of US Forest Service data by the National Wildlife Federation reveals that the Green Mountain NF has more than 6,000 miles of permanent roads within its purchase boundary, and at least eighteen roadless areas of 1,000 acres or more in size. These eighteen areas cover about 140,000 acres — a little more than one-third of the total national forest. Permanent closure of infrequently used logging roads could expand the size, sometimes significantly, of most of these wild forest areas.

Seven of the eighteen roadless areas are permanently protected from

APA Enforcement Overwhelmed, Changes Recommended

(Press release of the Adirondack Council, Nov. 18, 1999)

Ray Brook, N.Y. — The Adirondack Park Agency has little idea what violations of state land-use laws are occurring on the six-million acre Park it oversees, and lacks both the resources and the authority to do much about them when violations are uncovered, according to a new report by the Adirondack Council.

After the Fact: The Truth About Environmental Enforcement in the Adirondack Park, details the enforcement woes at the Adirondack Park Agency — one of the smallest and most under-funded state agencies in New York. The report was compiled over the past two years from documents and interviews that included APA's own enforcement reports and permits, as well as past and current commissioners.

"The APA has only three enforcement officers to safeguard nearly 10,000 square miles of Park," said Adirondack Council executive director Timothy J. Burke. "The Agency's lack of resources, coupled with a lack of authority to take decisive action against even flagrant lawbreakers has led to a backlog of between 1,000 and 3,000 unresolved cases. Some of them date back many years. The only way to fix the problem is a substantial influx of new personnel, plus new legislation to bolster the APA enforcement powers and a short-term task force from the Attorney General's office to deal with the backlog."

For example, Burke noted that the Catskill Park watershed is protected by twenty times as many enforcement officers as the Adirondack Park (60 vs. 3). The Catskill watershed enforcement team also has ten attorneys at its disposal, the APA enforcement team

future roadbuilding and logging. The remaining eleven areas do not have any long-term protection of their wild, roadless conditions. They range in size from 1,000 acres to 19,000 acres, and cover a total of 60,000 acres — 16 percent of the Green Mountain NF or one percent of Vermont.

Keeping this small fraction of Vermont wild and free of roads would help to re-create the most original of Vermont land uses: vast, old-growth forests out of which all other 'traditional' land uses were hewn. Protecting these wild forests would enable future generations to hunt, fish, hike and experience the primeval conditions that greeted the first European settlers in Vermont. At a time when tract homes, three-car garages, and new access roads are popping up everywhere, re-creating a few living specimens of Vermont's original forests makes good sense. Let's support the President's initiative.

Jim Northrup is Executive Director of Forest Watch, a 2000 member environmental organization based in Montpelier, VT.

three. The Adirondack Park is five times the size of the Catskill watershed (nearly 10,000 square miles vs. 2,000).

"I want to make it clear that the APA's staff is not to blame for this sorry state of affairs," Burke said. "The enforcement team is comprised of hard-working public servants who are laboring under an impossible mandate. It isn't realistic to expect three officers and a handful of attorneys to handle the number of new cases that arise each year, let alone the old ones. In addition, the APA has no authority to impose administrative penalties or to compel a landowner to comply with the law. The APA must always attempt to negotiate a settlement first."

"If violators choose to ignore the Agency's entreaties, the APA must then decide whether it's worth the effort to call in the Attorney General," he said. "The whole process can take years and years, while the violations continue. The problem has been growing for years. The new commissioners have inherited this mess, but they simply have to deal with it — and soon."

The report's recommendations include:

- Doubling the size of the enforcement team at the APA.
- APA authority to address violations directly through administrative orders, similar to the powers granted to the Department of Environmental Conservation.
- A team from the office of the Attorney General to help clear the current backlog of enforcement cases.
- New funds for local planning assistance grants to the 77 Adirondack towns that still lack an APA-approved local land-use plan.
- Legislation authorizing the APA to collect application fees from developers.

Those interested in obtaining a copy of the report should contact the Adirondack Council's Albany office at 342 Hamilton Street, Albany, NY 12210, or by calling 518-432-1770, or by e-mail at TACAlbany@aol.com

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NOTE: On December 15, the US Forest Service held an evening hearing in Rutland, VT on the proposed roadless area rule changes. By Forest Watch's count, 37 speakers supported such changes and 13 opposed, with a strong contingent of more supporters in the audience of 200. Many of the speakers advocated roadless area protections in areas of 1000 acres, beyond the 5000 acre threshold proposed by the Clinton administration.

A similar hearing in northern New Hampshire yielded but one testimony in support of roadless area protections, and numerous opposition to any diminution of the White Mountain National Forest timber program. Presidential politics has also intertwined with the roadless initiative, with John McCain against it, and Gore/Bradley supporting it despite Democratic Governor Jean Shaheen's opposition.

IN RESPONSE TO OVERCUTTING IN MAINE ARE LANDOWNERS CUTTING LIGHTER?

by Mitch Lansky

THE US FOREST SERVICE showed, and the Maine Forest Service (MFS) confirmed, that cut during the period 1982-1995 was greater than growth. The inventory declined. Cutting has not been sustainable. But is cutting getting lighter in response to these statistics and various initiatives towards sustainability?

According to statistics from the Maine Forest Service, the percentage of cuts that are clearcuts has gone down from 45% in 1989 to 6% in 1998 (see chart 1). One way of interpreting this is that landowners have been winding down the salvage cutting of spruce and fir in the wake of a major

PAPER CHANGES

Although the Forest Practices Act (FPA) passed in 1989, harvest rules did not go into effect until 1991. The biggest drop in clearcutting (from 45% to 22%) happened between 1989 and 1990—after the definitions for clearcuts changed, but before the rules were implemented. At least some of the decrease in clearcutting could be explained by different terminology, rather than different practices.

Not all clearcuts, for example, remove all trees (silvicultural clearcuts). A commercial clearcut just removes all merchantable trees—leaving small

Service inventory of the Maine woods estimated that between 1982 and 1994 the average annual area cut was around 560,000 acres. In 1988, the MFS only reported 261,000 acres cut. In 1989, the number rose to 326,057 acres. During the 1990s, the figures have been above 400,000 acres—with the last few years being above 500,000 acres. One impact of the FPA is that more landowners are reporting acreage cut. Many of the landowners who did not report harvesting previously were woodlot owners who were not as prone to do clearcuts. So the acreage of selection cuts went up and the percentage of clearcuts went down even further.

VOLUME PER ACRE

Because these classifications can be misleading, I decided to check the average volume per acre removal. Unfortunately, acreage earlier in the decade was underreported. Large landowners who did report tended to clearcut more than smaller landowners, so volume removals per acre earlier in the decade tended to be a little higher. Despite this, the evidence from MFS statistics does not show any major drop in the average intensity of cutting—withstanding the incredible drop in acreage and percentage of clearcuts. (see chart 2)

Figures from the US Forest Service inventory show that 47% of the acres cut 1982-1995 removed more than 60% of the standing volume. A Maine Forest Service report of cutting 1991-1993 showed that the average cut (including clearcuts and overstory removals) removed around half of the standing volume—which is slightly less than the US Forest Service figures. While it is possible that cutting intensity dropped slightly from the '80s to the early '90s, it seems to have been fairly stable since then.

Volume per acre removals are not the whole story. If cutting cycles are

'90s. (see chart 4). Since there is a deficiency of poletimber to replace the heavy cutting of spruce-fir sawtimber, the trends in increase in cut of spruce-fir sawtimber cannot be sustained. This overcutting of spruce-fir sawtimber is not bringing commensurate value-added benefit to Maine. In 1997, 47% of all the spruce-fir sawtimber cut in the state was exported unprocessed out of state, mostly to Quebec.

Hardwood pulpwood cut has gone way up so that, starting in 1993, total hardwood cut has, for the first time, exceeded total spruce-fir. Since the average cut of hardwoods was close to growth from 1982-1995, and since the cut of hardwood pulp has gone up dramatically since 1993, it is quite possible that hardwoods are being overcut statewide now. Even during the 1982-1995 inventory period, in Franklin, Somerset, and Piscataquis Counties cut of hardwoods was already greater than growth.

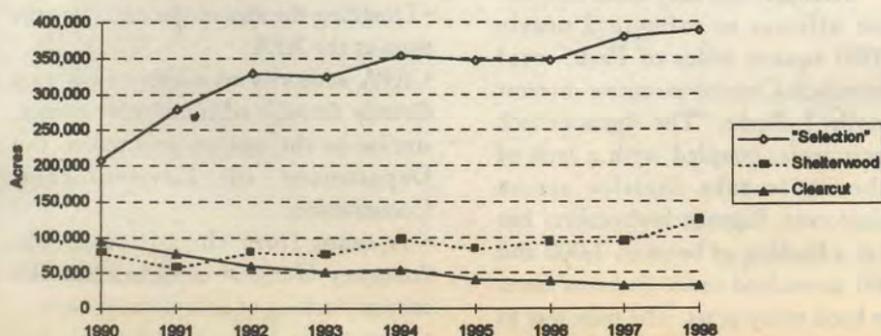
CONCLUSION

The figures indicating less clearcutting are no grounds for complacency. The evidence from Maine Forest Service annual reports are grounds for concern that both spruce-fir and hardwoods are being overcut. At a time when paper companies are selling off millions of acres and, in some cases, selling off mills or shutting down machines, this heavy cutting is sending out an unfortunate message to the public.

Some landowners might argue that growth during the inventory period was very low because of the spruce budworm, and that they are actually cutting at a reasonable rate, because growth rates are recovering. They may even argue that their intensive management (herbicide spraying, precommercial thinning, and plantations) is going to lead to major future growth. This argument does not work with

Acres Cut by "Silvicultural" System 1990-1998

Chart I



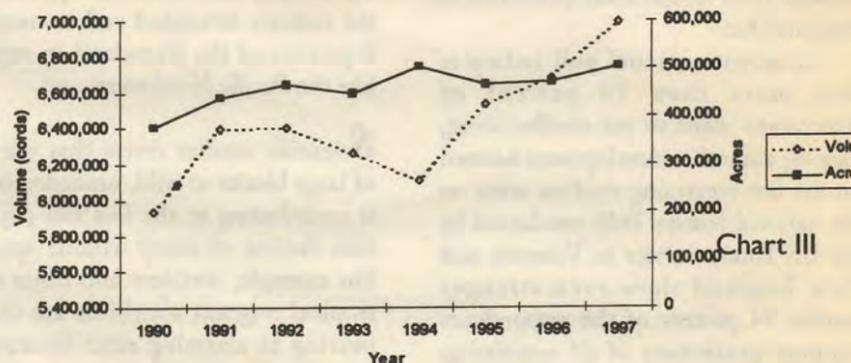
spruce budworm outbreak that ended in 1985. Also during the 1990s, there have been repeated attempts to regulate clearcuts. Landowners have gotten the message that they have to clearcut less. Finally, landowners are aware that past cutting was too heavy—many claim to have adjusted their cut levels to sustainable levels. Indeed, many of the big landowners have signed on to the Sustainable Forestry Initiative. Considering this, one might assume that landowners are operating with a lighter touch on the land.

A closer look shows that cutting may not be less intense. Because the numbers from the Maine Forest Service are not entirely dependable, the question can not be conclusively answered. These state figures suggest, however, that the total acreage cut and total volume removed are increasing, with average removals per acre staying remarkable stable through much of the 1990s.

trees, unwanted species, and culls. In 1989, the MFS reported that 65% of all clearcuts were commercial clearcuts. Under the FPA, the Maine Forest Service now lists heavy cuts that leave more than 30 square feet of basal as selection cuts, which is an intentional misuse of a silvicultural term. Foresters for the Maine Forest Service are fully aware that the proper term would be partial cut, rather than selection. True selection cuts aim to create an uneven-aged forest with stand improvement as the goal. Highgrading and diameter-limit cuts (where the logger cuts all trees over a given diameter) are not selection cuts. Also under the FPA, cuts that remove all merchantable trees but leave advanced regeneration are considered shelterwood overstory removals rather than clearcuts.

Before the passage of the FPA, MFS estimates of acreage cut were way off—many landowners did not report their cutting. The US Forest

Volume and Acreage Cut 1990-1997



long enough, stands can recover volume eventually. Statewide, however, both acreage cut and volume removed are increasing. (see chart 3). Around 1/30 of the forest is being cut each year. At this rate of cutting, inventories will continue to diminish, unless growth rates increase markedly.

CHANGES BY SPECIES TYPE

State figures show that there have been some dramatic changes in the levels of cut of spruce-fir pulp (down) and spruce-fir sawlogs (up). These trends have, to some extent, canceled each other out. While there was heavy salvage of spruce-fir during the late '70s through the '80s, total spruce-fir cut has been fairly constant during the

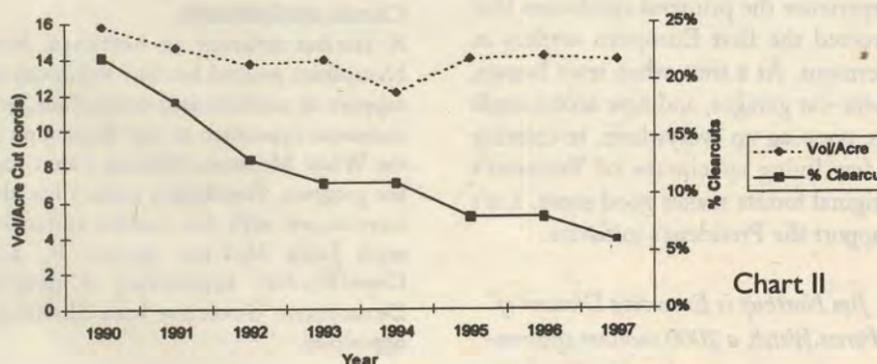
hardwoods, which are not being managed intensively or particularly well. Although spruce-fir net growth rates were low because of mortality and slow growth, what is being cut now is sawtimber, what is growing is saplings. There is a gap of many decades before the latter becomes the former. In the meantime, the spruce budworm may come again, putting a bug in the computer projections. Basing today's cut on optimistic projections of tomorrow's growth is risky at the least.

The Maine Forest Service is proposing benchmarks for sustainability, including stabilizing the cut/growth ratio. These benchmarks are voluntary.

Continued Next Page

% Clearcut vs. Vol/Acre Cut 1990-1997

Chart II



Salmon Feeding Frenzy Governor King Declares Endangered Species Act an Atomic Threat to Economic Development

King bashes enviro groups on enemies list; lashes out at salmon restoration efforts in pre-Christmas, ex cathedra proclamation

HUNDREDS OF THOUSANDS of wild Atlantic salmon used to return to the rivers of New England annually to spawn. By the 1990s, development and overfishing had reduced the numbers to a trickle. In 1993, RESTORE: The North Woods petitioned to have salmon protected under the federal Endangered Species Act throughout their historic range. The federal agencies dragged their feet for years while the number of fish continued to dwindle. Then they proposed to list salmon in seven eastern Maine rivers. That proposal was dropped two years ago after the King Administration cobbled together a state salmon "conservation" plan.

In October, 1999, the proposal to list the salmon as endangered was reinstated. What happened? It became clear that the state plan was failing to stem the decline in the species. Fewer than 30 salmon were counted in 1999 in the seven rivers covered by the plan. Plus two new salmon viruses showed up. Plus continuing expansion of the aquaculture industry increased pressure on wild fish stocks. Plus a coalition of conservation groups sued over the failure to list salmon under the ESA. As one state biologist in Maine admitted last summer, "We have some populations that are pretty damned close to extinction."

Overriding the state's own biological experts, Governor King now is threatening to sue to stop ESA listing, which he claims would be "a devastating economic blow." He cites no hard evidence for that contention and he calls the ESA "the atomic bomb of environmental laws." Brock Evans, executive director of the national Endangered Species Coalition says, "If elected officials and business leaders in Maine want to be constructive they can make sure that listing the salmon as endangered results in an improved federal-state-private partnership. I hope they do not sue or try to be obstructive. All that would do is escalate the politics, needlessly prolong the debate, and waste taxpayers money."

WHAT YOU CAN DO — Speak at a public hearing in Machias, Maine, on January 29 or in Rockland, Maine, on February 2. Send written comments supporting ESA listing of Atlantic salmon before February 29 to USFWS, 300 Westgate Center Drive, Hadley, MA 01035

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Maine Clearcuts circa 1988-1989. Land conservation deals are now bailing out the clearcutters. Photo © John McKeith

NH Land Commission Issues its Final Report; Ecological Reserve Report Mentioned — Barely

THE NEW HAMPSHIRE Land and Community Heritage Commission issued its final report in December, calling for a permanently funded state program to work closely with private entities to protect the state's historic and natural heritage.

The level of funding called for is a modest \$12 million from general revenues. The report makes further recommendations however for full funding of the federal Land and Water Conservation Fund's state-side program, which has not been funded since 1994. It also calls for funding of the federal Forest Legacy Program at \$25 million annually. This program has paid for numerous conservation easements on Northern Forest timberlands. The Commission also endorsed full federal funding of the Historic Preservation Fund, Urban Parks and Restoration Program, and Farmland Protection Fund.

The report makes only oblique reference to the work of New Hampshire's Ecological Reserves Steering Committee, which has been dormant for a year. The Committee has recommended a series of steps to save the Granite State's biodiversity, chiefly that of "designing and establishing an integrated and comprehensive set of reserves that incorporate principles of [ecological] reserve design." Its recommendations for protecting large blocks of unfragmented forest note that the greatest opportunity for doing so occur in the northern reaches of the state and that the minimum viable size for such reserves from an ecological perspective is 25,000 acres.

Both reports, as well as other studies recently released, have highlighted the impact of development on New Hampshire, particularly in the southern part of the state. The Commission's report does make note of the Ecological Reserve Project finding of low levels of protection for biodiversity. Public concern over loss of open space and other similar threats, and support for protection, were noted to be very strong.

In emphasizing a public-private partnership, however, the report gives some warning to advocates of an eco-

logical reserve system that would include unmanaged forest lands in viable size and adequate representation across the landscape. Other disturbing signals include mention of the Ecological Reserve's findings without reference to the recommended course of action. A reserve system does not make it onto the Commission's list of physical assets worthy of protection. Combined with New Hampshire's institutional preferences for working forest, these signs could point to future bias in the expenditure of public funds — if the public fails to articulate support for a reserve system that includes large forested preserves.

Nova Scotia Group Calls for Reserves on Crown Lands

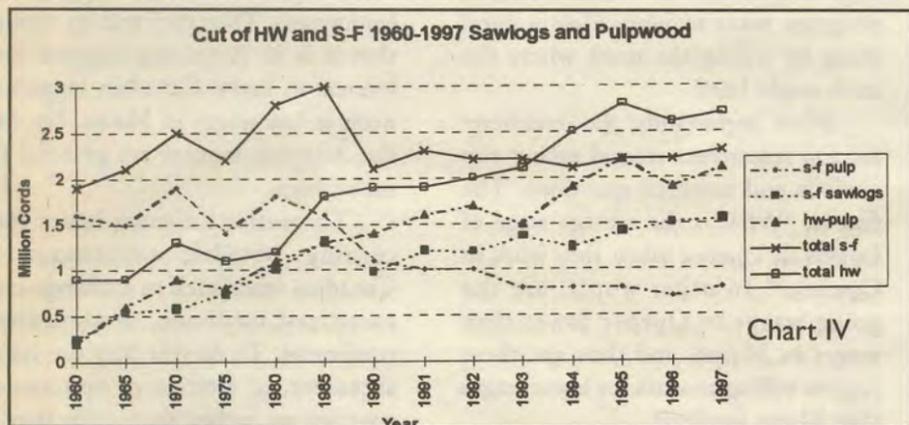
A CITIZENS' FOREST advocacy group in Nova Scotia has proposed that the provincial government protect a 16,000 hectare tract of Crown land, reserving it from logging and roads. The land is currently under lease to Kimberley Clark and was formerly managed by Scott Paper.

Eastern Shore Forest Watch proposes a Ship Harbour Long Lake Wilderness Corridor between two existing wilderness areas, White Lake and Tangier-Grand Lake, all on Nova Scotia's East Coast. The Wilderness Corridor would have the goal of retaining and restoring native forest as well as protecting Atlantic salmon habitat in the Musquodoboit River. The reserve would provide 'excellent' representation of the Central Quartzite Hills and Plains community type as well as including four others.

The group believes that remnant forest, including old stands of red spruce, white pine and yellow birch will be clearcut if not protected under the provincial Wilderness Areas Protection Act. It urges that letters of support be mailed to Premier Dr. John Hamm, POB 726, Halifax, NS B3J 2T3 or emailed: premier@gov.ns.ca

For further information, visit the website of Eastern Shore Forest Watch: www.3.ns.sympatico.ca/asibley

Is Cutting Lighter? continued...



Assurances that landowners will voluntarily restrain overcutting are starting to sound hollow to many people. After all, level of cut has always been voluntary. My analysis of the situation is conservative. My data ends in 1997 or 1998, but since then, there have been major land sales. Some of the non-industrial landowners may be cutting very heavily to pay off debts. The situation is probably worse than my figures suggest.

AN EARLIER VERSION OF THIS ARTICLE IN V. 7 # 6 OF THE NORTHERN FOREST FORUM OMITTED MOST OF THE TEXT.



Department of Labor Study: Wrong Questions, Wrong Answers

Landowners and contractors do not pay loggers more because they don't have to

by Mitch Lansky

In response to border closings and other protests from Maine loggers from the St. John River valley area, the US Department of Labor spent \$100,000 to do a study of the problem. The result, released in November, is a 250 page document by Pan Atlantic Consultants and the Irland Group. This study concluded that the bonded Canadian logger program is not depressing wages in the state or taking away jobs from Maine workers. These conclusions do not bring solace to unemployed woodworkers in northern Maine.

I expected to find some useful information in a study of this size, and I did. The study confirmed that loggers' wages are depressed in northern Maine. The study's central thesis for explaining this fact is not all that flattering to the timber industry. The writers contend that due to concentration of ownership and geographic isolation, the market for labor is "imperfect." The technical term for this imperfection is a monopsony, or oligopsony, where there is just one or a few buyers who can control prices. This is similar to monopolies and oligopolies where one or a few sellers can control prices.

The study showed that logging contractors and loggers have little or no bargaining power with big landowners and big mills. In some cases, vertical integration of landowner with mills makes the problems worse. The geographic isolation and low populations mean there are few alternative jobs. So loggers are offered low wages and told to take it or leave it.

What the authors of the study missed is that the Canadian loggers are not the cause of the poor wages, but they are a contributing factor. With Canadian loggers in the equation, landowners can say "take it or leave it — and if you leave it, we have Canadians who will take your place at the wage offered." This point is so obvious that one would have to willfully miss it.

DUBIOUS SCHOLARSHIP

One of the first places I look at in a study of this magnitude is the list of references. Having written on the subject, I am aware of some of the key literature. To my surprise, some of the key literature was not listed. In 1977, for example, Senator William Hathaway chaired a hearing of the Committee of Human Resources of the US Congress on Canadian Labor in the Maine Woods. This led to a transcript full of studies and testi-

monies on the subject. For an example of some of the interesting dialogues from the transcript, see the side bar.

The study also did not look at the work of Bowdoin economist David Vail, who wrote several papers comparing labor and technology in the Maine woods and in Sweden. Had the study looked at Vail's work, they would have seen that woods labor can be well trained and well paid, with high community status.

The study did not have a reference to *The Paper Plantation*, by William Osborne. This was the major critique of the timber industry in Maine until *Beyond the Beauty Strip* (which is also not referenced) was published in 1992. These books give comprehensive critiques of industrial forestry in Maine and show how the bond program fits into the picture.

The study does have a reference to "Nader, Ralph. Chapter IV: Pulpwood Peonage. Mid-1970s." I defy anyone to find that in a library. In 1988, the Maine Times did have an article by a similar name, "Pulpwood Peonage: Loggers are the Last Indentured Workers," but I do not think the authors of the study read that document. The study was probably referring to Osborne's book, but the authors did not bother to look up the proper citation. One expects more for \$100,000.

UNRELIABLE GOVERNMENT DATA

The study used government data on employment, harvest, and other subjects. Unfortunately, this data has limited worth. This data is often unreliable (due to method of collection) or inconclusive. Many of the recommendations at the end of the study were to government agencies to improve data collection to make it more reliable. For example, to some government agencies, loggers who are self employed "contractors" do not exist statistically on wage or employment surveys.

The study is about loggers. The authors, using various sources, could only guess at the number of loggers in Maine. Besides using different methods to count loggers, agencies sometimes use different definitions of what a "logger" is. Is a contractor a logger? Is a heavy equipment operator a logger? Depending on the answer, logger income estimates can vary widely.

Some of the data used in the study had a lack of differentiation by category. To accurately compare statistics on loggers, we need to be able to compare type of equipment (mechanized vs. chainsaw), type of payment (wage vs. piece-rate), and type of relationship (employee vs. self-employed contractor). We also need to know where the loggers are from. Without such differentiation, the result can be argument through statistical dilution. The piece-rate cutter in northern Maine, for example, could be told there is no depression of wages to the

average worker (of all types) in the entire state.

FLAWED INTERVIEWS

To supplement the available government data, the Pan Atlantic Consultants did a series of interviews with loggers, contractors, and landowners. From these limited interviews, the authors published the results, as if these were true "random" surveys that represented the whole. But it is not clear that this is the case with loggers. In publishing the results, the authors did not always differentiate categories (as previously discussed) so that the reader could know more precisely which type of logger expresses which type of opinion, where.

The study, for example, concluded based on their surveys that the average logger wage is around \$31,000. In another section, the study states that the average hourly wage for loggers is \$10, and that loggers work for 50 hours a week for 41 weeks a year. With 10 hours of overtime a week (assuming that loggers get paid for overtime), this would only add up to \$22,550 a year. One is left to wonder what types of "loggers" are making the higher incomes. Are they contractors?

For many loggers, a good portion of their income is in payments for chainsaw, skidder and travel expenses. This is a way for contractors to reduce workers' compensation payments. In my own research I found such fudging to be nearly universal. I wonder just what kind of figures the researchers used to figure annual income. Was this gross income before deductions for expenses?

The authors did not entertain the possibility that some of the interviewees might have an interest to lie. If the study confirmed negative impacts from the use of Canadian bonded labor, the program could be shut down. So why would landowners or large contractors who benefit from the program want to jeopardize a good thing by telling the truth where the truth might hurt?

More importantly, the interviewees and researchers missed asking two obvious and essential questions. The first is, "What is the average wage of loggers in Quebec when they work in Quebec?" In other words, are the going wages in Quebec lower than wages in Maine, and thus are these loggers willing to work for lower wages than Maine workers?

The second question is really the most important the researchers could have asked: "At what wage and under what conditions would Americans be attracted to working in areas where there is currently a 'shortfall'?" The authors assumed that Americans would not be enticed to work in these areas even if wages went up, but they only suggested a wage increase of a few dollars an hour. Clearly, there is a wage at which workers will do difficult work in isolated places. The authors should have made a stab at what this

figure might be. The authors should also have analyzed what the impact of various increases in wages might be on the cost of the wood and on the cost of paper or lumber. But they did not. Apparently, higher wages are not an option to be considered.

Ironically, some loggers from the Allagash area have traveled hours from home to get higher-paying logging jobs because the jobs offered locally (within 40 miles) were taken by Canadians. The region may be remote to the researchers of the study, but it is a lot closer than where they have had to go to find work at times. Indeed, sometimes bonds are working in the same towns where local loggers have had to leave.

FLAWED REASONING

The key point of the study is based on an obvious example of circular reasoning. Raising wages will not bring in more American loggers because Americans who aren't loggers now don't want to be loggers. Americans don't want to be loggers because wages are too low. Huh?

The authors claimed that, due to mechanization, the number of bonded Canadian workers has gone down, yet this has not led to an improvement of wages for American loggers. Thus, the study concludes, getting rid of the Canadian loggers will not help Americans. Indeed, they argue, getting rid of the bond program could get rid of the minimum wages set by the government. Wages could fall. If wages went up, mechanization would increase and jobs would be lost.

Unfortunately, the authors neglect their own data that show that the ratio of bonds to American loggers has actually gone up from .19 to 1 in 1975 to .27 to 1 in 1998. Canadians still have some leverage over wages. The authors also assume that nothing will be done to address the severe imbalance of power between loggers and landowners. Thus they end up arguing that it is in American loggers' best interest to invite Canadian loggers to work at low wages in Maine. I'm sure the Allagash loggers are grateful for such advice.

The authors dismiss issues concerning possible advantages of Canadian labor such as exchange rate, socialized medicine, or subsidized equipment. To do this they use either argument, or citation of opinions of contractors, rather than collection of actual data. They even suggest that Americans can take advantage of the exchange rate and shop in Canada. The authors declared that "We are not persuaded that there is merit in viewing these as matters of fairness, nor is it evident to us that their existence has had more than a marginal effect on logging labor markets in northern Maine, when seen in light of the overall economic and geographic situation in the region." Once again, what could be seen as a contributing factor is dismissed because it is not a causative

factor.

The authors admit that there may be an impact to some loggers in a few regions (such as the St. John River valley where the protesting loggers live), but do not explain how an adverse impact to these Americans can translate into there not being an adverse impact to Americans. Instead they trivialize these impacts as being only around \$13 million in wages in an economy worth billions. This figure assumes all the bonds are loggers working at the "average" wage. A certain proportion of bonds are actually truck drivers, heavy equipment operators, operating engineers, machinists, cooks, book keepers, and logging supervisors. Thus, the economic impact could be greater. The study, surprisingly, made no mention of the range of jobs taken by bonds. There are also secondary costs as communities decline.

The authors say, on the one hand, that because of mechanization, there has been a major loss of jobs. One would assume this would mean a surplus of displaced workers. Yet on the other hand, they argue that there is a shortage of workers, and that the shortfall needs to be filled by Canadians because Americans can't be found. They do not explore what has happened to the displaced loggers. If jobs are open, why did they leave?

The authors missed the obvious conclusions from their own premisses. Jobs are disappearing. The forest is being overcut. Loggers have no power to negotiate higher wages. The work is hard, seasonal, with lots of commuting. Incomes are low, and companies have avoided paying wages, benefits, or insurance by calling the workers independent contractors, rather than employees. So loggers leave or tell their children not to get into logging. The conclusion of the researchers should have been that these conditions are unacceptable in a civilized society. One only needs to look at the example of Sweden to see a society that gives loggers better training, better pay, and higher status. It can be done.

WRONG QUESTION

The study brings little comfort to unemployed or underpaid loggers because it tries to answer the wrong question. The study tried to find out if the Department of Labor is administering the bond program within the law — i.e., is there an adverse effect on American workers from the employment of bonded Canadian workers? The authors did not look into the export of raw sawlogs to Quebec. They did not look at the import of Mexican labor to plant trees and thin brush. They did not look at the causes

of declining rural communities.

What the loggers want to know is how can they have stable employment and continue to live in their communities? Apparently, some in industry and government think that living in the community where one grew up is an indulgence. If wages aren't high enough, go somewhere else and let the Canadians work at the going wage scale.

INADEQUATE OR HOLLOW RECOMMENDATIONS

Over the last thirty years, there have been a number of studies of the Canadian logger problem. Each of these studies has come up with recommendations for change. The problem has not been solved, however. Writing studies and making recommendations is not enough. Someone in power (Congress, for example) has to do something. Apparently, someone in power, over these last few decades, has



Rangeley Lakes Area Logger Photo © John McKeith

not wanted to do something.

The only new positive contribution in recent times, in the eyes of the DOL study, has been the 4-day Certified Logging Professional training program. While this has brought down workers' compensation payments, loggers have not seen the benefits in higher wages. The benefits are going elsewhere. This is not a major victory worth celebrating for loggers.

Many of the study's recommendations are for changes in classifications for filling out forms. The government, for example, still does not know how to deal with self-employed contractors. The government currently has no rates set for feller bunchers, grapple skidders, or other heavy logging equipment. This shows the degree to which there are serious gaps in the bond program. These machines, not skidders, are the primary logging tools used today in the industrial forest but the DOL has not been regulating their use.

The authors would like to see a minimum hourly wage even if a worker is paid on a piece rate. The authors could have gone a little farther. They make the case that the relationships between landowners and loggers are often very stable. They do not seem to recognize, however, that what they are describing should be an employer-employee relationship with stable wages, benefits, insurance, workers' compensation, vacations, and ability to organize. Paper mill workers have these benefits, loggers don't. The big landowners have gotten rid of such headaches by declaring that their workers are contractors, not employees.

The large landowners are being penny wise and dollar foolish by using their political might to wrest a few dollars an hour from the local Maine loggers. The landowners put the squeeze on contractors who put the squeeze on their workers. From 1973 to 1997 worker productivity, according to the study, has gone up 74.4%, but real wages have declined 31.8%. The landowners are thus saving money, but not passing the savings on to the workers.

Perhaps the most telling statistic from the study was the result of a question to employers: "Would you increase wages 10% to alleviate the shortfall of workers?" Seventy percent said no and 12% were unsure. Landowners and contractors do not pay more because they don't have to. The government is backing them up by allowing bonds who will work at lower wages. This program can thus be seen as a subsidy which further distorts an imperfect market.

If the large landowners want their woods to be well managed, they need to pay the loggers to take the time to take care. Loggers from away getting survival wages do not have the incentive to take care. To buy cheap wood for the mills, companies have cheapened the labor and cheapened the forest. The degraded forests and communities that result are a cost the public will have to pay for one way or another.

Although the study very ably presents the power imbalance of poor loggers versus big landowners in geographically isolated regions, it gives the loggers little aid or comfort. The only way for loggers to address the imbalance is to organize. Unfortunately, in an age when workers are dependent on expensive machines that must be kept in production to pay off debts, this is not an easy thing to do. As Bill Butler quipped in my book, loggers are not so much employees as debtors. It is also not easy to organize when you can be replaced by Canadian workers.

The Allagash loggers appealed to officials to protect American citizens from the negative impacts of a government program that allowed foreign competitors to take potential jobs. These loggers have concluded, however, that their own government appears to be more on the side of absentee owners, foreign labor, and foreign mills than the local workers and communities that were crying out for help.

From the April 14th, 1977, Congressional hearing on Canadian Labor in the Maine Woods

The following dialogue occurred after George Carlisle, of Prentiss and Carlisle stated that Maine loggers avoid the work because of the distance and isolation, and thus there was a need to hire Canadians:

SENATOR HATHAWAY: "You mentioned the fact that Americans don't like to go into the woods. Yet for some reason, a lot of Americans have gone all the way to Alaska to work on the pipeline up there. So it seems to me that it may be just a question of money. It may be a question of living conditions also . . . But don't you agree that if you just paid them enough you could get all the Americans you needed?"

DAVID CARLISLE: "I presume that to be true."

From the PAC/Ireland Group report for the DOL. The following, from page 229 of the report, is an example of sloppy copy editing for which we should all be grateful. In this quote from an interviewed contractor, a company name was unintentionally left in:

"WHEN X PURCHASED Y, we didn't have any negotiations. We were offered a 30% decrease from what we had made with Y for the past 20 years. There wasn't a second offer, it was basically "take it or leave it." We believe this was done so that they could hire Canadian labor. We had a perfect record for 35 years. We never fell short of filling our contracts. Now we are forced to travel 2 hours and 40 minutes and stay at camps all week. Previous to the buyout we only traveled 20-30 minutes. Canadians are subsidized when they buy equipment, and because of the exchange rate and health care situation they are cheaper to hire. Irving has taken over, they set the low prices and the competition will follow. The State of Maine needs to protect its people. Logging will never be the same."

TEST YOUR READING

COMPREHENSION

SEE ECONOMICS QUIZ ON

PAGE 30

A MULTIPLE CHOICE TEST

OF YOUR KNOWLEDGE AND

THE CRAZY LOGIC OF

WORKING AS A LOGGER IN

MAINE.

ADIRONDACK PARK REPORT

by Peter Bauer



THE ADIRONDACK PARK is a model for people living amidst wild areas in a way that's usually mutually beneficial to both. At six-million acres in size—bigger than the State of Vermont—the Adirondack Park contains a checkerboard of publicly owned Forest Preserve lands (2.5 million acres), which is managed as wilderness, and 3.5 million acres of private lands, 2.5 million of which is commercially managed forests. The Forest Preserve is protected as lands "to be forever kept as wild forest" in the state constitution.

This is the tightest wilderness protection in the U.S.; no timber harvesting, strictly limited use of motor vehicles. Created in 1885, lands in the Forest Preserve represent 85 percent of the total wilderness lands in the eleven Northeast states. 130,000 people make their homes and livelihoods in the Adirondacks spread throughout better than 100 communities.

All land uses in the Adirondack Park are managed jointly by the State of New York through various agencies and departments and local governments. While there are many complaints all around, the Adirondack Park works extremely well and is not only a place where people and wilderness systems coexist, but represents a successful model for large-scale landscape protection. Each issue the "Adirondack Park Report" details the most pressing recent issues facing the Adirondack Park.

NEW YORK ACTS DECISIVELY AGAINST ACID RAIN

NEW YORK GOVERNOR George Pataki acted twice this fall to position New York to do all it can to unilaterally combat acid rain. To truly advance the fight against acid rain, New York must point a finger inward before it can point out Midwest ways. On October 14, 1999, Governor Pataki ordered the New York State Department of Environmental Conservation to use its rule making authority to cut sulfur dioxide and nitrogen oxide emissions from utilities based in the state. Once the new rules are officially phased in between 2000 and 2007, sulfur dioxide will be reduced from 260,000 tons annually to 130,000 tons; nitrogen oxide will be reduced from 93,000 tons annually to 16,000 tons. Mercury levels will also be reduced.

These reductions will bring relief to the Adirondacks, where scientists calculate that 20 percent of all acid rain stems from short-range transport. States upwind of New York, such as Vermont and New Hampshire, should see even greater relief. Several peaks in central Vermont are renowned for extremely high mercury levels.

Pataki's second action was to order that New York State adopt the California Clean Air standards for automobile emissions. This has long been a cry of clean air advocates across the state. The Governor announced this program would start on January 1, 2004. Then all cars sold in New York will be required to meet new clean air regulations. Massachusetts was quick to add that it would follow New York's lead. The sheer power of the marketplace in New York and California will drive nationwide changes to vastly improve air quality emissions for automobiles. Fully 25 percent of all new cars sold in the U.S. are purchased in New York and California.

The Governor's actions followed New York Attorney General Eliot Spitzer's announcement that on September 17, 1999 that he has served notice of an intent to bring suit against the owners of 17 coal-fired power

plants in the Midwest for alleged violations of the 1990 Clean Air Act. Spitzer alleges that these power plants have routinely violated the grandfather clause in the Act, that allowed them to continue to operate at current levels and perform routine maintenance. Spitzer's staff found that all of these plants have significantly increased the wattage produced by upgrading and expanding capacity all the while continuing to use coal. 11 of the 17 power plants named in the suit are owned by American Electric Power of Columbus.

The companies were quick to counter punch that New Yorkers and only New Yorkers are responsible for poor air quality and acid rain. They pointed to clogged highways around New York City, high truck traffic

Eliot Spitzer routinely refers to the AG's office as a "public advocacy law clinic." Spitzer has put together one of the most formidable environmental legal staffs in the U.S. He tapped Peter Lehner, former NRDC lawyer, and long-time NYPIRG leader Judith Enck, to head up his environmental division. Spitzer also recently announced that he is moving against General Electric to recoup damages for people along the Hudson River barge canal who have suffered negative economic impacts from GE's failure to dredge PCB-laden sediments from the river. GE has successfully stalled for nearly 25 years against cleaning up the Hudson. Spitzer is moving against GE where no public official has ventured.

Spitzer's announcement was followed one month later with an

Public Health Advisories in Adirondacks Due to Mercury

Lake	County	Type of Fish
Moose Lake	Herkimer	yellow perch
Carry Falls Reservoir	St. Lawrence	walleye
Round Pond	Hamilton	yellow perch
Ferris Lake	Hamilton	yellow perch
Francis Lake	Lewis	yellow perch
Sunday Lake	Herkimer	yellow perch
Stillwater Reservoir	Herkimer	yellow perch
Moshier Reservoir	Herkimer	yellow perch
Long Pond	Lewis	splake
Meacham Lake	Franklin	yellow perch

through the state, and pollution records of power plants located in New York. Spitzer was quick to respond that one plant, the Gavin Power Plant in Ohio owned by American Electric Power, emitted more nitrogen oxides in 1998 than the 21 dirtiest plants in New York. Spitzer has since gone on to officially bring suit in federal court in November and also announced that he plans to sue several New York power plants for the same alleged violations of the Clean Air Act. There are three coal-fired power plants operating in New York.

announcement by the U.S. Attorney General Janet Reno and EPA Administrator Carol Browner that they plan to sue 32 coal-fired plants in ten states along the same lines as the Spitzer suit. It is believed that acid rain would be lessened by reductions in emissions from these plants. Total emissions from these plants top 2.2 million tons of sulfur dioxides and 660,000 tons of nitrogen oxides. These suits are expected to be officially brought early next year. The 32 plants are located in Alabama, Florida, Georgia, Illinois, Indiana, Kentucky, Mississippi, Ohio, Tennessee, and

West Virginia.

The combined actions help to make the case that New York is doing a lot (now, how about retrofitting existing automobiles and new investments in public transportation) to take the moral high ground in the acid rain fight. The facts remain startling: 500 dead lakes, 1,000 more predicted to die over the next 40 years if present trends continue, ten lakes in the Adirondacks with public health warnings against fish consumption due to high mercury levels in fish (see chart), and forest regeneration failure in many parts of the Adirondacks alarming landowners and foresters alike.

NEW ADIRONDACK EMPLOYMENT DATA RELEASED

A new jobs study of the Adirondack Park was recently released. Researched by the Department of Labor's Adirondack bureau led by Alan Beideck, this report looked at trends between 1992 and 1997. This study is an update of the 1994 study that looked at job data between 1985 and 1992 published jointly by the Department of Labor and the Nelson A. Rockefeller Institute of Government. The 1994 study found that the Adirondack Park experienced job growth at a rate faster than either the state or national average during the same years. The Beidick studies are noteworthy because they look specifically at the Adirondack Park. The Adirondack Park contains a dozen counties, but just two—Hamilton and Essex—are completely within the Parks boundary. The Beidick report looks only at data from within the Park and since most economic data is tracked on the county level, these reports necessitate a lot of special research and effort.

The findings are interesting. The report found job growth every year from 1992 to 1997, growing from 35,043 to 37,681. All sectors, but one (mining) expanded during these years: Agriculture, 308 to 359; Mining, 280 to 246; Construction, 1,227 to 1,360; Manufacturing, 3,240 to 3,486; Transportation, 928 to 1,080; Trade, 7,294 to 7,423; Fire, 900 to 897; Services, 9,905 to 10,915; Government, 10,934 to 11,863; Nonclassified, 27 to 52. Improvements in mapping jobs through GIS and a revision in the methodology has made the 1999 report, for which data ended in 1997, a much more accurate report than the 1992 report. In 1997 there was a total of 3,534 employers in the Adirondacks providing some 37,681 jobs. From 1992 to 1997, the Adirondack Park added 2,638 jobs. Pretty good for an area with a population of 130,000 and about 75,000 households, both year-round and seasonal.

The service sector jobs grew the greatest, by over 10 percent, adding some 1,010 jobs from 1992 to 1997. Social, lodging, recreational — these are the main jobs within the service sector. Social services are mainly private non-profits like hospitals, substance abuse centers, day care, private colleges, among others. The govern-

ment sector ranked second in growth. The Adirondacks has six prisons, large mental health facilities, numerous school districts and well-staffed town and county governments. The average annual wage in the Adirondacks was less than other parts of New York: Adirondack Park, \$23,224; Upstate New York, \$28,710; U.S. average, \$30,343; NYS average, \$38,637; Downstate New York, \$44,583.

Comparisons with the national averages for the mix of jobs predictably found that there's a greater reliance on government jobs in the Adirondacks (31.5% compared with a U.S. average of 15.6%), less manufacturing (Adirondacks: 9.3%, U.S.: 15.4%), though trade (Adirondacks: 19.7%, U.S.: 23.6%) and services (Adirondacks: 29.0%, U.S.: 27.8%) were close. Total payrolls figures were lopsided. For example government (Adirondacks: 40.5%, U.S.: 16.4%) and manufacturing (Adirondacks: 13.8%, U.S.: 19.5%) showed an imbalance. Other areas were closer, such as services (Adirondacks: 22.0%, U.S.: 26.1%) and trade (Adirondacks: 12.1%, U.S.: 16.6%). This reinforces previous studies that show a reliance on government employment, the tourist economy and small businesses.

One major failing of this report is that it misses thousands of legitimate jobs, an area of perhaps the largest job growth in the Adirondacks: self employed people. These folks work off their social security numbers and are not tracked by the Department of Labor. They're not covered by unemployment insurance, and again not tracked by the Department of Labor. The self-employed, independent, non-incorporated consultants, crafts people, freelancers in these many professions represent thousands across the Adirondacks.

CLASSIFICATIONS OF WHITNEY AND WATSON'S EAST TRIANGLE

Classification hearings were held by the Adirondack Park Agency (APA) on proposed classification for some 60,000 acres of Forest Preserve lands in the Adirondacks. These included the new 15,000-acre Little Tupper Lake tract, reclassification of the 7,500-acre Lake Lila tract, classification of the 23,000-acre Watson's East Triangle tract, and reclassification of 12,000 of Wild Forest lands bordering the Watson's lands and the 2,100-acre Alice Brook tract.

The public hearings went extremely well for wilderness advocates. Four hearings were complete routs where a total of 150 speakers spoke in favor of wilderness and only a handful against. Two others in the far reaches of the Adirondacks were closer, but just one had more opponents of wilderness speak. The public written comments followed a similar pattern. On the subject of the Little Tupper

Lake Classification, over 1,000 letter writers called for wilderness, whereas less than 100 called for a lesser classification. This was the same pattern for comments about the Lake Lila reclassification; the overwhelming majority believe that this tract should be reclassified as wilderness and combined with the Little Tupper Lake tract.

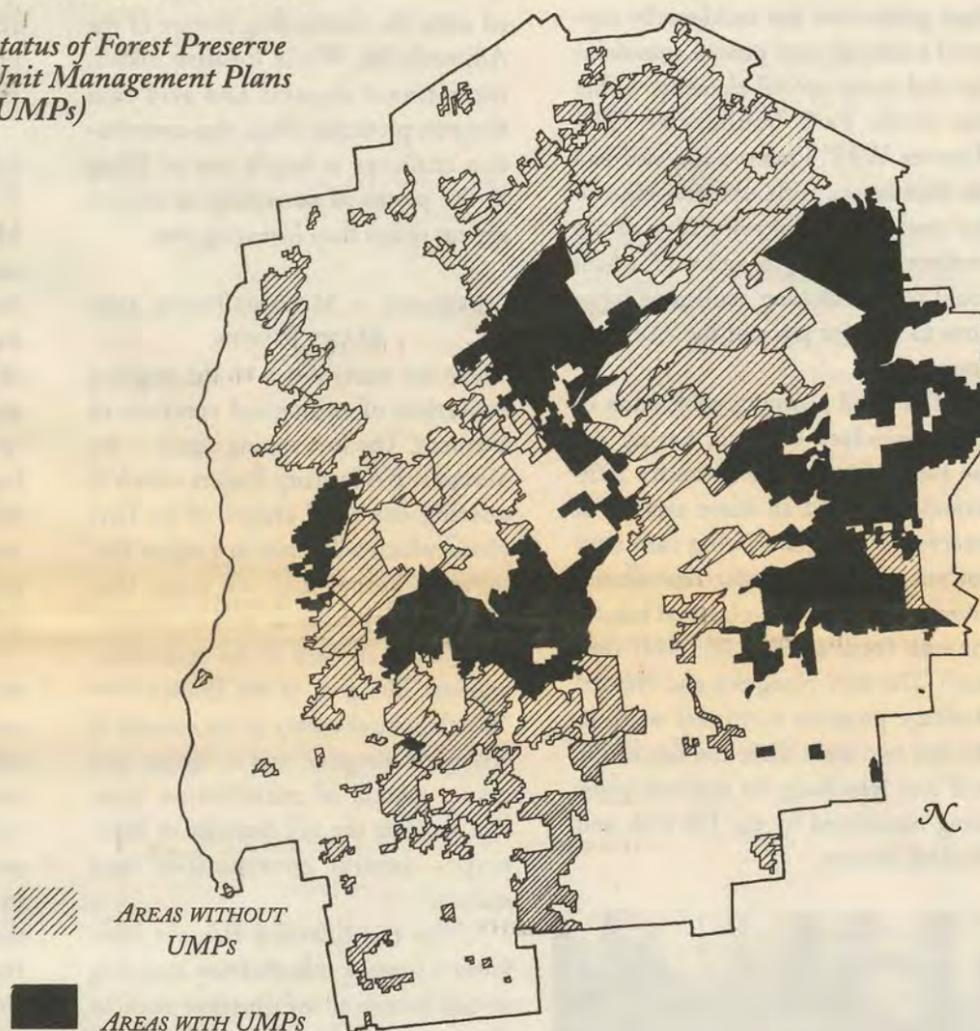
The APA also brought forth a proposal for the reclassification of 2,100 acres in the northern most part of the Five Ponds Wilderness, area to the largest stands of old growth in the Adirondacks. The Five Ponds Wilderness runs right up to suburban neighborhoods around the community of Star Lake. The APA is proposing to reclassify this 2,100-acre chunk from Wilderness to Wild Forest to recreate a snowmobile link between Star Lake and Cranberry Lake that partly ran along the old railroad bed of a long

canoes upstream to the Rock Pond and Sand Lakes outlet, up which they paddle and drag some more to reach these lakes. Once beyond the Sand Lakes, they carry to Wolf Pond and then carry to the 5 Ponds and eventually the Oswegatchie River. The New York environmental community was split over how to classify this tract. Several advocated total wilderness, others advocated a wilderness/wild forest split. All groups agreed on reclassification of 12,000 acres of isolated Wild Forest to Wilderness (with the Watson's purchase these tracts adjoin either the Pepperbox or Five Ponds Wilderness).

Public comments echoed this split. With some 35,000 acres on the line in the Watson's East Triangle classification, the APA staff proposed to classify about 10,000 acres as Wild Forest, areas that contain the majority

ADIRONDACK PARK

Status of Forest Preserve Unit Management Plans (UMPs)



defunct logging railway. Opposition to reclassification was fierce in the public written comments, though the Pataki Administration is looking for a way to facilitate the snowmobile trail while not being seen as degrading Wilderness. Some form of temporary primitive corridor may be used.

The Watson's East Triangle is a thorny management issue. Purchased from International Paper Company in the mid-1980s, this butchered, heavily cut-over tract contains a sprawling network of roads and private land inholdings, many of which have been used by generations of people to drive to an assortment of lakes and ponds for fishing and hunting. One road travels along a rare esker. Wilderness canoeing enthusiasts have long used the main haul road to access the Middle Branch of the Oswegatchie, where they paddle and drag their

of roads, and the classify the remaining 13,000 acres of the Watson's tract and 10,000 acres of other wild forest lands as wilderness. Roads and rivers would serve as the boundaries between the two areas. Through this partition, both the 5 Ponds Wilderness and Pepperbox Wilderness would be expanded as would the Aldrich Pond Wild Forest. The APA is scheduled to make a decision during its meetings on January 12-14, 2000.

ACCELERATED FOREST PRESERVE PLANNING PROCESS ANNOUNCED
The NYS Department of Environmental Conservation (DEC) announced in October 1999 that all Unit Management Plans (UMP) would be completed within the next five years. In previous issues of The Park Report the RCPA has written about how a stunning 1.4 million acres of Forest Preserve areas are without

UMPs (see chart). Under the Adirondack State Land Master Plan, each Forest Preserve Area is supposed to have an UMP, which is created by the DEC and approved by the Adirondack Park Agency (APA), to guide all development, maintenance, natural resource protection, and access in the area. The APA recently approved the first UMP for the High Peaks Wilderness Area (after a tortured 25-year public and backroom political process) and the DEC has just released a draft UMP for the Camp Santanoni Historic Area; a newly created area carved out of the Vanderwhacker Wild Forest Area.

This announcement was facilitated by the new project funding in the NYS Environmental Protection Fund (EPF). In the 1999-2000 budget \$12 million was allocated in a new Stewardship category in the EPF. Half of these funds will be used for Forest Preserve stewardship: trail maintenance, parking areas, new bridges, lean-tos, and Forest Preserve planning projects. No staff can be hired (the DEC can't offload staff onto the EPF budget to cut administrative costs), special contractors can be hired. There's currently a \$5 million backlog of projects in the Adirondack Park for approved projects for trail and road maintenance and other infrastructure. Moreover, a dozen campground areas have failing sewage systems in dire need of upgrades. This funding will address all of these issues.

The Adirondack environmental community lobbied hard for the stewardship funding with the understanding that DEC would commit to revitalizing the UMP development effort. The Governor also added six new staff positions at the DEC to work exclusively on UMPs. It is my hope that having codified, APA-approved UMPs for all areas of the Forest Preserve will eliminate the abuses of motor vehicles in the Forest Preserve and blatant mismanagement by the DEC field staff.

Peter Bauer is the executive director of the Residents' Committee to Protect the Adirondacks and can be reached at P.O. Box 27, North Creek, NY 12853, (518) 251-4257.

Erratums

In the Autumn Equinox 1999 (v. 7 #6) issue of *The Northern Forest Forum*, Pamela Prodan's page 19 comments on the Breen family's legal approach to developing Saddleback Mountain, *Saddleback Mountain — The Truth About Eminent Domain* — was not attributed to her.

Similarly, in the Summer *Forum*, v. 7 # 5, Jamie Sayen's page 30 commentary on the Maine Biodiversity Project ran egregiously without proper spell check and also omitted his name.

Beyond Representation

ECOLOGICAL RESERVES IN THE NORTHERN FOREST

by Andrew Whittaker

BIODIVERSITY PROTECTION is the goal of many conservation organizations and state agencies at work in the Northern Forest. Preservation effort has sought to protect rare as well as exemplary common natural communities with the goal of assembling a living library representing Nature's diversity.

Earlier forest preservation efforts resulting in the state and National Forests of the region may have been inspired by humanist ideals or aesthetic appreciation of Nature, but by virtue of their size they provided an umbrella of protection to a wide range of communities and species.

In the wake of the Northern Forest Lands Council, and with the development of conservation biology, the concept of ecological reserve systems has crept into regional biodiversity protection efforts. Industrial timberland sales, wholesale logging, and the nibbling effects of development have however been met with no answering, comprehensive plan for saving the Northern Forest's ecological richness and variety.

Ecological reserve systems are based on the desire of conservation biologists to save all the pieces, but to save their functionality as well. Ecosystem processes cross ownership boundaries, and small, localized preservation effort is no guarantee against extinction. Elements eliminated from our ecosystems — such as old growth forest, natural disturbance over large acreage, and predation by carnivores like the wolf — once provided important ecological functions that contributed to diversity, stability and resilience at both site and landscape levels.

Ecological reserves aim to restore these functions as well as protect habitats and preserve species. Ecological reserve design may indeed be based on representation of all native communities — but addresses the larger issue of ecological health across the landscape.

The following is a by-no-means exhaustive look at the separate states of the Northern Forest and an assessment of how far they have gone beyond representation of the rare and exemplary to protection of the whole.

THE ADIRONDACKS — FILLING IN THE PIECES

New York has the legacy of the Adirondacks and the Forest Preserve — a century's worth of coarse filter conservation based on the availability of land and the funds to purchase it. Such protection has incidentally captured a slice of most natural communities and many special elements within the wider Park boundaries. The "Forever Wild" Preserve has also laid the foundation, with extensive areas of low road density, for restoration of top predators such as lynx and wolf, which could restore missing ecological functions to a major piece of the Northern Forest.

The 1988 planning publication of the Adirondack Council, *Saving All the Pieces* (part of the Council's 2020 series) addressed all three aspects of reserve design, identifying rare sites not yet protected, under-represented communities and also potential habitat for one focal species, the wolf (see map). The state Nongame and Natural Heritage program continues work in the first two areas while the fate of the wolf and lynx hang on recovery plans being considered by the US Fish and Wildlife Service.



Joe Pyeweed in Stratford Bog, NH. The Northern Forest's natural communities must be preserved not only in representative samples but at a scale sufficient to preserve their viability. Photo © John McKeith

How well has the Preserve captured representativeness and the rare and threatened? Bill Brown of The Nature Conservancy's Keene Valley office believes the Park has accomplished two things. First, it has done a "good if incomplete" job of capturing the rare and representative. Second, the Park has protected the ecological richness and biological integrity of a landscape, with wetlands, old growth, and the very size and extent of protect-

ELEMENTS ELIMINATED FROM ECOSYSTEMS — OLD GROWTH FOREST, NATURAL DISTURBANCE OVER LARGE ACREAGE, AND PREDATION BY CARNIVORES LIKE THE WOLF — CONTRIBUTED TO DIVERSITY, STABILITY AND RESILIENCE.

ed areas the outstanding feature of the Adirondacks. While invasive plants, recreational impacts and acid rain threaten protected areas, the conservation challenge is largely one of filling in the pieces of an ecological reserve system rather than inventing one.

VERMONT — MOVING PARTS AND MANY PIECES

There are many pieces to the ongoing evolution of ecological reserves in Vermont. The first among equals is the Vermont Biodiversity Project which is nearing the final stages of its first phase, which will result in a report that presents actual lines on maps that show areas of rarity as well as ecological richness in each of the state's bioregions. The goal of the Project is to "maintain biodiversity in the context of ecological integrity" and to "design and map a system of conservation areas that protects the full diversity of landscape, natural communities and species."

The Biodiversity Project progressed beyond communities mapping to add layers of information such as species occurrences, aquatic assemblages, bedrock geology and topography and soils. This landscape diversity was used as a "surrogate for biological diversity." A Geographic Information Systems (GIS)-based project, it assigned to each pixel or computerized snippet of landscape a Landscape Diversity Unit; these were aggregated in polygons representing a sizable area of a region (5% +/-) and then the polygons ranked. To the polygon with the highest diversity ranking was added the next polygon adding the greatest complement and so on. The polygons were fleshed out to reflect watersheds and hot spots, or clusters of rare sites.

The resulting lines are meant to inform, rather than drive, reserve design. Questions will arise when they fall outside public lands; or when public lands do not appear within them. The limitations of the approach are acknowledged by its authors. The Biodiversity Project has been spearheaded by Elizabeth Thompson of the

Natural Heritage Program and John Roe of The Nature Conservancy, David Capen of the University of Vermont's School of Natural Resources, and Agency of Natural Resources personnel. Biologists, independent field naturalists and doctoral candidates have all contributed.

Many of the same people have figured highly in Champion lands decision-making and Agency of Natural Resources land planning. ANR is close to releasing the final report of its lands acquisition committee, which has at least used the language of reserve design though not to the satisfaction of those advocating large core reserves across the landscape. The Agency is

also drafting long term management plans for its forests, parks, natural areas and wildlife management areas.

Informing that process is a prototype for ecological management at Pine Mountain, a Wildlife Management Area in the Topsham area, where the rudiments of managing for specific aspects of biological diversity are being tested. Charles Johnson of the Agency's Department of Forests and Parks characterized these efforts as "getting the information we need to begin design [of ecological reserves]" with the Vermont Biodiversity Project, once it has progressed through academic review, providing a "foundational" role.

Finally, Vermont has largely avoided integrating biodiversity recommendations with its clearcutting rules; the rulemaking process it conducted was in my view episodically scientific rather than comprehensively so and driven more by the political desire to quell the extremes of opposition to the law and clearcutting itself rather than to investigate the impact of clearcutting on biodiversity and recommend mitigating steps. Whether such permitting of large cuts is wise remains a question mark; but the condition of the private "matrix" forest is unquestionably key to biodiversity across the state and region. The more even-aged, fragmented and simplified the matrix forest becomes, the less of a role it will play in maintaining biodiversity.

NEW HAMPSHIRE — PIECES IN PLACE

The Scientific Advisory Committee of New Hampshire's Ecological Reserve Project issued its report in July of 1998. Over the past year, the Project has largely lain dormant while awaiting the progress of New Hampshire's Land and Community Heritage Commission, in expectation that the work of the two bodies would dovetail. With some feeling that work of the Project should probably have proceeded in the interim, Steering Committee members will in January be discussing

actual implementation of a reserve system and how that will proceed. The report of the Heritage Commission, released in December, mentions but does not highlight the work of the Ecological Reserve Project.

Ellen Snyder of the University of New Hampshire's Cooperative Extension System has, since the departure of The Nature Conservancy's Michael Stevens (to TNC in Idaho), provided half time staff to the Project. In her view, the Steering Committee will be looking at using the criteria developed by the Scientific Advisory Group to answer the question of "how do you actually select lands and monitor them" to assess effectiveness of conservation measures.

It is likely that the first steps in a NH reserve system will take place on existing conservation lands already in the hands of public or non-profit entities such as SPNHF and Audubon.

Further, Ms. Snyder suggested that the work of the Steering Committee will help guide and prioritize new acquisition efforts through the use of criteria assessing the ecological value of sites and also provide impetus to moving all land management toward biodiversity protection.

The Scientific Advisory Group had three goals: 1) assess the current state of New Hampshire's Biodiversity 2) examine the adequacy of the current system of conservation lands in protecting the state's biodiversity and 3) define scientific principles of reserve design.

The report finds that "The biodiversity of New Hampshire is threatened at the species, natural community, and ecosystem level." Among the multiplicity of factors for this are mentioned rates of urban development in parts of the state, the natural rarity of some community types and hence their particular vulnerability to development, and widespread alteration of aquatic, estuarine and coastal wetlands about which little is known to begin with.

Of relevance to discussion of conservation of Northern Forest regions, the Report states, "There are few exemplary examples of even the most common natural community types throughout the state." Lack of old growth forest communities is one aspect of this; lack of undisturbed forest another; under-representation of low land and more productive soil types another.

In its discussion of the principles of reserve design, the Report acknowledges that larger size, connectivity and buffer areas are all key components to protecting biodiversity. The recommended threshold size for viable reserves of common, matrix reserve forest is 5-25,000 acres; larger reserves are said to be most likely in the White Mountain ecoregion. Recommended action in this region is for review of

management on currently conserved lands, assessment of their connectivity, and protection of rare and isolated species and communities. The report notes on the one hand that "current biodiversity management strategies on public conservation lands may not be sufficient to sustain species and natural communities," and on the other that "existing conservation lands have provided the state's most significant areas for restoration of core forest areas."

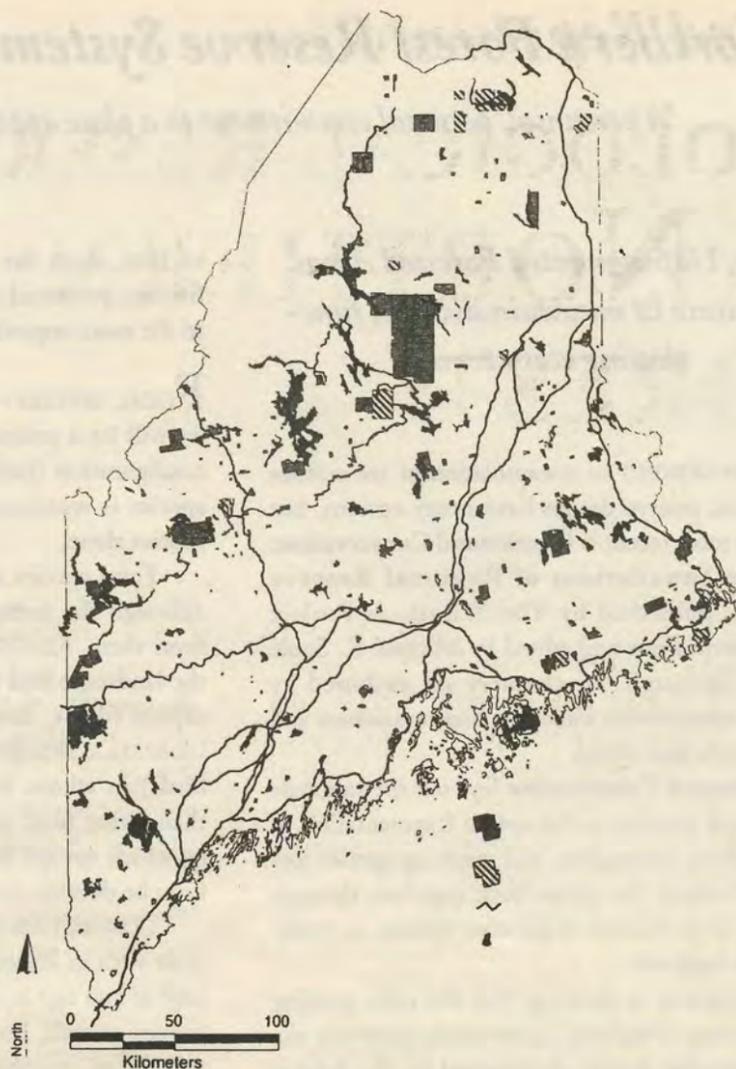
The Report's implications for conservation in the state's Northern Forest region is that the current approach to land deals is insufficient. The Report clearly points to the possibility of 1.) restoring exemplary examples of even the most common forest types, at all elevations, across the range of soils 2.) linking core areas that would aggregate with time and 3.) thinking in terms of fairly large acreages.

As such, the report provides citizen activists plenty to go on in advocating for a more ambitious approach than has been displayed in land conservation deals dating from the Nash Stream purchase of the late 80s to the recent Champion deal in the same northern New Hampshire area. Current reserves on this land are 1.) in the higher elevations 2.) not on more productive mid-slope and valley soils 3.) not regionally considered in the context of connectivity to other core areas such as the Vermont Champion lands and 4.) not aggregating to create remoteness, roadlessness, and the large size that will make natural rather than human disturbance the main agent of change.

MAINE — MISSING PIECES

The Maine Biodiversity Project, which has been closely covered and critiqued in the Forum, has proposed a reserve network for public lands in Maine, conducted a biodiversity assessment in 1998 and recently published guidelines to sustaining biodiversity in managed forests. The latter examines site, property and landscape level management considerations, appropriate in a state of large ownerships. The operating political assumption in Maine, however, that the privately owned forest can sustain a high level of biodiversity, and that an ecological reserve system on public lands alone can protect the rare and exemplary, is at odds with the statistical picture of Maine's forest.

Cathy Johnson of the Maine Natural Resources Council believes that a system of ecological reserves is in the offing on public lands in Maine despite the prospect of a legislative initiative of the Sportsman Alliance of Maine to require legislative approval of reserve designations. A Bureau of Public Lands report due in January 2000 should address reserves. Johnson emphasized that, with private lands left out of the biodiversity assessment, a public reserve system is only a begin-



Maine's public conservation lands are too fragmented and isolated to support a viable ecological reserve system that goes beyond small-scale representation of natural communities. Political pressure has been exerted to prevent discussion of an adequate reserve system. Management by larger landowners has simultaneously diminished diversity and ecological richness.

ning. At present, the Land For Maine's Future program, with \$50 million in hand, and a citizen-nominating procedure used to select lands for acquisition, is the prime vehicle for adding to a public reserve system.

An ecologically significant reserve system for the state of Maine remains therefore very much in the domain of citizen activists working with independent scientists. Proposals for a 100,000 acre reserve in the Greenville area and a wildland in the Boundary Mountains are currently being developed as is a much larger Wildlands Project proposal for the entire state. A reserve design from TWP, expected in 2000, will be based on existing roadless areas and needs of focal species.

THE REGION'S EFFORTS

As in forest practices reforms, the separate states have exhibited different approaches and levels of progress in implementing reserve design. These efforts have largely focused on capturing biodiversity through representativeness, with ecological integrity, watershed-based design, and rewilding through restoration of carnivores a tangential or repressed approach. Only the Adirondacks, by virtue of over a century's worth of land purchases and a "Forever Wild" land designation, enjoys a landscape-level of biodiversity protection and ecological health — with some key species, connectivity and functions still missing.

As biodiversity initiatives across the Northern Forest unfold, we can hope that there will be some further integration of strategies. The science suggests that biodiversity is best pro-

tected when the rare or exemplary are embedded in a matrix of unmanaged, unfragmented forest, when streams have watershed-level protection and when common, matrix forest is represented in sizable acreages sufficient to maintain diversity through natural disturbance. Restoration of top predators is a further development amply supported by a public becoming accustomed to seeing moose, coyote or wild turkey in suburbia.

Preserving biodiversity with large core reserves, connected and buffered, will remain a matter for citizen engagement as well as science. Conservation organizations view themselves as working in tandem with industry to preserve a working landscape, albeit one in which forest practices are integrated more closely with biodiversity considerations and rare and exemplary communities are protected. Public understanding, involvement and pressure remain vital elements in conservation.

US GEOLOGICAL SURVEY'S STATUS AND TRENDS OF THE NATION'S BIOLOGICAL RESOURCES NOW AVAILABLE

The USGS has released a two volume assessment of "the health, status, and trends of our plants, animals, and ecosystems." The first volume covers background concepts and issues while the second provides a region-by-region assessment of bio-resource status and trends.

Available for \$98, the report may be ordered by telephone at 202-512-2250; or on the internet via http://orders.access.gpo.gov/su_docs/sale.html.

A Northern Forest Reserve System *DEPENDS* on Public Advocacy

"A perennial, personal commitment to a place appears to accomplish more than the infusion of large dollops of dollars."

Large, Unfragmented Forested Areas will restore & maintain diverse, functioning ecosystems

READERS SEEKING an encapsulation of the science of ecological reserve design have many options, but among the most recent is **Continental Conservation: Scientific Foundations of Regional Reserve Networks**, published by The Wildlands Project through Island Press and edited by Michael E. Soulé and John Terborgh. Its chapters are authored by numerous conservation biologists and researchers and are extensively foot-noted.

Continental Conservation lays out the rationale for ecological reserves as the spatial fragmentation of habitat, habitat destruction, and resulting species loss proceed. Knitting the pieces back together, through protection of the habitat of keystone species, or rewilding, is fundamental:

"... research is showing that the rules guiding the architecture of regional conservation networks are, to a considerable degree, determined by the habitat requirements of keystone species." "Nature is now in pieces, and rewilding is a justification for restoring connectivity on a regional or landscape level." Today, "each isolated remnant of nature is caught in a tightening tourniquet of civilization."

The spatial fragmentation of habitat results in an isolation of natural processes across landscapes, regions, and even continents. Economic development and the conversion of land to its uses is thus an essentially entropic enterprise: "every field biologist knows the world is in crisis." (On the subject of conservation and activism: "A perennial, personal commitment to a place appears to accomplish more than the infusion of large dollops of dollars." Elsewhere, authors call for discipline and scientific rigor in reserve selection and design.)

Of large cores, the authors state: "Experience on every continent has shown that only in strictly protected areas are the full fauna and flora of a region likely to persist for a long period of time." Core areas provide reference areas for comparison to the humanly altered landscape; they preserve critical habitats and act as reservoirs of biota; they form "biological fortresses against invasion" by exotic species of organisms; and, in a subordinate way, provide ecosystem services that have economic value to people.

Reserve design must be scientific: "It is essential [then] that acquisitions target the lands of highest biological and ecological value..." Further acquisitions should complement previously secured lands. Selection of land for reserve status is driven by three considerations: Special Elements; Representation of Habitat types; and the habitat needs of Focal Species. Special Elements include the rare and threatened plant communities identified by Nature Conservancy-inspired state Natural Heritage programs as well as roadless areas, remnant primitive forest, unique geology and watersheds, and areas adjacent to existing protected areas. In reserve design, planners ought to seek hot spots, or clusters of special element occurrences.

Representation seeks the protection of viable examples of all vegetative communities in reserves, a coarse filter approach to saving elements contained within them but not readily identifiable or quantifiable. Within a reserve, representation also encourages inclusion of all soil types and an elevational gradient,

so that, as in the case of New Hampshire's Nash Stream, protected and reserved lands are not limited to the more unproductive soils and higher elevations.

FOCAL SPECIES — often large roaming carnivores — will be a prime determinant of reserve size and configuration (rather than exact locale). A suite of species is recommended, rather than one or several species alone.

Focal species are not necessarily large predators although the authors of **Continental Conservation** favor them. **KEYSTONE SPECIES** such as the beaver, in the landscape lead to a cascade of favorable ecological effects (dams, floods, ponds and all they signify); **UMBRELLA SPECIES** (ie, mature conifer forest songbirds) in whose habitat other species might make their living (e.g., pine marten, fisher). The rationale by which species focal to a reserve design get chosen must be developed and stated.

CONNECTIVE CORRIDORS and **BUFFER AREAS** are dealt with in illustrative and technical terms. "A century or two ago in North America and in most of the tropics as well, human settlements were the islands and nature was the sea. Now it is the reverse." The gradual chopping up of a forested landscape fragments and isolates it; conservation biology proposes the reverse.

Corridors are parts of the landscape that link large forested cores. To protect them, they need to be identified, and monitored. Nutrients, genes, predator and prey, migratory patterns: all rely on habitat connectivity. "In the simplest terms, the battle against extinction is being lost because the processes that maintained biodiversity prior to human settlement has been disrupted." Connecting cores is thus an essential of any viable reserve design.

The scale at which connectivity is considered influences reserve design. Amphibians crossing a highway face more localized challenge than bear or wolf populations. The latter figure more highly in the design of regional networks, and would require much greater connectivity.

BUFFER AREAS "maintain some degree of wilderness but allow sustainable economic uses that are compatible with the goals of the reserve network as a whole." Maintaining native biodiversity is a goal. Logging in buffer areas would seek to maintain continuity of vegetative cover, minimal road density, and low impact methods at the site level. Buffer areas form a part of the habitat of focal species, but may not provide critical remoteness. Wolves, for instance, may populate managed forest, but only from source wilderness areas.

Monitoring is necessary. Reserves are in some ways hypotheses (as is our developed and managed landscape). Follow-up monitoring provides a guide to management that may be necessary within reserves (over a short time span) and helps assess the effectiveness of reserves at doing what they are supposed to: preserve, restore and maintain for perpetuity the many components of biodiversity.

When monitoring can be accomplished through the efforts of citizens trained to scientific rigor, I would add, ecological reserves gain an important means of public outreach, support and integration with culture.

ARE THERE SKEPTICS of reserve design within the scientific community? Does a reserve design make sense for the Northern Forest? Will a system of ecological reserves here survive political suppression to

LOGGING IN BUFFER AREAS WOULD SEEK TO MAINTAIN CONTINUITY OF VEGETATIVE COVER, MINIMAL ROAD DENSITY, AND LOW IMPACT METHODS AT THE SITE LEVEL.

achieve the landscape scale success envisioned by conservation biologists?

The short answer is yes, yes, and yes. Scientific skeptics — who have some valid criticisms and perspectives — are joined as well by academics who criticize Wilderness as a human construct. Most of these criticisms do not negate the ecological validity of Reserves, or the spiritual benefits of Wilderness either, for that matter, and may well end up informing and improving Reserve strategy and design. The Northern Forest needs an Ecological Reserve system to preserve its biota, and allow for the full expression of its native biodiversity.

The answer to the last question lies with the citizenry. Outside the Adirondacks, the unfolding of conservation deals has demonstrated the political-institutional appetite for placing the working forest model at the forefront and limiting conservation dollars to scenic and recreational areas, special elements, limited representation, and isolated core reserves; an ecologically truncated approach. Although the limited conservation dollars available for direct acquisition may be one reason, there is the prospect of enhanced future funding, as from a renewed Land and Water Conservation Fund. Strong leadership on the behalf of a reserve network could strengthen funding prospects and build public awareness of what a reserve network intends to achieve.

As strongly as the public may support Wilderness, its appetite for protracted battles with industry or private landowners is probably limited. An Ecological Reserve network has in this regard a powerful and inherent advantage, the same advantage that make cores, corridors and buffer areas a superior approach to saving species than the under-exercised Endangered Species Act. A Reserve network focuses attention positively to those areas where nature still functions and can be restored. In the Northern Forest, many of those large areas are routinely on the market. We have willing sellers, and with a regional reserve network placed before the public into which these lands could be fit, the probability of willing buyers.

These advantages also are relevant to the necessity of reserve design in the Northern Forest embracing a multitude of landownerships, from the public through a variety of agencies, to large companies, land trusts, families and individuals. Especially in landscapes dominated by smaller landowners, the tactical approaches afforded a reserve design by broad public support and understanding is key to its success.

Just as important as placing reserve proposals before the public is empowering the public with the science of reserve design. A citizenry that starts to look at existing public lands in the Northern Forest as well as purchasable timber lands from the perspective of reserve design may pose a vague threat to scientific rigor — but with the abundant reward of a system of ecological reserves that gets off the maps and onto the ground.

COPIES OF CONTINENTAL CONSERVATION ARE AVAILABLE FROM ISLAND PRESS BY PHONE AT (800) 828-1302; OR VIA WEBSITE: WWW.ISLANDPRESS.ORG.

THE ECOLOGICAL CASE FOR RESERVES on VERMONT'S *Champion Lands*

*"A Conservation Design for
Champion Lands in Vermont
— An Area Vital to the Long
Term Ecological Integrity of
the North Country"*

Summarized & Quoted from a report of the Champion Lands Review Team dated December 1997

(It will be noticed that the breakdown of acreages below differ with the ultimate numbers acquired by Vermont, the US Fish and Wildlife Service and Essex Timber Company. About 25,000 more acres were devoted to managed forest than the Review Team had suggested, subtracted from the state and federal portions.)

Although the Team felt that the '2b' lands—those now largely in state hands—were best left in management with biodiversity a major goal, no real rationale for their not being more fully reserved is presented. What is said of the Nulhegan Basin's diversity applies in some measure to the West Mountain drainages (Paul Stream, Dennis and Wheeler Brooks). What the area may comparatively lack in diversity, it makes up for in representing the matrix forest of the Northeast Highlands.

A more formal process to inventory the state lands is underway. Hopefully, in assessing the pieces, the sum of the parts will not be overlooked.

JUSTIFICATION

"THE CHAMPION LANDS represent the best opportunity to conserve the resources that make the Northeast Highlands of Vermont a unique place. The Northeast Highlands, encompassing most of Essex County and a small

part of Orleans County, is distinct from other areas of Vermont, and scientists agree that it is important to capture that distinctness in any statewide conservation strategy. Among the things that make the region distinct are rare natural communities such as black spruce swamps, dwarf shrub bogs, and an unusual oak stand, rare plants such as mountain cranberry and yellow-eyed grass; rare boreal birds such as gray jay and spruce grouse; highly oligotrophic lakes; and the state's largest deer wintering area.

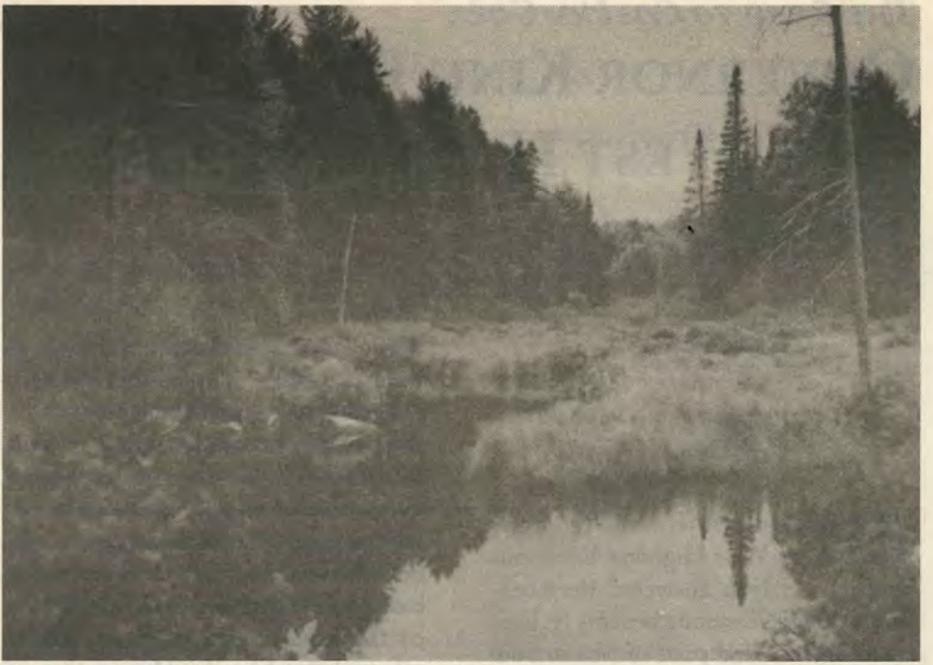
In addition to these unique features, the area's remoteness and lack of development make it especially important for mammals with large home ranges and for migratory songbirds. The connections that the land provides between protected forest land to the north and south [and east and west—ed. note] make it an area that is vital to the long term ecological integrity of northeastern Vermont and northern New Hampshire."

ZONE 1—THE EVENTUAL US FISH AND WILDLIFE REFUGE LANDS

"THE 39,041 ACRES recommended for fee ownership and managed as natural area accomplish several conservation objectives. Zone 1 has as its core the Nulhegan basin, an area that has long been recognized as significant for its unusual natural communities, its rare plants and animals, and its deer wintering area. Lowland black spruce forests, bogs, swamps, and a number of streams feeding into the Nulhegan River characterize the basin.

In addition to the Nulhegan basin, zone 1 includes higher elevation hardwood and mixed wood forests in the watershed of the basin itself. These forests are not a rare community type; instead they represent the matrix forest of the Northeast Highlands, with all the characteristic plants, animals, soils, and ecological interactions that make up the forest. Zone 1 also includes Lewis Pond, one of the most significant ponds in the Northeast Highlands. Mount Monadnock is also included in this classification, to give some protection to its special geological and botanical features as well as its scenic importance.

Protected over time with no timber extraction, these lowland and upland forests, and the waters that flow through them, will eventually provide an intact, old-growth example of this landscape type and its constituent communities and species. It will be large enough to function naturally. Where natural disturbance is necessary to maintain communities, it will act. Where animals need intact



Outlet of Big Wheeler Pond, Brunswick, VT— now state-owned. Vermont has the opportunity to grant a high level of protection to the entire West Mountain drainage, a unique complex of upland wetlands, bogs, distinctive glacial formations and remnants of primitive forest. Photo by Gwendolyn Whittaker.

forest to move about, they will have it. When climate change causes change in community composition, there will be room for that change to occur without the loss of species."

MANAGEMENT

"Zone 1 will be managed primarily for biodiversity values. In general, this means that no timber will be harvested, though there may be small, localized exceptions to this to meet other management objectives. Some roads will need to be closed over time to allow for recovery of the forest to an intact, unfragmented condition. Some recreational use will be allowed; providing that it does not threaten the ecological integrity of the area. Hunting, fishing, hiking and snowmobiling are among the uses that will be allowable in certain areas and circumstances. The details of management of the deer herd have yet to be worked out, but it is unlikely that management for biodiversity values will conflict with the maintenance of a healthy population of deer in the area."

NATURAL AREAS, ZONE 2A

"THE 3,730 ACRES in this zone allow for the protection, through conservation easements, of special natural areas identified by the Vermont Nongame and Natural Heritage Program. Among these areas are Ferdinand Bog, a large wetland complex with excellent examples of poor fen and dwarf shrub bog communities, as well as a large deer wintering area and the rare gray jay. Other areas are West Mountain Pond, Mud Pond, Dennis Pond, Wheeler Pond, Paul Stream Pond, and East Mountain, an old growth spruce forest. A total of sixteen rare species and six significant natural community types is protected in these areas.

Each natural area will have its own specific management requirements. The lakes, ponds, and wetlands will require buffers of at least 100 feet, and in some cases buffers of up to 300 feet will be required. Within these buffers the only logging should be single tree harvesting. No skidders should enter the buffers themselves. These buffers provide corridors for the move-

ment of wildlife that use the wetlands, and protect water quality. East Mountain is an old growth high-elevation spruce-fir forest in Zone 2a. No timber should be extracted from this area, and a buffer of 300 feet should be provided in which no timber is extracted.

THE STATE LANDS—ZONE 2B

"ZONE 2B CONTAINS 28,812 acres [Vermont acquired 22,000 acres — ed. note] recommended for protection by forestry easements. These easements will call for forest management that results in a high degree of ecological integrity. This zone creates a corridor of intact forest that links the protected Nulhegan Basin and Hancock Forest Legacy Lands to the north with Victory Basin to the south. It also provides a crucial link to protected forest lands in New Hampshire. It provides an ecologically intact working landscape surrounding Zone 1, giving those lands a greater degree of protection and long-term viability."

MANAGEMENT

"THESE FORESTS SHOULD be managed in such a way as to mimic the natural forest composition and structure, and to mimic natural disturbance processes (such as canopy gaps created by single tree death), while allowing for the harvest of some timber. The easements should limit changes in species mix, unless those changes bring the forest closer to its natural condition. Easements of this type will have to be developed specifically for each forest type, and may need to be tailored to specific site conditions. It may be desirable in Zone 2b to close some roads over time to reduce forest fragmentation. In any case, roads should be as small as possible. Recreational uses such as hunting, fishing, hiking and snowmobiling will be allowed on these lands. Lakes, ponds, and streams within this zone should be protected with adequate buffers. The size and nature of these buffers is not yet determined."

CONTINUED NEXT PAGE



A yellow birch of advanced age on the state lands in the Champion purchase. Many such older specimens remain, scattered across clearcuts & along streams. They are biological legacies of the primitive forest & deserve protection on all state holdings.

along the lines of "east-west mobility," than a four-lane highway. But no study has shown east-west mobility to be a problem, and even if it were, there is no reason to assume that highways are the best solution.

HIGHWAY PROPONENTS PERFORM DAMAGE CONTROL

Although proponents were initially disappointed with the economic impact analysis and commissioned a 41-page critique of it, they subsequently put their own spin on events. They credit the administration as having moved past the negatives of the reports and they say they are pleased with the King plan. This is in no small part due to the fact that Commissioner Melrose has publicly stated that the administration will work toward the overall objective of a four-lane limited-access highway from Calais to Coburn Gore.

It's not at all clear where funding is coming from to pay for the work of the proponent group, the East-West Highway Association, a.k.a. Maine Citizens for Increased Jobs and Safety in Bangor. The group has refused to release its funding sources. Highway construction is a big industry and investing in lobbyists and public relations people is a minor investment when spread out over a half-billion dollars worth of highway construction projects. The pro-highway group is also suspected by some to be linked to the Canadian-based Irving Corporation, which is seen as a prime beneficiary of an east-west highway across Maine. According to the economic studies, approximately 60% of the total vehicle hours saved from constructing a four-lane limited-access highway from Calais to Coburn Gore would flow to external users, i.e., Atlantic Canada shippers.

THE CHALLENGE AHEAD

The studies performed to date on the East-West Highway concept contain plenty of ammunition to defeat the proposal to construct a four-lane highway across Maine. The studies show that capacity on existing east-west corridors is sufficient well into the next century. They also show that the economic benefits of such a highway are moderate at best and unequally distributed. The cost of each job created by a four-lane highway ranges from \$190,000 to \$439,239.

The challenge will be in shaping public policy. Public policies should reflect people's values, but with the rise in corporate power, more and more policies tend to reflect corporate profit. Decisions about how much money should be put into highways should be informed by the likely outcomes for communities and the natural world, not just corporate coffers. I am convinced that the East-West Highway debate is really about conflicting visions of the future of Maine. For those of us who value rural Maine and the opportunities that already are here, the East-West Highway is a solution searching for a problem. The big question is whether highway boosters will be able to convince policy makers that rural Maine has a problem that needs this solution.



Phase IV Report Shows Less-Than-Positive Effects of Interstate Highways

THE 46-PAGE Phase IV Technical Report is the last of the studies evaluating a proposed East-West Highway across Maine. The report should be of interest to audiences outside of Maine. It examines transportation and economic trends before and after the construction of two interstate highways, I-89 and I-91 in Vermont and New Hampshire. I-89 and I-91 both serve regions that are comparable to Central and Northern Maine, provide comparable highway connections to

•The most common type of development along these corridors is that of highway-related services such as fast-food establishments and gas stations.

•Observed land development impacts of I-89 and I-91 have been largely confined to the larger economic and population centers that pre-existed each corridor.

•Neither I-89 nor I-91 appear to have caused dramatic traffic or land use impacts along their rural segments.

•Both I-89 and I-91 have gen-



Montreal and have been in operation roughly 30 years. The authors conducted case study research of communities along I-89 and I-91 and interviews of local planners and economic development directors. In addition to gathering information about the historic experience of these four-lane corridors, the research raises issues of the localized land use and cultural impacts of the highways.

Based on the I-91 and I-89 experiences, the Phase IV authors conclude they cannot project that significant employment or population growth would flow into rural counties located along an East-West Highway across Maine. This conclusion is consistent with the projected economic impacts developed in the Phase III Technical Report. To the extent that economic impacts from a highway do occur, the authors conclude they are most likely to occur within commuting distance of Bangor and other larger population centers along the corridor such as Skowhegan, which are already located close to Interstate 95. Some of the not-so-positive findings about these interstates contained in Phase IV follow.

GENERAL FINDINGS

•Rates of population and employment growth in the counties served by I-89 and I-91 have been roughly comparable to Vermont and New Hampshire statewide averages since 1969.

erated negative bypass effects on some communities.

•Neither highway has dramatically altered the underlying economic structure of the corridor communities.

SPECIFIC FINDINGS

WHITE RIVER JUNCTION, VT AND LEBANON, NH AREA

•Windsor County, Vermont, where I-89 and I-91 intersect, experienced the slowest rate of job growth of all counties in Vermont from 1969 to 1996.

•Bypassed communities, particularly along Route 5 between White River Junction and Newport, lost roadside business development as a result of the construction of I-91.

Although slow growth in Vermont's Windsor County was partially offset by the expansion of abutting Grafton County in New Hampshire, the crossing of two interstate highways clearly did not cause a noticeable acceleration of job growth in Grafton County. Nor was the construction of the two interstates able to prevent later manufacturing job losses in Grafton County.

The increased access afforded by I-89 and I-91 has clearly established West Lebanon as that region's predominant retail destination, although this may simply have been achieved at the expense of nearby secondary retail locations like White River Junction, St. Johnsbury, Springfield and Barre, VT and

Claremont, NH.

Planners in Hartford, VT and Lebanon, NH both stated that the area's quality of life attributes and cultural and educational facilities have been far more responsible for the region's overall economic strengths and recent expansion of software and other high-tech industries than the central location and highway access.

ST. JOHNSBURY, VT AREA

•Caledonia County, Vermont, where I-91 and I-93 intersect, has lagged the Vermont average in population and growth since 1969.

•St. Johnsbury, Vermont, located at the intersections of I-91, I-93 and U.S. Route 2, is served by five interstate exits, but has generally under-performed the Vermont economy over the past 20 years.

•Although I-91 has provided rural populations to the north of St. Johnsbury with better access to the town, the convenience of the interstate has also encouraged residents to drive to Littleton or Lebanon, NH to shop. As a result, St. Johnsbury has experienced very little new retail development in recent years.

•Although most Canadian truck traffic uses the interstates around St. Johnsbury, most local freight movements, particularly wood products, stay on Routes 2 and 5 due to their higher weights. This has caused congestion and safety problems for several communities in the region.

•An increase in seasonal population has been brought about by the purchase of inexpensive seasonal homes in the rural areas around St. Johnsbury.

•St. Johnsbury's population is projected to fall from 7,608 in 1990 to 6,823 by 2000 and to just over 5,600 by 2015. The 2015 projection represents an anticipated 26% population loss from 1990.

HOW TO OBTAIN THE REPORT

The Phase IV report has been remarkably difficult to obtain. The final version of Phase IV was not even emailed to State Economist Laurie Lachance before Governor King revealed his Seven Step plan in early October. When I called to request a copy of Phase IV in mid-October, she acknowledged that she needed to prod the consultant to email it to her and forward the final version for printing. People on the mailing list to receive a printed copy may never have received it. I didn't, until I made another phone call. Compounded with the fact that Phase IV has not been posted on the State Planning Office's worldwide web site, but instead on a "back-door" site, these chaotic events make some of us wonder whether there is a conscious effort on the part of the administration to bury this report. The Phase IV report (as of this writing) can be viewed at <http://www.state.me.us/spo/whighway/whighway.htm>. Copies may still be available from Laurie Lachance at 207-287-1479. — *Bessie Prodan*

CANADIAN GROUP PROPOSES NORTHERN CORAL FOREST PROTECTED AREA BETWEEN GEORGES AND BROWNS BANKS

By Derek Jones and Ron Huber

THE CANADIAN OCEAN Habitat Protection Society (COHPS) recently unveiled its proposal for a Northern Coral protected area in the deep water between two sunken plateaus that frame the northeastern edge of the Gulf of Maine: Georges Bank and Browns Bank.

The proposed protected area encompasses sections of Browns Bank's North East Peak and Romey's Peak on George's Bank, and also includes the "Hell Hole" the turbulent waters and seafloor of the Northeast Channel that separates the two Banks.

Historically the richest area in Canada for the diverse Northern Coral tree coral communities, the area has suffered significant damage in recent years. Offshore dragger fleets that have scraped clean the shallower areas of the Georges Bank and Browns Bank and elsewhere along the Scotian Shelf are now sending their scraper nets down one thousand feet or more, smashing down the coral 'trees' and 'shrubs' that cover the seafloor.

If designated, the COHPS Northern Coral Forest Marine Protected Area would be the world's first marine protected area specifically set up to protect northern coral species from harm. One of the biggest challenges to protecting deepwater coral forests is their relative inaccessibility. Unlike tropical corals, the deep water northern corals do not have a symbiotic relationship with photosynthetic algae. As animal-only coral organisms, they rely entirely on capturing copepods, other zooplankton and microscopic life that move in an edible fog across the deep sea floor.

Slowgrowing (a half-inch thick coral tree may be 400 years old), some scientists think that the deep ocean coral trees surviving in the deepwaters off Maine and Nova Scotia may be among the world's oldest living organisms. Some specimens appear to have been continuously alive for at least 2,000 years.

Two of the most important northern Coral species include the Saguaro cactus-like *Paragorgia Arborea* and the bushy low coral shrub species *Primnoa Resedaeformis*. In combination, the two animal species provide extremely high quality sheltering habitat for juvenile groundfish and other small animals that are otherwise quickly the prey of the vast array of predator fishes that live in these deep waters. The coral

branches and trunks are also colonized by barnacles, mussels, sponges and even other coral species, creating a highly productive deep water seafloor environment that is believed to have been one of the reasons for the extraordinary biodiversity and productivity of the offshore waters prior to the intensive scrape fisheries for groundfish, scallops and deep sea clams.

Quoted in the October 21, 1999 edition of the Globe and Mail newspaper, McMaster University biologist Michael Risk said the deep ocean corals off Nova Scotia are likely "almost the longest-living things on the planet — older than redwoods, older than giant clams."

In addition to the relentless scraping of the seafloor by dragger vessels, the northern corals are also threatened by petroleum exploration and drilling and by thousands of miles of lost gill-nets that have created large entangling wastelands that are shunned by the fish that once made the coral forests their home.

Dalhousie University conservation biologist Martin Willison [willison@is.dal.ca] a leading deep water corals researcher says that research is limited by low budgets for coral research. Because of the depths of the northern corals habitat, expensive research submarines must be rented, and the money to do so just isn't there.

The Northern Appalachian Restoration Project sponsored a joint research project with COHPS in early September that examined the shallower seafloor area near Cape Sable island, using a remotely operated vehicle equipped with a digital video camera. The resulting images have revealed, in addition to a surprisingly large number of oversized 'senior' lobsters, the existence of several previously unknown inshore coral species. The video from the ROV expedition also reveals the use of the inshore shallow corals by cod, giant halibut and other fish and crustacean species. (See related story)

Budget restrictions mean government scientists do what they can with the money they have, said DFO ecologist Don Gordon, but that has amounted to little more than a peek at the ocean floor with a remote-operated video camera.

"Even though the interest is there, just having a focused program in corals is going to be very difficult to do," Mr. Gordon said. "We will do the best we can as part of other projects or on a small-scale basis."

FOR MORE INFORMATION OR TO OFFER SUPPORT, CONTACT:

Derek P. Jones, Canadian Ocean Habitat Protection Society, Box 13, Newellton, Nova Scotia Canada BOW1PO
dkpjones@atcon.com <http://www.atlantis-force.org/cohps.html>

Marine Probers Find Rare Coral Species off Nova Scotia Coast

(CAPE SABLE ISLAND) — An international team of marine conservation activists and fishermen using an underwater robot has discovered rare northern corals in shallow waters off Nova Scotia, challenging contemporary science which holds that the extraordinary organisms exist only in very deepwaters offshore. The discovery may have major implications for fisheries management, and could lead to a ban on the use of dragger gear in many shallow water areas.

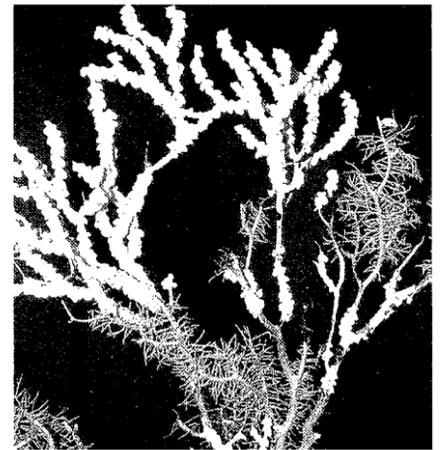
Derek Jones, executive director of the Canadian Ocean Habitat Protection Society, announced that his team discovered and videotaped a variety of northern corals at depths of only 30 to 35 fathoms. Scientists have long held that the corals were only found offshore at depths of 200 to 400 fathoms. The expedition, sponsored by the Northern Appalachian Restoration Project and funded by the Sweet Water Trust, was a joint project of the Canadian ocean Habitat Protection Society and the Coastal Waters Project.

The international team used the 'ROV Scallop' a small submersible robot manufactured by Inukton Services Ltd of Vancouver, British Columbia. Equipped with a color video camera and powerful quartz halogen lamps, ROV Scallop is connected by a tether to a control panel, video display and VCR, and is operated by a researcher on the vessel above. See the INUKTON company website at www.inukton.com.

"The ROV Scallop is a fantastic little device!" said Ron Huber of the Coastal Waters Project. The digital videocamera and the halogen lamps delivered extraordinarily clear seafloor video that scientists at Dalhousie University and elsewhere are using to re-write their abundance and species distribution surveys of the waters offshore of southern Nova Scotia.

In addition to locating shallow water northern corals, including an interesting albino species, the team has also made a number of other discoveries about the status of marine life in Nova Scotia's inshore waters, including the presence there of an abundance of oversized lobsters, a profusion of young cod and haddock in the shallows of the Scotian Shelf, and numerous other animals. The robot was also visited by a seal and by an enormous halibut.

It was also found that at night, lobster bait is swiftly pillaged from lobster traps by 'sand fleas' coming off the bottom at night. Like tiny piranhas, clouds of hundreds of these



A northern coral shrub from deep waters off Nova Scotia. Photo by Derek Jones.

lentic-sized animals arose from the seafloor and swiftly descended upon pieces of herring and other lobster bait set on the seafloor in front of the camera, visibly reducing it to near zero over the course of an hour. Interestingly, the sand fleas all but ignored bait suspended only a few inches above the bottom, suggesting their ecological role as limited to scavenging the sea floor.

Jones was joined by Nova Scotia fisherman Ronnie Wolkins who commanded the fishing vessel that was used in the expedition, and by Americans Herb Hoche and Ron Huber, both of the US group Coastal Waters Project, who were on board as observers. The two groups, teaming together as "Task Force Atlantis" plans to carry out similar ROV investigations of the offshore areas of the seafloor in the spring of 2,000, including US/Canada border areas on Georges Bank that have been proposed for designation as a national protected area by both nations.

Both groups say that information gleaned from fishermen and from explorations by marine scientists strongly suggests that both shallow and deepwater northern corals both play key roles in juvenile groundfish survival by providing food and concealment from predators.

The two groups are pressing for an end to the use of mobile fishing gear that they say has almost completely destroyed thousands of square miles of coral 'forests' that once covered much of the seafloor, and were responsible for the extraordinary abundance of groundfish and other marine life that existed offshore before the use of dragger gear.

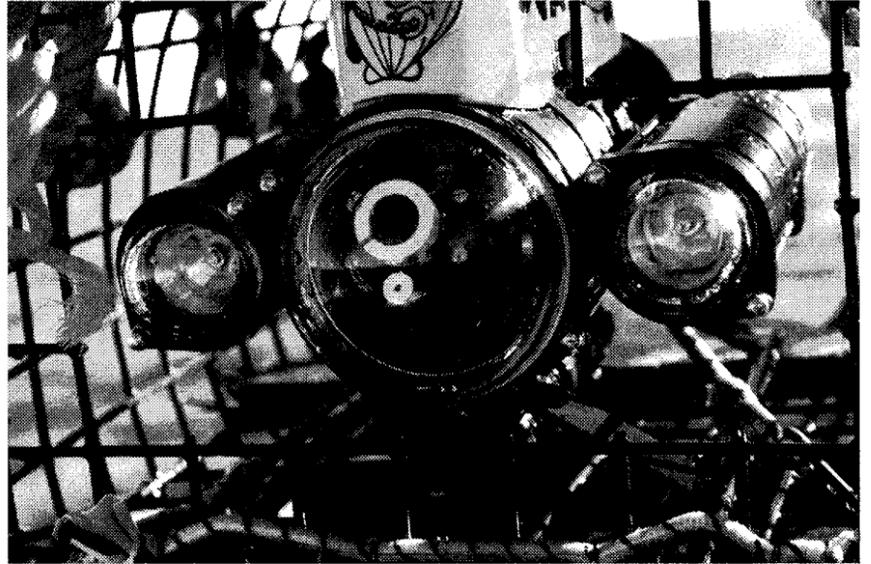
The weeklong expedition returned to shore with many hours of high quality videotape and still images taken. Some of the still images are available on the internet at www.atlantisforce.org/rovpics1.html.

FOR INFORMATION about obtaining copies of pictures of northern coral and other organisms taken during this voyage, contact Derek Jones at (902)745-2950 <dkpjones@atcon.com>.

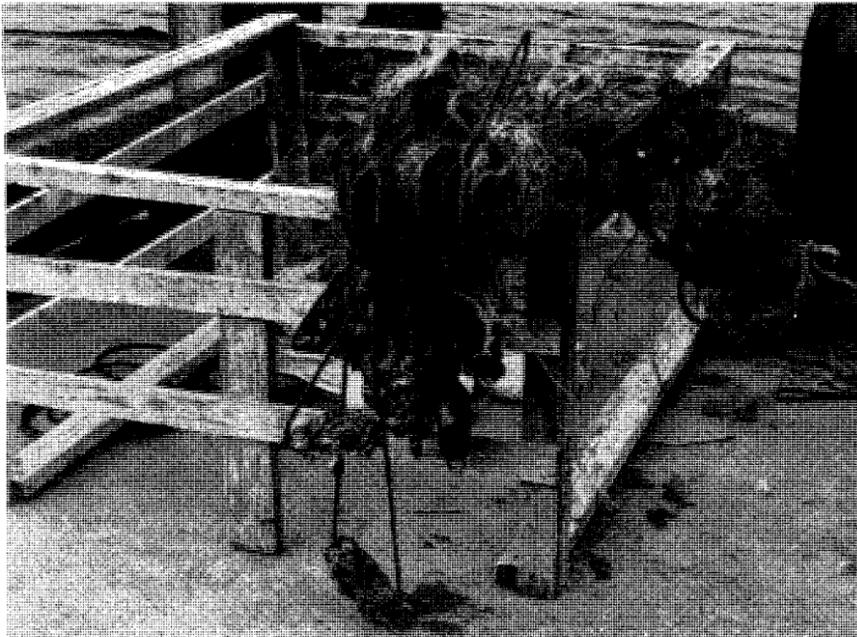
For more information on the plan for an international marine protected area on Georges Bank, contact Ron Huber at (207)594-5717 <coastwatch@acadia.net>



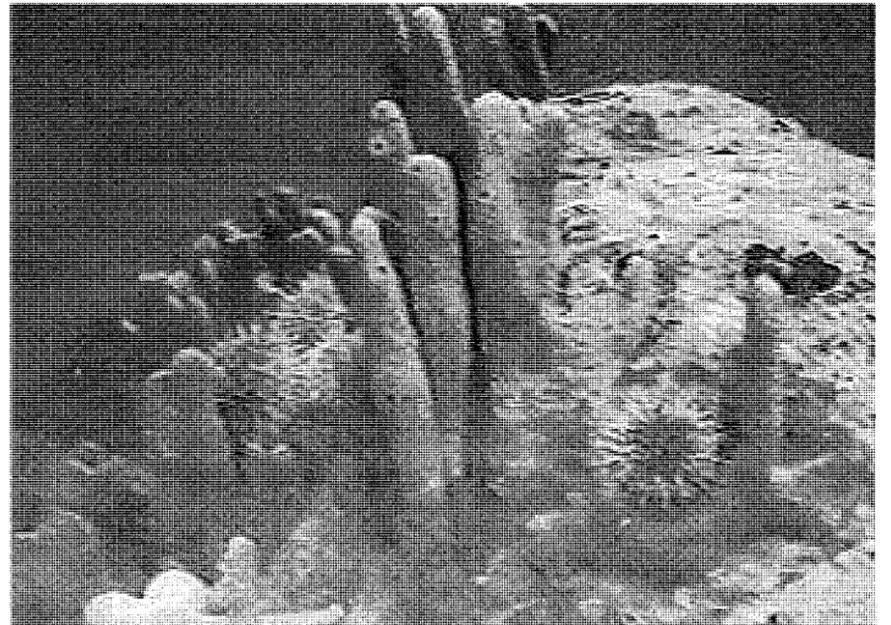
Corals recovered from ghost nets collected here by the Canadian Oceans Habitat Protection Society. Photo by Derek Jones.



The ROV Scallop which documented the presence of rare Coral Species in northern waters. Photo by Derek Jones.



Long lost ghost net with marine growths. Ghost nets — derelict gill-nets lost by fishermen — accumulate and now cover vast acreages of Georges Bank, which become ecological dead zones. Canadian activists hope to direct funds to their removal. Photo by Derek Jones.



A seafloor assemblage of sponges and soft corals shot by the ROV Scallop's video camera. Dragging for groundfish and dredging for scallops threatens recovering benthic habitats. Closing areas to dragging and dredging would allow ecosystem recovery. (More images may be seen at <http://cohps.atlantisforce.org/galleries.html>)

Tanker War!

MAINE DEFENDS ITS OIL TANKER RULES BEFORE US SUPREME COURT

by Ron Huber

Maine, 19 other States join fishing industry in asking U.S. Supreme Court To Uphold States' Rights to Prevent Oil Spills

On December 7, 1999 twenty states, including Maine, submitted a joint amicus curiae, or "friend of the court," brief to the United States Supreme Court, calling on the Court to uphold the state of Washington's oil spill prevention program against efforts by global oil companies and the federal government to strip all US states of their power to regulate the powerful oil tanker industry. The High Court heard oral arguments on behalf of Maine, Washington, and the other states and groups on December 7 1999.

The essence of the case, called Intertanko vs Locke, is whether or not coastal states have the right to protect their waters and shores from cata-

strophic oil spills. Under the Oil Pollution Act of 1990, states are granted the right to create and enforce oil tanker safety rules that may even be stronger than federal rules.

Intertanko, an international trade association that represents most of the world's oil tanker owners, is asking the US Supreme Court to throw out Washington State's oil tanker laws. If the Supreme Court rules in INTERTANKO's favor, then Maine and other state's will also be stripped of their state oil tanker safety laws and regulations, too.

In September, over the strenuous objections of the oil industry, the Maine Board of Environmental Protection approved the nation's toughest regulations over oil tankers and barges, asserting the New England state's power to prohibit entry to Canadian or other foreign or domestic supertankers or other oil ships and barges that don't meet Maine's 'Tired Tanker' standards for

worker training and vessel seaworthiness. The state also requires that oil tankers operating in Maine waters be fully staffed, and have an English speaker on the tanker's bridge who can also speak the language of the crew, when the vessel is in motion in state waters.

"Governor King has shown some surprising courage," said Ron Huber, director of the Rockland-based Coastal Waters Project. The tanker industry is powerful and well connected, and has spent years pushing King to order Maine DEP to drop Maine's oil tanker rules. Mr. King stood up to these special interests. Maine's coastal people and resources are better off because of it."

The oil tanker industry claims that the state safety rules would confuse its captains. "That's a lot of bull," said Ron Huber of the Rockland-based Coastal Waters Project. Most tanker captains run the same routes over and over agains through out their

careers. Don't try to tell me that a captain that runs a tanker between New Brunswick and Portland, year in year out, is going to get confused about Maine's oil tanker rules. That's purest nonsense." Huber spent 5 years working with the state and other non-government organizations to craft Maine's oil port and oil tanker safety rules.

Amicus briefs in support of states' rights to adopt oil spill prevention were also filed by the Cape Cod Commercial Hook Fishermen's Association and by the west coast fishing organization Pacific Coast Federation of Fishermen's Association.

The Supreme Court is expected to makes its ruling by March, 2000.

MORE INFORMATION

Providence (R.I.) Journal series on the deadly North Cape oil spill <http://projo.com/horizons/oilspill/spilmain.html>

Governor King's Salmon Diatribe: "RESTORATION NOT"

MAINE GOVERNOR ANGUS King's silly December 2, 1999 essay - 'Restoration not Regulation' was an abortive attempt to shift blame for the collapse of Maine's wild salmon to anyone but the actual industrial culprits. So abjectly was King's 'speech' a canned big industry PR event, that every Maine television station — even Maine Public Television! — declined to run it.

Nonetheless, for those with a taste for the Governor's occasional peculiar forays into industrial PR, King's handlers put his speech on the internet, where one could choose various forms of Virtual Angus — audio only, audio visual, or text.

http://janus.state.me.us/govoffice/salmon2_text.htm

Audio-Video-King turned out to be a downloadable file so enormous that few in Maine bothered to wait for the 30-40 minute download time just to view canned King. Those with an interest in the content of the Governor's latest outpouring could click on the text version for a quick copy of the actual text of his speech, "Restoration Not Regulation."

There, minus the toothy grin and the empty-suit showmanship (which tie did King have on? You don't remember?!), one could try to discern just what was troubling Mr King so much about federal efforts to help save America's last wild Atlantic salmon. It quickly becomes clear that the more appropriate title for Mr King's speech is, simply, "Restoration Not."

King correctly points to population growth in Midcoast Maine, and the encroachment of multinational agri-businesses, paper companies and foreign owned aquaculture corporations into eastern Maine, as chief culprits in the inability of the wild salmon to replenish themselves. But instead of proposing to hold developers, agribiz and aquaculturists to the high standards that have been time and again recommended, the governor has chosen to waste his, and his citizens' time and money, trying to shield industry from having to maintain a reasonable relationship with nature.

Remarkably the entire screed,

beyond the nearly neurotic need King has always had to shift blame away from his industrial campaign contributors to someone, anyone, is also a lengthy description of his utter lack of faith in his own "state plan" for protecting salmon!

As the Maine governor well knows, Federal protection of salmon will simply be an adoption of the state plan, with the all-important addition to the plan of its glaringly missing backbone and teeth.

Uncle Sam will excise the gobbets of soft, fluffy, it's-all-optional adverbs infesting the state's Maine Atlantic salmon restoration plan. Weasel words like 'may' and 'should,' beloved by anti-environmental lawyers everywhere, will be extracted and replaced with clear, directly-to-the point words like 'shall', 'must', 'will' and 'can.' Words suited to Maine's vigorous climate and people.

Frightening words, though, to corporate liberals like King, who only know how to make government bend down, not stand up, when it comes to Big Industry.

But firmness is what is called for at this dark hour for Maine rivers, almost entirely depleted of their most important predator and keystone species — *Salmo salar*, the Atlantic Salmon.

Instead, industry apologists like King will always seek for options that free industry from responsibility for its actions. But 'options' are what the wild salmon don't have.

Travelling through a particular Maine bay up a particular Maine river to a particular Maine stream isn't an 'option' for a hard working wild salmon making its way in the world to a place to live. It IS, however, an option for a fish pen operator to doublepen his livestock to keep them inside their cages.

Just as it is an option for a logging contractor to keep from loosing a choking avalanche of silt into that stream by leaving the streamside (riparian) areas undamaged. Just as it is for a pesticide sprayer to turn off his aircraft's poison dispensers before approaching that stream.

Maine marine worm harvester, consulted with NARP's Coastal Waters Project and with the Washington DC based American Oceans Campaign. On the advice of CWP director Ron Huber, Atherton used Maine's rulemaking citizen petition process to force the state of Maine to carry out a rulemaking proceeding to ban mussel dragging from the intertidal zone of Maine's coastal environment.

Atherton said that the flats are worth millions of dollars for Maine's worming and clamming industry. He is especially critical of the scraping of intertidal mussels for sale to cat food and fertilizer companies, which he said several draggers described to him as the

But Mr. King wants the world to believe that the multinational industries glutting themselves on eastern Maine laissez-faire non-regulation would crumble into insolvency if they HAD to exercise those options and become reasonable stewards of the public resources they are so blithely abusing at present.

King's assertions in "Restoration NOT" may be easily dispensed with; nearly all of them take a tumble, once scrutinized. Biggest humbug that he espouses in Restoration Not? The comical claim that not enough time has passed to prove if the state plan works.

On the contrary, it is entirely clear to every biased or unbiased observer, including King, that since the signing of Maine's state salmon protection plan, NOBODY, not a single wild salmon-impacting-corporation has followed ANY of the suggested protective actions laid out in the state's plan. Nor has King budgeted sufficient monies to carry out even a fraction of the voluntary action. The plan most emphatically DOES NOT WORK.

Despite frequent exhortations to the three biggest harmers of wild salmon, the blueberry, fishfarming and logging industries, to voluntarily desist from a litany of known fish-killing practices, all of those industries have continued bad-business-as-usual:

- Logging companies have continued logging to streams' edges and creating patchworks of water-warming clearcuts

- Irrigating blueberry farmers have continued drawing salmon streams dry, or well below the known and agreed-upon safe levels;

- Aquaculturists have continued to spread fish diseases and to colonize prime wild salmon estuaries with vast absentee-corporation-owned 'marine hog farms'.

All three industries, it goes without saying, have continued sloppily dumping tons of pesticides and herbicides into their respective parts of Maine's wild salmon ecosystems.

Clearly, like other efforts to protect the public health and resources, regulation without enforcement doesn't work. The Maine Atlantic Salmon plan, toothless by design, has unsurprisingly proven unable to take a bite out of the problems facing the eastern Maine rivers.

King lets slip the interesting fact that "the records show that more than 100 million salmon have been stocked

markets for the grittier mussels taken from mudflats.

According to Atherton, who recently completed two reports on the musseler versus wormer conflict, Maine's intertidal mud flats simply can not ecologically withstand 25 to 30 square miles being dragged per high tide each day during mussel harvesting season, across the state's tidal flats from Quoddy to Kittery.

A decision by DMR is expected soon. Meanwhile, the legislature will be considering a proposal to empanel a study commission on intertidal flat dragging — a dilatory tactic in the view of Atherton, who would prefer an immediate halt to dragging.

into Maine rivers over the past hundred years."

He doesn't seem to understand that that statistic alone is sufficient cause for immediate listing of the wild salmon. If millions of fish can't survive in Maine's rivers and coastal waters, then there is something VERY wrong. King knows what it is, but his rigid allegiance to big industry, even the low employing, high polluting absentee-owned ones like fish penning, keeps his mind clenched tight.

FINALLY: A truth! King notes that "A listing in and of itself will not and cannot bring back the salmon." So true! This is the very reason why Maine's state plan for salmon restoration has failed so spectacularly; it is merely a listing of things that well-behaved companies ought to do voluntarily, to stop the decline of wild salmon if they chose.

They haven't. They won't.

Because King and the Maine legislature lack the political courage to take on Big Pollute, it is up to our federal government to bring about protection for Maine's rivers. This is a right and proper role for federal government: to protect the public interest when the state government won't. By contrast, when the federal government won't protect the public interest, it is right and good for the states to defend that interest. The recent decision by Maine's Board of Environmental Protection to adopt strong state oil spill prevention rules, over the strenuous objections of federal government and the oil industry, is a good example.

Remarkably similar in tone and lack of substance to his rejected Forest Compact, which sought to shield the industrial logging industry from accountability by substituting voluntary rules for mandatory ones, King's Restoration NOT will end up on the same historical rubbish heap, leaving our Governor without a single major policy triumph that might rescue his two terms of office from being merely another obscure late twentieth century historical roadbump.



USEFUL LINKS on Coral Ecology in the Gulf of Maine

CANADIAN OCEAN HABITAT

PROTECTION SOCIETY

<http://www.atlantisforce.org/cohps.html>

ECOLOGY ACTION CENTRE report on Northern Corals

<http://www.chebucto.ns.ca/Environment/EAC/coral.html>

DALHOUSIE UNIVERSITY website

depicting deep ocean corals off Nova Scotia

<http://biotype.biology.dal.ca/biotype/1998/dec98/coral.html>

DEPARTMENT OF FISHERIES AND OCEANS' OCEANS ACT COORDINATION OFFICE

http://www.gfc.dfo.ca/science/oceans_a ct/eng

OCEAN VOICE INTERNL.

Trawlers are stripmining the ocean

<http://www.ens.lycos.com/ens/dec98/1998L-12-23-03.html>

REFERENCES ON GORGONIAN CORAL GROWTH RATES

<http://coral.aoml.noaa.gov/bib/gorgonians.html>

Globalization's Iron Fist: Mexican Troops, American Dollars, Corporate Priorities Overwhelm A People's Sovereignty

The War on the Land in Chiapas Expands — Big Timber a Key

by Orin Langelle, ACERCA Coordinator

IN THIS AGE where multinational corporations increase their influence on the people and governments through various 'free trade' policies under the auspices of globalization (or neoliberalism to our neighbors south of the border), people are beginning to realize something is amiss. In the northeast we are seeing raw logs exported to Canada to be milled and then sold back to US markets. Loggers in Maine have formed an alliance with the Native Forest Network and other environmentalists because of the gross exploitation of Maine's forests by timber multinationals.

Mainstream media more and more is speaking about free trade issues such as the World Trade Organization (WTO). The WTO settles disputes between countries and removes barriers to 'free trade' while the environment, workers and communities suffer. Other trade schemes in the works include the Free Trade Area of the Americas. The FTAA is the southern expansion of the North American Free Trade Agreement (NAFTA) and will encompass all of the Americas except Cuba.

One of the first popular resistances to these trade deals occurred when NAFTA went into effect. It came from the southern-most state of Mexico in Chiapas and was implemented by "the poorest of the poor:" the indigenous people. Since NAFTA has been in effect, hardships to the indigenous continue to escalate; not just in Chiapas, the state which frequently makes the headlines, but in the neighboring states of Oaxaca, Tabasco and Guerrero. Multinationals plan to take over indigenous lands, for environmentally and culturally destructive projects such as dry canals, eucalyptus plantations (some genetically engineered) and sweatshops. All of which will increase the suffering yet more.

THE CHIAPAN REBELLION BEGINS

On January 1st, 1994, the day NAFTA went into effect, many of the indigenous people in Chiapas, Mexico rose up under the banner of the EZLN (Zapatista Army of National Liberation) and emerged from the Selva Lacandon. The EZLN occupied the towns of Ocosingo, Las Margaritas, Altamirano and San Cristobal de las Casas. Municipal buildings were seized, prisoners freed from jails and government shops opened to the populace. The EZLN then issued the Declaration from the Lacandon Jungle denouncing NAFTA as a 'death sentence' for the indigenous peoples of Mexico.

The Zapatistas did not start the war; their livelihoods and culture were attacked. Although peace talks with the government quickly followed the initial insurrection, there has been no real peace. The struggle in the region, however, began long before NAFTA. One prime cause of the Chiapas uprising came about in the early 90s when then Mexican President Salinas' PRI government amended

Constitutional Article 27, the constitutional amendment which guaranteed the people of Mexico access to communal lands.

NAFTA AND BIG TIMBER

The power and weight of the timber industry's influence in Chiapas is best evidenced by the government's manipulation of Article 27 and the rewriting of other new laws to open up Mexico for timber exploitation. Article 27 was written as result of the Mexican Revolution of 1910, spearheaded by rebels such as Emiliano Zapata. Article 27 promised agrarian reform and land redistribution to peasant communities.

A precondition for Mexico entering NAFTA was reform of Article 27 to allow for the privatization of previously communally held lands. It was rewritten by forestry under-secretary Luis Tellez (later Mexican President Zedillo's Chief of Staff and now Energy

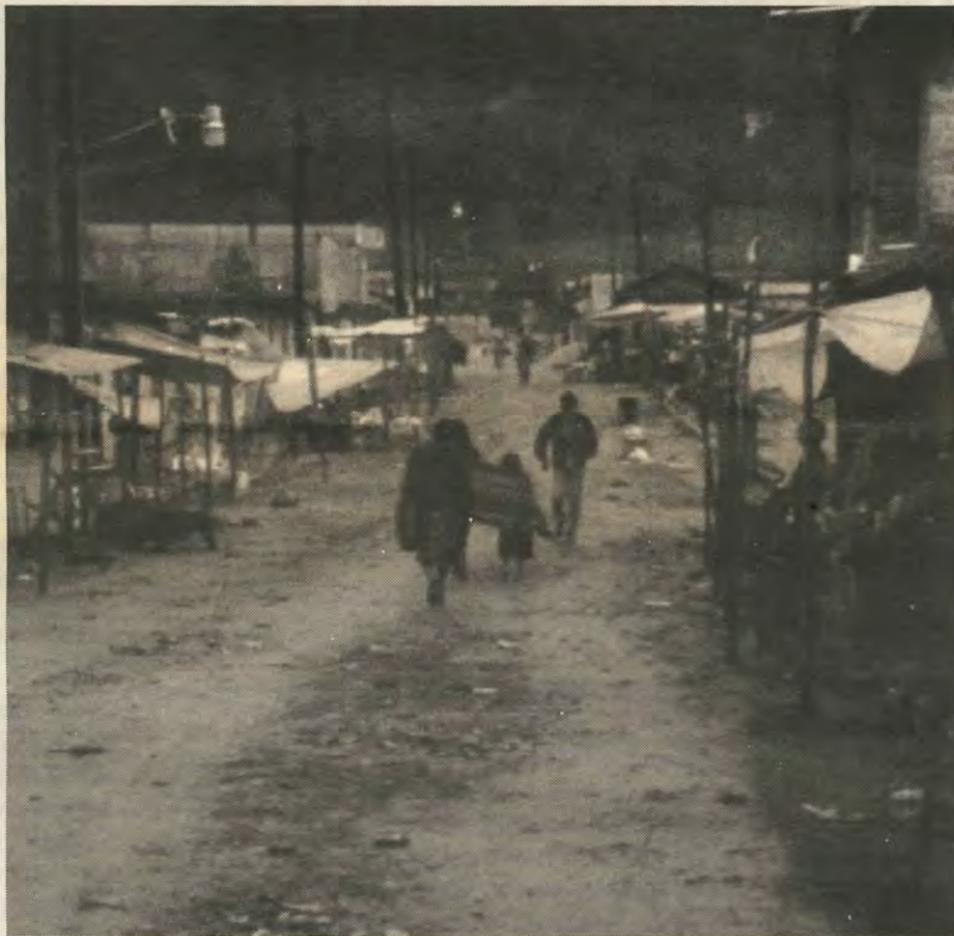


Photo © Orin Langelle

Secretary) to bring Mexico's property laws up to par with the requirements of NAFTA. This destroyed the hope of the peasant population to have communal lands to farm. In part, the reform of Article 27 forced the Zapatistas to rebel against the government. Tellez then authorized two subsequent laws: a 1992 forestry law that allowed commercial tree plantations and a 1997 revision of the law (now referred to as Krobacher's Law) that literally granted big timber's wishes.

The law is so named because it implemented a series of proposals made in a June 1995 letter to Tellez from Edward Krobacher, IP's forestry division vice president. Big timber could now receive hefty subsidies to acquire land parcels of unlimited size.

THE SELVA LACANDON

In August of 1999, 10,000 Mexican troops invaded the Montes Azules Biosphere Reserve (a United Nations sponsored conservation area) in their attempt

to crush the indigenous uprising in the state of Chiapas. This reserve is part of the Selva Lacandon one of Mexico's and North America's few remaining tropical rainforests. The invasion is part of an effort to stabilize the Mexican economy for foreign investment. One of the biggest foreign investors is the United States, who has billions at stake.

The Lacandon tropical rainforest is rich in biological diversity. It is the home of many different species including jaguars, spider and howler monkeys, harpy eagles and neo-tropical migratory songbirds. The Selva Lacandona is part of a larger rainforest ecosystem reaching through Guatemala to Belize in Central America. Unfortunately, the Selva Lacandona sits atop rich oil and natural gas fields and has been exploited for its rainforest woods such as mahogany.

THE ROOTS OF THE CONFLICT

The struggle in the region has its roots in the European invasion which occurred over 500 years ago. The stakes are high, as they always are when people try to control their own destinies and hence, their own land. In this world of dwindling natural resources the question of 'who controls the land and for what is it used' becomes increasingly critical.

In the Selva Lacandon, there was indigenous resistance to the Spanish conquest until the end of the 16th century when most of the Mayan population was moved from the selva (jungle) to the highlands for cheap labor. They stayed in the highlands until they started moving back toward the selva in the 1940s (and increasingly in the 60s and 70s) due to population increases and resultant increased demand for land. Although the new inhabitants set up ejidos (collective land holdings) for farming, the Mexican government encouraged and gave credits to campesinos for converting that land into pasture for cattle which, in turn, lead to further encroachment into the selva.

The age old problem of 'who controls the land and for what it is used' is as relevant today as it was when the first human being decided land and its riches

could be accumulated and that those human and non-human species alike who dwell on that land could be subjugated. As we move toward the 21st century, the problem has been intensified by the onslaught of multinational corporations who operate globally with the sanction of governments and their militaries. The globalization of capital and the interweaving of financial institutions have opened the doors for the further destruction of ecosystems and the annihilation of traditional peoples, cultures and values.

In Chiapas, international investment, multinational corporations and the Mexican government have led the assault, extracting raw materials ranging from petroleum, corn, hydroelectricity, cattle, coffee, forests and blood. Businesses take the wealth of southern Mexico and send it north to the U.S., Canada, Germany, Italy and Japan. Left behind is malnutrition, illiteracy, sickness, poverty and ecological devastation. The whole crisis is rooted in an ecologically disastrous development model that is expanding with NAFTA.

Before the 20th century the Selva Lacandona

War in Chiapas Expanding under Globalization



Photo © Orin Langelle

covered 13,000 square kilometers. Today, two-thirds of that is already gone leaving only purely intact the Montes Azules Biosphere Reserve. In the late 1800s the forest industry began the onslaught extracting mahogany and tropical cedar from the Lacandon rainforest. Deforestation has continued to the present, with the addition of forestry modernization practices leading to more roads fragmenting the forest. Governmental policies have further exacerbated the present crisis.

What the Mexican government says is an internal problem is, in actuality, an international crisis. The globalization/neoliberalism process in southeastern Mexico began with the practices of the International Monetary Fund and the World Bank. Chiapas' Gustavo Castro of CIEPAC (Center for Investigation of Economics and Political Action) have stated that the International Monetary Fund and World Bank used Mexico as a model for their Structural Adjustment Programs (SAPs). SAPs were started by the IMF for the liberalization of economies to foster privatization of oil, minerals, etc. This all promoted deregulation of trade and financial markets. High interest rates were encouraged to attract foreign investment and short-term speculation. Billions of foreign dollars were invested.

Because private corporations are now diverting profit from sources once slated for governments, governments have in turn slashed social services and environmental safeguards. Castro further explains that governments like Mexico, having lost these funds, then ask the World Bank for more money, but the World Bank will agree only if the governments follow IMF policies which require further privatization. Social programs and regulations are also eliminated because they are "barriers to the free flow of trade and capital." The indigenous populace and their tradition of direct democracy are also impediments.

Many describe the Zapatistas' struggle as one against neoliberalism and for the collective use of and respect for the land, for dignity and health care for their communities and for the practice of legitimate democracy. The Zapatistas seek to promote the participatory democracy that has developed in the declared 'autonomous' regions of Chiapas. This direct democracy is the logical outcome of the community discussion, understanding and participation necessary in a community surrounded by hostile forces.

Direct, legitimate and participatory democracy is quite a contrast to what is practiced in Mexico today. As the Mexican oligarchy has grown, public relations crisis management has become a multi-billion dollar industry. The political machine that has run Mexico for almost seventy years, the Partido Revolucionario Institucional (PRI) and Mexican business spent over

\$50 million dollars lobbying in the US during their successful bid to win passage of NAFTA. PR Watch reported that an estimated \$1 billion dollars was spent by the PRI and their wealthy supporters in the last Mexican elections. This money was not used just to seduce voters, but also to reassure U.S. and other foreign investors that Mexico would remain 'favorable' to foreign investment.

A monetary crisis swept through Mexico when the Mexican peso fell in early 1995. Clearly the US and Wall Street were worried about Mexico's financial stability. As the Mexican situation worsened, Chase Bank, specifically its Emerging Markets Group, which has billions at risk in Mexico, called on the Mexican government to crush the Zapatista insurgency.

Chase's January 13, 1995 "Political Update on Mexico" stated, "The government will have to eliminate the Zapatistas to demonstrate their effective control of the national territory and security policy."

On February 9, 1995 Zedillo ordered the arrest of suspected EZLN 'leaders' and the Mexican military invaded Chiapas' autonomous regions making war on the population in order to try to quell the uprising and stabilize the financial concerns of foreign investment whose security is the fundamental purpose of NAFTA. On February 21, 1995 President Clinton approved a \$20 billion loan packet to bail out the Mexican economy and big US investors.

In mid-February 1995, the Mexican military followed the Zapatistas into the Selva Lacandona. Fearing reprisals from the approaching military, an estimated 20,000 of the indigenous population and peasants followed the EZLN into the Lacandon rainforest. International and domestic human rights groups found that Mexican government forces engaged in extra judicial killings, torture, illegal searches, and unconstitutional arrests as they carried out President Ernesto Zedillo's orders to suppress the rebellion.

Currently there are over 70,000 Mexican troops in Chiapas and over thirty newly formed paramilitary organizations that terrorize indigenous communities.

Much of the military might being brought to bear against the indigenous communities of Chiapas is being supplied by the United States. For example, the Mexican daily, La Jornada reported that from 1989 to present, Mexico bought 7,148 personal transport armored vehicles. The US Pentagon agreed to give seventy-three UH-1H Huey helicopters to the Mexican Air Force to be used "principally" (but not exclusively) for anti-drug activities. In addition, from 1983-95 approximately 725 Mexican military officers were trained in the US, also under the auspices of the Drug War. This "anti-drug" assistance to the military

is ironic because there is much evidence to indicate that the Mexican military is directly linked to the narcotics trade.

THE PULP AND PAPER PLOT THICKENS

The World Rainforest Movement's Tree Plantations: Impacts and Struggles was released in February 1999. The following is of major interest:

"The increased activities of the maquiladora (or sweatshops) industry (installed within Mexico and based on imported inputs and external export markets), have resulted in an enormous deficit in packaging papers — which are currently being imported from the US and Canada — used in the necessary packaging of the industrial goods for the supply of external markets. Responding to pressures from the country's industrial sector, the Mexican government is now paving the way for the promotion of large scale pulpwood plantations to provide industry with raw material to produce cheap and paper to fill in that gap."

On April 6, 1999, IP along with Fletcher Challenge Forests, Westvaco Corporation and Monsanto announced their intent to form a forestry biotechnology joint venture to produce and market genetically engineered tree seedlings.

EUCALYPTUS PLANTATIONS

Journalist Jaime Aviles from the Mexican daily La Jornada describes eucalyptus as the perfect neoliberal tree. "Eucalyptus is fast growing, kills everything near it, and makes a lot of money for a few people," writes Aviles. Eucalyptus also depletes nutrients and ground water, leaving a potential desert in its path.

CIEPAC's Gustavo Castro states that multinational corporations rent the land for a few years from the campesinos to plant plantations and then give it back to them after it is ruined. Plantation sites are in (or planned for) Chiapas, Tabasco, Vera Cruz and the Isthmus of Tehuantepec. The number of acres of Eucalyptus Plantations in Chiapas is unknown to the NGO's in the region due to the scope of the Mexican military's low intensity war against the civilian population.

In the southern zone of Chiapas on the Pacific Coast near Tapachula, African Palm plantations have been planted. Corporations have been able to develop the plantations there because of the infrastructure (roads) built by the government. Gerardo Gonzales of FORO para el Desarrollo Sustentable (Forum for Sustainable Development) in Chiapas says Grupo Pulsar, based in the northern Mexican city of Monterrey, has a research center in Tapachula (NAFTA's only humid-tropic research laboratory for ag-biotech) where it is involved in genetically engineering trees and new genetic strains of vegetables. Grupo Pulsar is a Mexican multinational corporation that has ties with Britain's giant British American Tobacco (BAT), which also has been involved in other genetic research, specifically tomatoes. The Los Angeles Times reported on July 26, 1998, that Grupo Pulsar is headed by Alfonso Romo whose agribusiness subsidiary Empresa La Moderna [ELM] engaged 800 more partners in 1998 to farm papaya, melons, chile, eucalyptus trees and bamboo.

Lloyd's Mexican Economic Report, in June, 1999 reported that Grupo Pulsar plans to invest US 300 million dollars over the next ten years in creating 300,000 hectares (three-quarters of a million acres) of commercial tree plantations in the states of Chiapas and Tabasco in southern Mexico. The plan is one of the world's most ambitious forestry projects ever. Jesús Roberto Rivas, the managing director of Desarrollo Forestal, the forestry subsidiary of Pulsar, says that in five or six years time, the plantations will produce 8 million metric tons of wood products a year, an amount approximately equivalent to Mexico's total current forestry production.

"Most of the plantings will be of tropical eucalyptus trees native to Australia and Indonesia, which have been genetically improved in Brazil. From 10-centimeter high seedlings, the trees take about six years to grow to a harvestable height of 35 meters with a diameter of 25 centimeters. A variety of wood

products will be produced, principally for export to the U.S. and Japan."

International Paper, who helped rewrite the forestry laws, apparently has only eight test plots in southeastern Mexico and at this point is only involved in research. Is it possible IP is waiting for a more stable social situation before they begin large scale eucalyptus plantations? IP's involvement with rewriting Mexico's forestry laws would lead one to believe that they are looking toward future development.

Gonzalez told us that Patrocinio González, the former Governor of Chiapas (1988-1991) and Secretary of the Interior during the Zapatista uprising, is now a representative for International Paper. Avelino B. Villa Salas, a spokesperson for Planfosur in Villahermosa, Tabasco, has also stated that IP has an agreement with the Mexican Forest Research Institute.

PLANFOSUR

Planfosur (Forest Plantations of the South) is a venture of the Texas-based multinational, Temple-Inland Forest Products International, Inc. (Simpson Mexico, Ltd. was once involved in the Planfosur venture but pulled out in 1996). Temple-Inland is the fifth largest private landowner in the southern US and ninth largest nationwide. Temple-Inland additionally holds land in Puerto Rico, Argentina and Chile. Planfosur has 21,000 hectares of eucalyptus, some genetically engineered in Tabasco and Veracruz.

Planfosur's literature says, "Operations began in February, 1994 with the purchase of approximately 10 hectares north of Las Choapas, Veracruz, Mexico. On this site, a nursery consisting of six greenhouses, a 7500 square meter growing site, a work center building and a warehouse were constructed. Planfosur began growing nursery seedlings in June 1994. In September an office was constructed and occupied, and the first tree farms were established...with the first harvests scheduled for 2001 (Planfosur now says 2002).

"The mission of the Planfosur partners is to plant, grow and harvest the fast-growing eucalyptus species on a total of 21,000 hectares on a continuing basis. At the end of the growing cycle, wood fiber will be exported from the port of Coatzacoalcos to Gulf of Mexico ports to supply the paper mills operated by the owners of Planfosur partners. As forestry becomes a major industry in Mexico, larger projects will be considered. For example, larger projects could include the establishment of additional tree farms and the construction and operation of a pulp mill somewhere near the tree farms."

In a meeting with the Planfosur spokesman, Villa Salas said that the purpose of the plantations is to provide wood chips to be transported to where the market is the best for paper pulp and particle board. Some would be used for Mexico as 1/3 of all packaging in Mexico is imported.

Villa Salas said that Planfosur has influence over 390,000 hectares but will only plant 21,000 (for the present). The 21,000 hectares will be cut in rotations by clearcutting.

At present 4.5 million seedlings are grown per year in the Los Choapas

nursery; some of them genetically altered. Genetically engineered eucalyptus species are planned exclusively after the second rotation.

Villa Salas said that Monsanto is supplying agro-chemicals (specifically FAENA, a glyphosate herbicide known in the US as Round Up) for the plantations. Temple-Inland, Inc. has also signed on with Monsanto for more genetic research. Villa Salas was proud of Planfosur's genetic research, saying, "Our genetic base is quite wide so we can play."

Planfosur spokespeople say that the Mexican government will help subsidize Planfosur if that venture follows all government and environmental regulations, (such as Mexico's Forestry Laws). When asked if NAFTA made the Eucalyptus Plantations possible, Villa Salas said the 1997 Forestry Law (put forth by IP) was more important.



Photo © Orin Langelle

MEXICAN CAMPESINO-ECOLOGIST TORTURED & IMPRISONED

On May 2, 1999, Rodolfo Montiel Flores, a Mexican campesino who successfully led public opposition to throw out the multinational Boise Cascade in Guerrero was arrested, beaten and put into solitary confinement. The World Resources Institute reports Guerrero's forests are one of North America's last "frontier forests," that is, one of the world's few remaining large tracts of relatively undisturbed forest. Mexico ranks fifth in the world for species diversity, according to the United Nations.

The US based American Lands Alliance says, "Rodolfo founded the Organization of Campesinos and Ecologists of the Sierra de Petatlán. Poor farmers and ecologists united to protect Guerrero's forests from logging by the Guerrero-based subsidiary of Boise Cascade (of Boise, Idaho) that contracted with leaders of communal land holdings, or ejidos, to supply logs for export. When destructive logging practices in the hills diminished water

to farmers below, community opposition brought the cutting to a halt.

"Boise Cascade signed deals for exclusive rights with then-Governor Rubén Figueroa Alcocer to log Guerrero's forests shortly after NAFTA went into effect. Figueroa was later forced out of office after national television broadcast a video exposing his cover up of the "Aguas Blancas" massacre, where state police ambushed dozens of peasants, killing seventeen and wounding twenty others, who were protesting logging in the region."

MEGAPROJECT IN THE ISTHMUS OF TEHUANTEPEC

With the advance of 'free trade,' and the transfer of control of the Panama Canal back to Panama in 1999 (with the two major port cities in the hands of Chinese multinationals), new schemes to transport goods to the market are being devised. In Nicaragua

#1, Melissa Burch writes "Megaproject plans begin with a 4-lane highway and 2-rail track for a 'bullet speed' train from the port of Coatzacoalcos in the Gulf of Mexico to the port of Salina Cruz on the Pacific Ocean. The rights to operation and ownership would not belong to Mexico, but rather to multinational corporations.

Alongside this transit corridor, there are plans for approximately 150 development projects including industrial parks, clothing and textile maquiladoras, 400 square miles of eucalyptus plantations, shrimp farms, tourist initiatives such as airports, golf courses and marine parks for yachts, oil refineries and most notably, 24 petrochemical facilities. The Isthmus already produces 90% of Mexico's crude oil." Mining and dams are also part of the projects and the Megaproject will open up slash and burn agriculture.

UCIZONI (Union of Indigenous Communities in the Northern Zone of the Isthmus) in Matias Romero, Oaxaca actively opposes the Megaproject. UCIZONI represents 100 indigenous communities of five distinct nations whose main aim is the defense of mother earth and protection of indigenous peoples. They promote sustainability, reforestation and organic farming.

In November of 1996, UCIZONI attempted, through guaranteed constitutional rights, to get information on the Megaproject. To this day their requests have been unanswered by the government. In August of 1997 UCIZONI organized El Istmo es Nuestro (the Isthmus is Ours) demonstration to again attempt to procure information on the Megaproject. A second demonstration was held in Mexico City in March 1998 and again no information was released to the people. In 1995 UCIZONI's Hernando Augustine was assassinated due to his work on forestry issues.

A NEW APPROACH

Can the indigenous peoples and campesinos protect their lands, forests and culture from further exploitation? No one knows for sure, but one thing is certain, the Mexican and US governments appear to have no intention of doing so. It is clear that a different approach to solving the Mexican crisis is needed. As Major Moises (of the EZLN) said to the Mexican Democratic National Convention in October 1994, "How are you going to construct something new, if you do the same old things?"

Orin Langelle is the Coordinator of ACERCA (Action for Community and Ecology in the Rainforests of Central America). The Burlington, VT based group is a project of the Alliance for Global Justice and member of the Native Forest Network. For further information, contact:

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Wilderness & the Cultural Landscape of Henry David Thoreau

"What are the natural features which make a township handsome? A river, with its waterfalls and meadows, a lake, a hill, a cliff or individual rocks, a forest and the ancient trees standing singly. Such things are beautiful; they have a high use which dollars and cents never represent.

If the inhabitants of a town were wise, they would seek to preserve these things, though at a considerable expense; for such things educate far more than any hired teachers or preachers, or any at present recognized system of school education. I do not think him fit to be the founder of a state or even of a town who does not foresee the use of these things, but legislates chiefly for oxen, as it were."

HENRY DAVID THOREAU, JANUARY 3, 1861

THOREAU'S COUNTRY: JOURNEY THROUGH A TRANSFORMED LANDSCAPE BY DAVID R. FOSTER, HARVARD UNIVERSITY PRESS, CAMBRIDGE, MA, 1999. \$27.95

HARVARD FOREST DIRECTOR David R. Foster has revisited the journals of Henry David Thoreau, and in *Thoreau's Country* drawn a portrait from them of both a mid-19th century New England landscape and Thoreau as an important observer of its natural and cultural influences. Foster establishes the agrarian nature of Thoreau's Concord, and makes the wider point that throughout New England, the Northeast, and elsewhere, the dynamics of Nature operate in a cultural landscape, where human influences are part of natural history. Not an argument against the preservation of wildness for its own sake, *Thoreau's Country* instead notes through Thoreau's eyes the durability of wildness through the machinations of man.

Not being a scholar of Thoreau — I've hit the high spots in the opus — I can't offer a critical assessment of where *Thoreau's Country* enters into the literature. I have noticed however that Thoreau has been getting knocked around a bit. Here is Eric Freyfogle's comparing Thoreau to Wendell Berry: "Where Thoreau went for a visit, Berry has gone to stay; where Thoreau went to dabble with real nature — caring more for its metaphysics than its physics — Berry has gone for practical advice, etc. etc." (*Wild Earth*, Summer 1994) Alexis Lathem in comparing Elliott Merrick to Thoreau writes, "What we find is the spirit of Thoreau but set in a far more powerful landscape, where the individual's spiritual and intellectual groping for a renewed ethical relationship to the natural world disappears in a natural drama of blizzards and white-outs, of raging rivers and endless spruce-covered valleys. The life of the Labrador trapper makes the life of the New England 'rugged individualist' look soft." (*Northern Forest Forum* v. 7 # 1; Autumn 1998)

Foster has deliberately set out to rejuvenate our appreciation of Thoreau the field naturalist, whose observations and detailed note-taking in his year-in, year-out perambulations about Concord forge a powerful record of one piece of the New England landscape at the pinnacle of its agricultural settlement. The closeness of Thoreau's observation yielded him insights that pre-figure later fields of research: forest succession; palynology; the impact of aboriginal practices such as burning; forestry. Thoreau, for instance, in analyzing tree rings, discovered what foresters label "culmination of mean increment", the point past which a tree, so to speak, does not earn its keep.

Thoreau did not stray far from Concord because he was a dabbler or lacked courage. He was there to do his life's work, which was to exercise his eye for the wilderness, the natural forces, within both himself and his surroundings. This was part and parcel of

Thoreau the preservationist and voice for wilderness.

Foster emphasizes the tamedness of Thoreau's country to make two points: Thoreau was cultural, an albeit critical recorder of a human landscape that he judged for its excesses and ignorance but nonetheless loved, in fact, for its virility, variety and proximity to wildness. Foster's second point, which he draws out as his major theme, and hopes will shape our approach to conservation today, is the durability of wildness in Thoreau's landscape — one in which the average woodlot was 30-40 years old and even the sight of a whitetail deer was uncommon enough to be remarked. Yet here was a lifetime of labor for one of America's pioneer naturalists.

Ralph Waldo Emerson, the author of *Self-Reliance*, burned annually something on the order of 25 cords of wood and 14 tons of coal to keep the ink flowing. It was he, nonetheless, who gave Thoreau the impetus to keep a daily journal, which amounted ultimately to two million words. Born in 1817 and dying of tuberculosis in 1862, Thoreau witnessed agricultural New England at its zenith and at the beginning of the Yankee exodus. The requirement for warmth in frigid New England was a major shaper of the forest, its woodlots cut repeatedly for generations by the time Thoreau came onto the scene. The generalist agriculture familiar to Thoreau and soon to be ended by transportation links to the West and its cheap grain, also shaped the landscape which Thoreau observed. The productivity of the landscape is evident in Thoreau's notes, a counter to the common assertion that New England's agriculture declined because of the inherent limitations of a thin, sandy or rocky soil and difficult topography.

Foster uses Thoreau's description of the landscape's patchwork of colors to suggest its structure: pine woods, deciduous woods, hayfields, the bluish-green of maturing rye, the gold of harvested straw, the black to yellow hues of plowed ground. Seasonality in the lives of those farming the countryside is pronounced, and indeed is the basic, recurring structure in Thoreau's own journal entries: the time of the year is the determinant of subject and theme. Cattle are



driven to further fields in spring, and back to market in fall. Men cut wood in winter and mow grass in summer. Chestnuts are gathered in fall and eaten even on the streets of New York.

Thoreau admires the farmer and is his best critic.

He notes the erosion common at the brows of hills, where soil losses from rainfall exceed gains from any system of manuring. Country life is heroic. He casts the mowers in military terms: "Mexico was won with less exertion and less true valor than are required to do one season's haying in New England." He disparages the fellow who clears his woodlot and plants rye among the stumps as having the productivity of neither a field nor woodlot.

He admires the woodlot owner who has harvested his 8 cords of firewood from 10 acres for thirty years on an evidently sustainable basis. ("In his conversations with Thoreau, Minott expressed joy that he knew each tree on his land, its history, and future use.") He criticizes the clearcutter — more common in the landscape — who ignores forest ecology to his own detriment but at the same time details vegetative responses to clearcutting as closely as he seeks out primitive forest — scraps of woods and old trees that somehow escaped the axe and suggested pre-settlement conditions.

Thoreau the poet reacts to rampant cutting: "The woods I walked in my youth are cut off. Is it not time that I ceased to sing? My groves are invaded." Thoreau the visual artist details the impressions of a wintry logging scene. He comments on the farmers' sons gone logging: "How they renew and wear out the paths through the woods! They think I'm loafing. I think they are drudging for gain." But he also notes their high spirits and the robustness of their labor. He laments the loss of old specimens to the chopper and then sits down by the stumps to count their rings.

Foster sums up Thoreau's attitude thus: "[his] curiosity about natural history, his breadth of observation, and his practical inclination led him to a balanced view, one that blended ideas about forest preservation with advice on how to improve woodland practices and make them more efficient. Thoreau's personal approach to forest management was thus a broad one that involved developing a long-term plan for each woodland, based on a thorough understanding of the environment and history of the individual site, the composition of tree species, and close observation of the current abundance of regeneration by seedlings and saplings."

USING THE SAME simple format of extracts and commentary, Foster proceeds from a general portrait of Thoreau's landscape to a closer look at the ecology of its forest at the cusp of the shift of agriculture to the West and the New England population to its industrial centers. Thoreau was busy recording this shift: he is an early recorder of abandoned New England which, by 1900, would be a mainstay of the popular press. He calls to his sister to observe the train passing through Concord, with two massive pine logs from the West lashed to its cars. He comments caustically on the allure of the city and the complications of modern technology — but seems aware of the cultural forces gathering in them.

Thoreau's journals suggest that clearing and reversion to woods were in a dynamic balance throughout the century, but that the scales gradually began to tip at mid-century. The loss of the agricultural landscape, the reversion of the woods, has had its ecological impact, continuing even to this day (Foster is concerned with two parallel phenomenon: the loss of biodiversity in the reverting landscape and its restoration.) Thoreau anticipated what contemporary bear biologists lament — the loss of the wild apple tree. He also studied the early advent of white and pitch pine into old fields and speculated that a similar process of forest recroachment had reclaimed old Indian clearings and thus influenced an earlier phase of forest development.

A chronicler of his time and culture, Thoreau was also compelled by the mystery of past land use, particularly by Indians, and the lost heritage of wild creatures and the straggling remnants of primitive forest. In the Concord of his day, muskrats were what

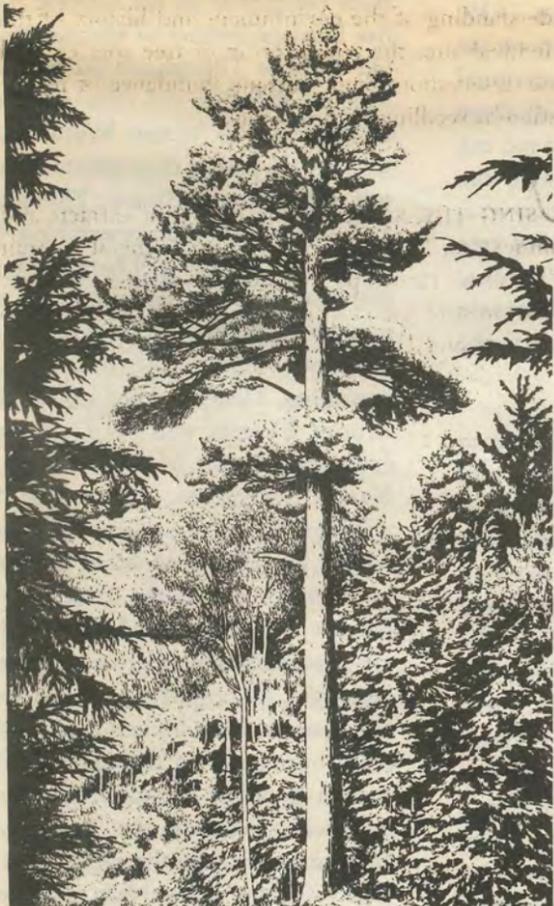
remained of a past zoology that included moose, lion (catamount), ounce (lynx) wolverine and wolf. "Is it not a maimed and imperfect nature that I am conversant with?"

Thoreau delved into the written record of primary narratives and town records, and queried the old timers, for information of these and other attributes of the pre-settlement forest. He sought out and "delighted in finding sites and forest stands that he sensed were closer in character to the 'wildwood' or original forest conditions." From his studies flowed insights into forest succession, forest management, and disturbance patterns, as well as proposals to preserve "the few remaining wild and less developed areas [in] every township."

Foster himself concludes that recognizing the ubiquity of human transformations "may also prevent us from attempting to identify and preserve a wilderness or nature that is untouched by us, outside of us, or a remnant of 'original conditions.'" In the context of the rest of Thoreau's Countryside, the statement is not an argument against designating wilderness; rather, it is acknowledgment that we will find no areas in New England completely spared the impact of humanity. This should only heighten our appreciation for the durability of Nature and the dynamics of landscape and spur a broad range of conservation effort.

Thoreau's Country strikes the theme of a dynamic landscape, in which wildness endures. How excited Thoreau would be today, were he still wandering the backlots of suburbia, to be finding there sign of returning moose and coyote. Yet how bleak he would feel at the loss not only of remnant patches of primitive forest but the almost total disappearance of the middle landscape — where humans labor in nature — and the arisen modern landscape of alienation (and outdoor recreation). How much stronger his call for the saving of large and wild places would be.

A landscape and a people availed of such places will only come back to their own civilized, cultured and paved landscapes, with, like Thoreau, a freshened eye for wilderness, and appetite for its preservation everywhere.



Illustrations in this review are from *Thoreau's Country* and are by Abigail Rorer

A Keen, Delicate & Genuine Observer of Nature

NATHANIEL HAWTHORNE ON
HENRY DAVID THOREAU

"HE IS A singular character — a young man with much of wild original nature still remaining in him; and so far as he is sophisticated, it is in a way and a method of his own. He is ugly as sin, long-nosed, queer-mouthed, and with uncouth and somewhat rustic, although courteous manners, corresponding well with such an exterior. But his ugliness is of honest and agreeable fashion, and becomes him much better than beauty. He was educated, I believe, at Cambridge, and formerly kept school in this town; but for two or three years back, he has repudiated all regular modes of getting a living, and seems inclined to lead a sort of Indian life among civilized men—an Indian life, I mean, as respects the absence of any systematic effort for a livelihood. He has been for some time an intimate of Mrs. Emerson's family; and in requittal, he labors in the garden and performs such other offices as may suit him — being entertained by Mr. Emerson for the sake of what true manhood there is in him. Mr. Thoreau is a keen and delicate observer — a

genuine observer which, I suspect, is almost as rare — a character as even an original poet; and Nature, in return for his love, seems to adopt him as her special child, and shows him secrets which few others are allowed to witness. He is familiar with beast, fish, fowl, and reptile, and has strange stories to tell of adventures, and friendly passages with these lower brethren of mortality. Herb and flower, likewise, wherever they grow, whether in garden, or wild wood, are his familiar friends. He is also on intimate terms with the clouds, and can tell portent of storms."

from Robert Cantwell's *Nathaniel Hawthorne — The American Years*
Rinehart & Co. NY 1948.

Cantwell relates that Thoreau, who had independently arrived at the Indian method of paddling, attempted to teach Hawthorne, who proved a poor student. Cantwell's book contains many descriptions of the Concord landscape as well as other areas of New England, particularly Maine, based on Hawthorne's own "purposeful observations" and "exact descriptions of nature."

Being the Unpretending Life of Asa Sheldon — One Who Drudged for Gain

THE SORT OF Yankee whose single-minded industry Henry David Thoreau chronicled is well-represented in *Yankee Drover — Being the Unpretending Life of Asa Sheldon, Farmer, Trader, and Working Man 1788-1870* (University Press of New England, 1988).

Yankee Drover is — dangerous for me to say — dreadfully proof-read, and filled with aggravating typos that conflate with the narrator's delicious colloquialisms. Nonetheless, it's a good thing that John Seelye, author of the forward, found this transcript of an old vanity memoir first published in 1862, and recognized its merit.

Asa Sheldon was born in 1788 in Lynnfield, Massachusetts. He was indentured by his parents at an early age to a neighboring farmer, a tyrant of a fellow who, however, meets his match in the young Asa, who has the virtues of a steady industry and wily cunning. The youngster supplements his meager stipend cutting fagots for ovens and stovewood; he develops the skills of the archetypal Yankee

trader, applying them to trades for everything being produced by the industry of the countryside: hops, cider, lumber, firewood. Striking out on his own, Asa drives cattle and trades oxen during the War of 1812; goes off in search of pigs in the frozen summer of 1816; trades for land and strips it of timber; goes bankrupt; and re-emerges as an excavator and builder of stonework for the Boston & Lowell Railroad.

There is something sublimely mechanical about Asa Sheldon, a quality that must have animated the social landscape observed by Thoreau. Sheldon gives credence to the myth of the Yankee as a race devoted to trading, industry and material gain. His aphorisms do however reflect the moral fiber we have also admired. Here is one admonition among the many he has handed to the ages: "Let no aged person be discouraged about setting fruit trees. Set the tree if you have opportunity, and if you never eat its fruit, let the deed be ascribed to disinterested benevolence." —A.W.

OLD Growth and BIG Trees ARE Where You FIND Them

By Robert T. Leverett

HOLYOKE COMMUNITY COLLEGE professor Gary Beluzo and I are in the process of conducting an "official" inventory of old growth sites on lands managed by the Commonwealth of Massachusetts Department of Environmental Management (DEM). We are mapping the boundaries of each site, recommending buffer areas, and building a multi-purpose GIS database for use by the state and by research institutions like Harvard University's Harvard Forest. We have until December 2001 to complete the work.

Our project will support the existing old-growth protection policy, promulgated by DEM, and pending legislation, and is motivated by our desire to provide a more permanent level of protection for the old growth. The Massachusetts Audubon Society is the driving force behind the legislation. Gary's and my mission is to make an intensive search to find any residual old-growth stands that heretofore were missed. As we map, we identify the major species growing on each site, establish formal study plots in the more significant sites, document exemplary features and specimens at all sites, take tree cores to determine average stand age, and rank the sites in terms of their relative ecological, historical, and aesthetic importance.

We are up to thirty-eight old-growth sites and will probably reach forty-five before our inventory is finished, possibly fifty. Neither of us views this project as a contest to bag old-growth sites, but given the amount of territory we have yet to cover, the predicted numbers are not only realistic, but virtually guaranteed. A decade ago, nobody I know, including me, would have thought that so many old-growth sites would have survived in populous Massachusetts. By 1996, I thought I had found them all. However, to keep the number of potential sites in perspective, their combined area will likely not exceed 1,500 acres out of the over 3,000,000 acres of forested land and over 5,000,000 acres of total land in Massachusetts. As a percentage of either figure, old growth in Massachusetts remains exceedingly rare. Even with this qualifier, the mounting number of individual sites is exciting. But how could so many old-growth stands have been missed? The simple truth is contradictory — they were and they were not. This statement requires explaining.

An old growth site on private property may be known locally to a few, but remain hidden from both public officials and determined old-growth sleuths for decades. Gary Beluzo, John Knuerr, and I were recently led to one of the best old-growth hemlock stands in the state,

which none of us had previously seen. The stand is on private land and is not publicized. I'm told that a similar situation awaits us on our next visit to New Hampshire. Other examples could be cited. Some of these unpublicized old-growth pockets on private land are proving to be highly significant. The lesson I've learned is that the lack of publicity, either intentional or unintentional, has kept a surprising number of important old-growth spots hidden from us. However, the private parcels are the lesser part of the story. There is a much larger, little tapped reserve of eastern old growth in non-commercial stands of stunted trees.

The search strategies we've used to identify potentially lucrative areas and the search images we've employed to spot old growth candidates, at a distance, have missed an entire class of old growth — the non-commercial pockets lying on steep, dry slopes, on high mountain summits, and in wetlands. These places can be in full view of a major road. As a generalization, we can attribute their slipping through the cracks to our society's preoccupation with wood products — a point of view that settled in the collective consciousness well back in early colonial times. The no nonsense, utilitarian mindset of our ancestors induced a lasting bias toward forests as commercial resources and diverted attention from forested areas not suited to timber harvesting. This persistent bias was rudely shaken in the early 1990s when the "Lord of the Rings" himself, Dr. David Stahle, Director of the University of Arkansas's Tree Ring Laboratory, predicted that a large acreage of non-commercial old-growth forest had survived intact, and strongly admonished us to protect it. Dave and his doctoral candidate Matthew Therrell became the champions of the Cross Timbers community of western Arkansas and Missouri and eastern Oklahoma. I fell in love with the centuries-old post oak communities on a visit to the Frank tract in Oklahoma in October 1995.

But most of us doubted that Dave's old-growth predictive models could be applied broadly, and certainly not to the settled Northeast. Dave suspected otherwise and he was right. The turnaround for me came upon my recognition of the stunted old-growth chestnut oak-pitch pine communities in the western Taconics, partly in New York, partly in Massachusetts. Then came the stunted northern red oak forests of Wachusett Mountain in central Massachusetts. Now we have old-growth pitch pine, scrub oak, gray birch communities on the exposed ridge tops of Mount Everett to investigate with new eyes. Beyond this, Rick Van de Poll of Antioch Graduate School is opening the door to fire-successional communities on the central New England monadnocks. All these jewels include the historically impor-

tant species *Pinus rigida* (pitch pine), and the pine communities are diverse.

Mount Everett is a large dome-shaped peak on the eastern side of the Taconics in southwestern Massachusetts. Its modest 2,608-foot height belies its visual impressiveness and dominance of the surrounding countryside. Everett rises abruptly from the lowlands of the Housatonic River to the east. The base to summit rise is almost 2000 vertical feet. Mount Everett (or the Dome) is a genuine mountain. More to the point of this article, the rounded summit of Mount Everett harbors a non-commercial old-growth forest that until Dr. Paul Van Deusen sounded the alarm had gone unrecognized. The mountain's summit is subject to extremes of climate, and as a result, a fascinating vegetative community has evolved that includes cohorts of dwarf pitch pine scattered within a thick cover of scrub oak. The community is of unknown origin. References to "yellow pine" on the summit date back to at least 1839. Residents do not recall any fires on the mountain top, and the successional nature of the forest community there speaks to this. Today, northern red oak and gray birch have penetrated the scrub oak and pitch pine along with nine other sparsely represented tree species and five or six shrubs. Blueberries are prolific. Historic accounts of the mountain such as the following still ring true.

"I used to go up to Bear Mountain ... The mountaintop was sparse and open — big stone ledges with pockets, now and then, of dirt and organic matter. The wind could blow hard up there; the sun could beat down; and often the soil, resting so thinly on the bedrock, would be parched. Only the smallest of trees — scrub oak, pitch pine, and small gray birches — grew there. The pines, especially, were distorted by the wind — leaning, as in a Japanese garden, with their neat round needle-clusters — emerald green — disposed artistically on their limbs." Rand, Christopher. *The Changing Landscape*: Salisbury, Connecticut. New York, NY: Oxford University Press, 1968.

The pitch pine community at the summit of Everett is precariously balanced. The Appalachian Trail crosses the summit, and unfortunately hikers and casual visitors tend to amble off trail. The community is sensitive to human disturbance. Young pitch pines



take root in the cracks of rock and snake along the surface like krumholtz, but since they are young trees they can be easily be damaged by being stepped on. The mature pines are 4 to 10 feet tall and their gnarled, twisted forms are exquisitely artistic. The pines form a natural bonsai forest, although a dynamic one. At present, we are guessing that the Mount Everett pitch pines got their start perhaps 200 years ago. In time, and with the help of Harvard Forest's paleo-ecologists like Dr. David Orwig and Glen Motzkin, we shall know more.

Apart from trampling by hikers, the pitch pines are potentially threatened by another source. The state, which owns the summit and a good portion of the slopes of Mount Everett, plans to refurbish the old fire tower and to install telecommunications equipment on the summit. This has local protectors of the mountain like Eleanor Tillinghast, her husband Morgan Bulkeley, and other residents of the town of Mount Washington worried. As part of their efforts to protect the mountain, Eleanor Tillinghast and others have been researching the origins of the forest. There are local oral histories of Indian terraces on the mountain. So far, the material is all anecdotal, but the possibilities are promising. There is a good chance that Mount Everett was used, perhaps extensively, by the Mohican Nation of Native Americans, featured in the writings of James Fenimore Cooper. Mount Everett was Mohican territory.

Many people in the small town of Mount Washington, Massachusetts, are passionate about protecting their mountain, and rightly so. Its treasures are many, and not limited to the pitch pine community on the summit. The eastern slopes of Mount Everett harbor ancient hemlocks that Tad Zebryk and I dated back in the early 1990s to over 350 years, yellow birch to approximately 300 years, black birch to over 210, and white pine to over 250. We were surprised to find growing on the lower slopes some of the state's finest native tulip poplars. I had read or heard nothing about those trees.

My familiarity with the eastern slopes of Mount Everett does not come from a casual visit or two. On at least a dozen occasions, I have followed the contours around Everett, frequently becoming entangled in the

thickets of mature mountain laurel. The physical difficulty of successfully penetrating the laurel is punctuated by thoughts about the whereabouts of possibly surviving rattlesnake colonies. In the laurel every trunk and branch takes on the form of a snake.

A unique feature on Mount Everett is Guilder Pond, the largest upland body of water in the state. The pond is surrounded by a very mature forest, which lends something of an air of mystery to the surrounding region. One gets the distinct feeling that in the distant past, the pond was an important, secretive place. Perhaps what is most visually obvious about Mount Everett is that it has not been degraded with the usual network of paved roads, parking lots, unsightly towers, slum-like campgrounds, and God forbid, the bane of all noble mountains — downhill ski operations. In fact, the mountain is as close to pristine as we have in Massachusetts. That great sister mountain to the north, Greylock, has not been as fortunate — all the more reason to protect Mount Everett. Yes, the Dome feels like holy ground and a growing number of us intend to see that it stays that way. Readers of the Notes can expect to be kept apprised as this important story unfolds.

I would be remiss, however, if I left the impression that the charms of southwestern Massachusetts are limited to Mount Everett, however. Far from it. Bartholomew's Cobble lies in the long shadows of Everett and the east-



ern ridge line of the Taconics. The Cobble has long been recognized as a special place, botanically and aesthetically. It is one of the few places where the great white trillium blooms profusely in the spring. The Cobble is also known for the number of species of ferns growing on the limestone ledges. Currently, the Cobble is well protected and managed by the Trustees of Reservation, a Massachusetts land trust. For all its charms, though, the only exceptional tree for which the Cobble is known is a lone, large tulip tree after which a hiking trail is named. However, on September 19th, John Knuerr and I measured a magnificent eastern cottonwood at the edge of a wetland. The cottonwood appears to be the new state champion for its species. The tree's statistics are impressive: 18 feet 2 inches in circumference, 120.9 feet in height, 105 feet in average crown spread. These are worthy numbers for an eastern cottonwood anywhere within the range of the species, as I confirmed that with my big tree partner in North Carolina, Will Blozan.

While I struggled to measure the huge cottonwood despite poison ivy, **New Year's 1900**

stinging nettles, marshland, I thought momentarily of the striking difference in plant communities between the protected lowlands of Bartholomew's Cobble and the inhospitable summit of Mount Everett. When I left the Cobble, my thoughts turned to the interactions of we humans with raw Nature. Where do the Mount Everett pitch pines and the Bartholomew Cobble cottonwood fit in? Fulfilling our perceived materialistic needs, we would have little reason to value or protect the pines or the cottonwood. They grow in largely non-commercial habitats. Cottonwoods are not economically valuable trees, and though large pitch pines were historically valuable, I could literally touch the crowns of the charming, diminutive pines on Everett. But what enticing contrasts! The pitch pine dwarfs and the cottonwood, with crown roughly level with the top of a ten or eleven-story building — space is needed for both. The answer to valuing these treasures obviously lies in fulfilling not our physical needs, but our spiritual ones — in the end, the latter is the more important of the two.

Note: David Stahle's predictions about old growth initially came to national attention with an article by Jim Spencer, "Is There a Virgin Forest in Your Neighborhood?" in *American Forests*, Jan./Feb. 1993. Others working independently were reaching similar conclusions about non-commercial forests. Robert Mueller of Virginians for Wilderness, for example, wrote in a letter of November 24, 1989 in answer to a question

about a specific ridge in George Washington National Forest, "This is a typical xeric oak-chestnut type ridge forest . . . It's sometimes difficult to tell if this type of forest is primary or secondary, unless the tree ages are known. The oaks . . . generally are stunted, thick-trunked and contorted and, if they escaped charcoal burning, frequently would have been rejected for timber use. I believe that there are probably a lot of scattered tracts of such inconspicuous, almost primary forest on exposed ridges throughout the Appalachians. They probably escaped the logging that destroyed the conspicuously large trees and more accessible stands along streams and in coves and on gentle slopes" (*Old Growth in the East: A Preliminary Overview* [Canton, NY: 1990]).

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The FAILURE of Scientific Forestry



Introduction by Brendan J. Whittaker, founding member of the Forest Stewards Guild:

As one with a four year university degree in forestry attained over 40 years ago, I've watched with dismay as the profession increasingly has lost credibility with the public. What should the role of the forest professional be in our democratic system? Can a well-trained logger, for example, fulfill the role of forester?

If, as many in the profession believe, fundamental change is necessary in our own ranks, how and where do we go about starting?

A forestry educator, Paul Kalisz has written a challenge directed at the schooling of beginning foresters. He first analyzes (right on point, I believe) our present deteriorating situation and how it arose. He then suggests some directions for forestry education reform, finally leaving us with two distinct choices for the future.

Professor Kalisz' piece first appeared in *Distant Thunder*, the newsletter of the Forest Stewards Guild. The Guild, which has an active working committee on forestry education, was created precisely to achieve the aims Kalisz describes. The four forestry aspects with which he concludes correspond with the six guiding principles of the Guild. Since in my experience so much of what he says is directly pertinent to our Northern Forest, particularly on large company ownerships, I am pleased to bring his challenging piece to the attention of Northern Forest Forum readers.

by Paul J. Kalisz

PROFESSIONAL FORESTRY in the United States is dominated by the paradigm of "Modern Scientific Forestry" (MSF). Forestry schools generally teach some variation of this paradigm, and thus, graduate foresters who base decisions primarily on science, technology, and economics rather than on ethics. Similarly, modern scientific foresters tend to feel first allegiance to their employers, and to unquestioningly work to achieve their employer's objectives, provided they are not patently illegal.

In my opinion, Modern Scientific Forestry is a dead-end. We need foresters who are ecological practitioners rather than scientific specialists, engineers or business people; we need foresters whose first allegiance is to the land rather than to individuals, organi-

zations or business entities. To cultivate such foresters, educators must create and teach ecoforestry — a new approach to forestry that views the restoration and protection of ecosystems as transcendent goals, and the production and harvest of forest produce for human uses as subordinate goals.

THE FAILURE OF MODERN SCIENTIFIC FORESTRY

Modern scientific forestry originated in Europe about two centuries ago and has been practiced and taught in the United States since about 1900. Without a doubt, MSF has made important and enduring contributions to the sciences and to our lives. Many MSF practices are viable in agroforestry settings. However, influenced by the rise of materialism and industrialism, MSF began first to consider forests only in terms of their usefulness to people, and then only in terms of profitability. This is the fundamental reason for its failure: MSF lost sight of the concept of forests as natural communities of which humans are members. As a result, the age-old spiritual and ecological ties to the land, which served humans well throughout their first half-million years of existence, were abandoned. Ultimately, the practice of MSF led to the present situation where, in the interest of production and profit, we decimate native biodiversity and degrade the land, hardening ourselves to our actions by convincing one another that MSF is the only practical way to manage forests in the modern world, and convincing the public that ecosystems treated in this way are still renewable and will somehow be able to recover.

The production and profit orientation of MSF is reflected in forestry schools that promote the following addictions:

(1) The addiction to uniformity. Ecosystems are diverse, yet MSF strives for uniformity. This expresses itself as a preference for even-aged forestry and rotation ages that maxi-

Continued Next Page

The Failure of Modern Scientific Forestry, continued . . .

mize the rate of return by growing trees for only a fraction of their life expectancies. MSF's obsession with uniformity is best expressed in monoculture plantations of exotic species.

(2) The addiction to quantification. Ecosystems are complex and dynamic, and understanding and managing ecosystems requires as much art and experience as science, yet MSF is based almost entirely on quantification. This obsession breeds an inherent bias toward the use of simplified models and emphasizes quantity over quality.

(3) The addiction to "big hammers." Ecosystems are intricate, often fragile, and have a natural trajectory of change, yet MSF always resorts to "bigger hammer" methods in efforts to prevent natural changes from occurring or to force unnatural changes to occur.

(4) The addiction to profitability and compound interest. Human societies and economies are dependent ecosystems of the encompassing natural ecosystem, yet MSF relies on economic profitability, and calculation of profit using discounting, as the "bottom line" for almost all decisions. Such thinking is a disincentive to conservation since the long-term and social value of many ecosystem components and processes simply cannot be expressed in dollars.

(5) The addiction to selfish individualism. Ecosystems are interrelated, yet MSF conforms to a culture which favors the desires of the individual over the good of the community. Selfish individualism also tends to work within the bounds of what is legal, rather than what is ethical, and often contributes to the degradation of the commons — air, water, soil.

THE PROMISE OF ECOFORESTRY
To successfully implement ecoforestry, and to counter the addictions of MSF, four aspects of forestry education must be reformed:

(1) Management Scale & Land Use: Students should be taught to make management plans that are case-specific and unique, and to harmonize these local plans across political or individual ownership boundaries to form forest plans applicable to natural ecological regions. Similarly, students should be educated in methods of locating, establishing and protecting large wilderness reserves as commons to provide enough space for evolution and other processes to occur at rates and along trajectories determined by nature, and to serve as benchmarks for understanding ecosystems.

(2) Educational Mechanics: Forestry students can probably be most effectively educated in programs that integrate university-style class work (2-3 years?) with journeyman-apprentice field training (1-2 years?). Such a curriculum would cultivate traditional and intuitive knowledge, and experience, along with rational knowledge and scientific methods.

(3) Ethics. Students should be taught that ethical considerations transcend more "practical" considerations

in decision-making. They should be guided to develop strong social, professional and land ethics. This means that foresters would learn to personally accept moral responsibility for their actions and management recommendations, and would naturally give their first allegiance to the land.

(4) Attitudes: Students should be taught that humility rather than arrogance is the proper attitude with which to approach forest management. Humility implies an appreciation of the magnitude of our ignorance and of the complexity of ecosystems; a tendency to use light-handed rather than heavy-handed techniques; the habit of creating flexible and adaptive plans; and a strong bias towards silvicultural practices that mimic processes and patterns that occur in nature.

WHICH SIDE ARE YOU ON?
Our management and educational paradigms must change. We need to edu-



We pay a price for human manipulations of the environment. Photo © John McKeith

cate foresters who recognize that forestry is not practiced in a vacuum, and that forest policies are related to issues of politics, social justice, and Earth's carrying-capacity for healthy human populations. We need foresters who are comfortable with the basic tenets of both the biological and social sciences, and who understand that forestry cannot be "fixed" without concurrently fixing other institutions.

We have two choices: business-as-usual forestry, with foresters passively functioning as servants to the forces that are now destroying forest ecosystems in the interest of commodity production; or creative ecoforestry, with foresters actively participating in the birth of a new type of forestry, one that will restore and protect ecosystems, and sustain human communities into the 21st century. We must each choose. Which side are you on?

Paul J. Kalisz is Associate Professor of Silviculture and Forest Soils at the University of Kentucky.

This opinion piece first appeared in the Spring/Summer edition of *Distant Thunder*, newsletter of the Forest Stewards Guild.

Where We are Headed 'Natural Disasters' in the

by Mitch Lansky

AS THE LIGHT DIMS before the last solstice of the millennium, dark thoughts come to mind. I am writing at a time of booming economy, low unemployment, and low inflation. Yet lurking behind this wealth and well-being is a sense of impending disaster. Indeed, along with the good economic news, there are other news items that leave an uneasy feeling.

There is plenty of such bad news to go around. Massive earthquakes, hurricanes, floods, droughts, international terrorism, domestic terrorism from extremist groups, white men gone berserk, or high-school kids gone berserk have been common news items in the last few years. Then there are the fears connected with our reliance on nuclear power (for which there are still no solutions to the waste problem), fossil fuels, toxic chemicals,

erty get in the way. If, for example, a river floods within its expected flood plain and there are no people or property in the way, there is not much of a disaster.

'P' stands for the people or property that do get in the way. When people build on the floodplain, an earthquake zone, or the expected path of hurricanes, they are obviously at some risk. Since there can be long intervals between major events, people tend to become complacent, and ignore those risks. When the expected (though not entirely predictable) happens, it is a disaster.

'E' stands for the entropic influence of human management that makes natural systems more unstable — i.e., management that increases the frequency, size, or intensity of natural cycles. With our flood plain example, clearing of uplands or filling in of wetlands can lead to more frequent or severe floods. The result is that the floodplain expands. Some who were outside the floodplain before find they are in it now. They and their possessions become 'P' — people or property in the way of a disaster.

Those who increase 'E' are usually not intentionally trying to bring disorder to the natural systems they are affecting. They are generally pursuing other goals — often economic. Their entropic influences are unexpected side effects. They are not even aware that they are managing floodplains — they think they are logging, expanding agriculture, creating houselots, or developing the land.

CORRECTIVE AND DISTORTED FEEDBACK SYSTEMS, A RELEVANT DIGRESSION

Systems maintain stability (resistance to and resilience from disturbance) through corrective feedback. If you are in a shower, for example, and you are too cold, you turn up the hot. If it gets too hot, you turn up the cold (or turn down the hot). Eventually you adjust the faucets until you reach a comfortable temperature. For this negative feedback system to work, you need the ability to sense when there is discomfort and an ability to respond to this discomfort in a timely fashion.

This simple feedback system can get more complicated if there is little or no awareness of pain, or if the corrective mechanism is delayed or does not work at all. In the case of the shower, if the water is very hot, but for some reason you can not experience pain, you will scald. Even if you are aware that you are hot, if the faucets do not work properly, you will still scald because you will be unable to cool the water.

If there is a delay in the water system, you might find yourself too cold. So you turn the hot water faucet up, but you are still too cold. So you turn the hot water up even more — and then get scalded. At this point you rapidly turn up the cold and turn down the hot, but nothing happens. You do this again, and suddenly you are freez-

genetically engineered foodcrops, or non-Y2K-compliant computer chips. And for many, there is a lingering fear that the success of the ever-growing, mega-global corporations may have its downside on our political power . . .

For this article I will focus on a more modest, but locally-relevant set of fears — fears connected with the potential for 'natural' disasters in the northern forest. I put the word 'natural' in quotation marks because 'natural' disasters are often partly human-induced.

FORMULA FOR DISASTER

A few decades ago, I came up with a formula to help explain why the spruce budworm was not simply a natural disaster to be corrected with chemical pesticides. Disasters, such as floods, insect outbreaks, or weather-related crop failures all fit the formula: $D = N \times E \times P$.

'D', of course, stands for disasters. 'N' stands for natural cycles of disturbance, such as floods, hurricanes, fires, droughts, insect outbreaks, or earthquakes. These events happen periodically, though not often in a predictable pattern. Society doesn't consider such events disasters unless people or prop-

New Millennium

ing. This does not lead to a pleasant shower experience.

If someone has switched the labels on the faucets, you can experience what systems analysts call 'positive feedback.' The hotter it gets, the more you turn up the cold (which is really the hot) which makes it get even hotter. Positive feedback loops lead to geometric growth; to explosions. It is what happens when you put the microphone up to the speaker. Positive feedback leads to instability — infinite growth can not persist long in limited systems. Eventually the system collapses — which is a form of negative feedback to the system, rather than within the system.

There is another form of distorted feedback — when someone else is controlling the system and does not share the same goals as you. Let us say, for example, that there is a shower controller who responds when you spend money, rather than when you are comfortable or uncomfortable. When the water is on hot, he makes more money (because you are burning more fuel to heat the water). If you complain that the shower is too hot, he might try to persuade you to buy a special protective suit so you don't become scalded. You might get more comfortable, but you won't get clean. Or he might sell you medicines or bandages to treat your burn problems.

DISTORTED SOCIETAL PRIORITIES
Too often, distorted types of feedback, as illustrated by our shower analogy, are those that influence our lives and threaten natural systems. Most consumers have little awareness of where the items they consume come from or where the waste goes. Without such awareness, it is difficult to take responsibility to correct problems caused by such consumption. Even when people become aware, they often have little power to fix the problems. The problems are often far away, controlled by powerful companies protected by powerful governments. When the problems become so overwhelming that the public becomes mobilized to force changes, often the changes are too late, and the actions produce unexpected side effects.

Many of the problems are caused by actions whose goals are at odds with maintaining stable social systems or ecosystems. When system instabilities make some sort of correction necessary, the corrections are made within the context of the irrelevant goals. As a result, either the original problem is exacerbated or some new, unexpected problems are created.

Anthropologist Roy Rappaport observed that: "To regulate a general system such as a society or a forest in accordance with the narrow purposes of one of its sub-systems, such as a business firm or an industry, or even industry as a whole (as suggested by Calvin Coolidge's famous dictum 'The business of America is business'), is to narrow the range of conditions under which the general system can survive."

The key to Rappaport's observa-

tion is that there has been an inversion of priorities. The social system should be seen as a subset of the ecosystem and the economy as a subset of the social system. Yet in our society, we view ecosystems as mere resources of the economic system, and these resources must perform to the demands of the economy.

Forests, rivers, prairies, or oceans have ecosystems that are normally self regulating. Under the inverted economic priorities, these ecosystems are managed externally, more and more for goals that are irrelevant to the goals of the ecosystem. As the ecosystems are managed more from the outside, they become more simplified to fit the needs of those who manage. As the systems become more simplified, they lose some of their self regulating abilities — they become more brittle, or more unstable.

Our society does have corrective feedback tools. The economy itself is supposed to respond to supply and demand. If commodities become scarce, prices go up, and demand is shifted elsewhere. Unfortunately, the economic feedback is based on a single measure—market value. Where items have no market value, there is no feedback. Currently salamanders, warblers, lichens, ground beetles, or mycorrhizae fungi are not very highly valued in the marketplace.

Even when there are market values, these are not necessarily social or ecological values and do not necessarily lead to results beneficial to social or ecological systems. Social and ecological values are best measured by social and ecological measurements, not dollars. Dollars are not a universal solvent that makes so many units of wetlands or oldgrowth equivalent to cars, condos, or VCRs.

A primary goal of the economic system is growth. Economic growth is, supposedly, a sign of a "healthy" economy. Growth is seen as the cure for poverty, social instability, or even environmental problems (the more wealthy the economy, the more money available for environmental protection). But geometric economic growth is an example of positive feedback. It can not be sustained.

What seems attractive or even necessary in the short term, becomes impossible or absurd in the long term. One only has to try thousand-year projections of any trend in consumption to realize that growth can not be sustained on this planet, even if one assumes some degree of substitutability. For some resources, such as clean air or fresh water, there aren't too many substitutes.

Our society is incapable of imagining continued existence in a realistic way for another thousand years. We are supposed to be assured by various bizarre fantasies of mining asteroids, or beaming down electricity from satellites, or covering cities with plastic bubbles to insulate them from an ever more unstable atmosphere. Even though there are no realistic solutions for the problems we are creating now

(such as dealing with nuclear or toxic waste), we assume that future generations will find a cure. Nice legacy.

IATROGENESIS

Ivan Illich, uses the term iatrogenesis to describe the phenomenon where a certain percentage of diseases of patients are caused by the physicians' 'cures'—medicines, surgery, or radiation. In a society with distorted feedback, the social cures can lead to iatrogenesis as well. The actions might be technological fixes, new laws, or economic adjustments. The solutions, however, will deal with social or ecological goals only insofar as they do not interfere with the primary goals of economic growth and returns on investment.

Ironically, attempts to fight against natural disasters, in such a political/economic system, tend to increase E (the instability of the natural system) and increase the chances for worse disasters later. The reason is that there is a tendency to avoid addressing the causes, and treat the symptoms instead. The causes of damage to natural system are often seen as economic necessities.

When a river starts to have more severe floods (due to clearing of uplands or destruction of wetlands), a typical solution is to build a dam or levee. Thinking the problem is solved more people or property might get into a vulnerable situation. Dams don't last forever. They silt up, or even break. They also can cause unexpected problems to nutrients, pollution, or aquatic ecosystems. If the dams or levees do break, the ensuing disaster is worse than the original problem.

With the spruce budworm, rather than manage the forest to have a more stable structure with less domination by fir, landowners have preferred to spray pesticides. The pesticides do not change stand vulnerability, but they do have side effects on predators, parasites, aquatic invertebrates, and pollinators. This has led to longer outbreaks and shorter intervals between outbreaks. In the meantime, the forest industry is even more reliant on the spruce-fir resource. There is no surplus fat for the budworm to chew on.

As New Brunswick forest professor Gordon Baskerville wrote, "We shall probably preserve our economic interest in balsam fir by more or less continuous tinkering with the biological system in an attempt to sustain an artificial ecological stability...any action that distorts the system will increase the need of more action for an indefinite period of time."

LOCAL DISASTERS, GLOBAL ECONOMY

The northern forest is being subjected to many more human-induced stresses than accelerated budworm cycles. And they are happening all at once. The cut is now greater than growth. The inventory is declining. Species ratios are shifting toward shorter-lived species. On some areas, where landowners claim to be doing intensive management, the entire forest is removed, tops, branches and all. The site is sprayed with herbicides and planted to species that would not naturally occupy the site. The rotations planned for are far shorter than those found in nature. Other stands are

being high-graded, with excessive stand damage, rutting, and soil compaction.

Ecosystems are being simplified, converted, or fragmented by heavy cutting, road building, and development. Air pollution is adding novel chemical stresses, including heavy metals, acidic precipitation, ground-level ozone, and nitrogen loading. Exotic pests, such as the gypsy moth and the hemlock woolly adelgid, are making inroads. The chestnut, the elm, and the beech have already been either decimated or severely stressed from exotic diseases and insects. Native species, such as deer or beaver, have also become pests—in part due to a lack of adequate predators. The climate seems to be shifting. As the climate warms, insects can migrate faster than trees...

Certainly one would expect that the overcutting alone is asking for disaster, as the current mill capacity can not be sustained—at some point machines and mills will have to shut down. Indeed some have already. Correction of this problem will be delayed. Market demand will not immediately bring forests back at any price. It takes decades to grow even pulpwood-sized trees in Maine, no matter how intensive the management.

Surprisingly, what should be a local disaster is masked by the global economy. Wood can be imported to keep mills going (as long as they are profitable). If consumers don't get their paper from Maine, they'll get it from South America. No matter how stressed the local forest, consumer goods don't seem threatened at all. If consumers aren't aware that they are causing pain to the forest, they won't feel compelled to change anything.

The global economy is one more form of distorted feedback. Consumers will not feel the pain of overconsumption until shortfalls are global. By then, the scale of disaster will be too great to correct and still keep the global growth machine going.

CONCLUSION

If this analysis is correct, we are headed towards increased risk of more severe 'natural' disasters in the northern forest. Attempts to combat these disasters will either increase the chance of greater severity later or create new, unexpected problems. To prevent this prognosis there need to be corrections of the system, not just by the system. These corrections would have to, at a minimum, do the following:

- Manage natural systems based on an understanding of the integrity of these systems and a respect for what these systems can do (i.e., keep people or property out of inevitable harm's way);
- Learn to live within the limits of what these system can produce;
- Develop a social structure that encourages better awareness of consequences and better abilities to correct negative impacts for which we are responsible.

To change our social/political system to meet these goals will be the challenge of the next century. If we do not change our direction, we will wind up where we are headed.

Mitch Lansky of Wyttopitlock has not been online since December 31st.

BAMBI-GATE? MBNA TO DEVELOP DEERYARD, WETLANDS

ENVIROS, GOV, FAIL TO OPPOSE

Did Maine Governor Angus King inappropriately participate in state permit decision favoring credit giant MBNA over deer & wild salmon?

Coastal Waters Press Release

(NORTHPORT, MAINE) — Revelations of apparent improprieties in a recent Maine permitting decision, dubbed MBNA versus BAMBI that granted credit mogul MBNA International Corporation permission to build a 40 building private compound in the heart of Maine's largest coastal deer birthing/wintering yard, have raised inquiries as to whether on December 3rd, 1999, Maine Governor Angus King, or other senior state officials, personally intervened at the last minute in the formal 'Site Law' environmental decision-making process on behalf of the credit card giant.

MBNA issues 'affinity cards' which are VISA and MasterCard embossed with the logos of conservation groups, universities, professional organizations, and other non-commercial organizations. When the affinity credit card is used, the group with its logo embossed on it is given an automatic payment of up to one half of one percent of the total amount. Sierra Club, for example, has gotten more than 1.8 million dollars in payments since starting up its relationship with MBNA International Corp in the middle 90s. Critics wonder if the largesse has muzzled the Sierra Club's anti-sprawl advocates in Maine and Delaware.

FILING FIOAs — Opponents, who have dogged MBNA and its supporters in government and in the NGO community since the early 90s when the company started its construction boom on the Penobscot Coast, filed formal requests under the Freedom of Access Law last week for the Governor's and Environment Commissioner Martha Kirkpatrick's email, telephone logs and other records stored in their files since September first, that relate to MBNA International Corporation or its construction arm Bracebridge Corporation.

Critics say the changes in the permit, added moments before signing, make it invalid because state environmental regulations require Maine DEP to give opponents of a development proposal and other stakeholders an opportunity to examine major changes and comment on them before final action is taken. In this case, however, last minute changes were made in the permit (1) letting MBNA dramatically enlarge its 40 new buildings and (2) deleting requirements for the company to remove its cabins from the

Ducktrap deeryard if its ecological functions are degraded or lost.

According to Chapter 2 of Maine DEP's Rules Concerning the Processing of Applications:

"After an application has been filed, if the Department determines that the applicant submits significant new or additional information or substantially modifies its application at any time after acceptance of the application as complete, the applicant shall provide additional notice to interested persons who have commented on that application. The Department may require additional public notice."

Department officials are claiming that the changes aren't 'significant.' But the smart money holds that the impartial eye of the Board of Environmental Protection and the law courts will likely disagree with the MDEP's interpretation, and the cabins may be taken off the mountain as quickly as they are presently being put up.

DECEPTION — Opponents of the development also complain that on December 3, 1999 both they and the news media were misled by two Maine DEP officials about the changes to the permit. MDEP's David van Wie, Director, Bureau of Land and Water Quality, and state permit reviewer David Silver both assured press and conservation stakeholders that only cosmetic changes had been made to the permit since its drafting. In addition, critics say Silver mischaracterized the forest of the deeryard to the news media, describing what is in actuality a thick coniferous forest rich with forested wetlands, as a dry mixed hardwood forest — an inaccurate description.

Dubbed 'Bambi-Gate,' this latest skirmish in a seven year struggle pits traditional economic mainstays of the area — the nation's most diverse and conservation-conscious tourism and commercial fishing industries — against outsider land speculators promoting urban sprawl and mass-employment call-center businesses — especially the MBNA International Corporation, the self-described as the nation's largest credit card issuer.

BUYING MEDIA — In the middle and late 90s, with the rolling forests and fading farms around the northern coast of Penobscot Bay seen as a suitable place for urban sprawl, the MBNA International Corp spent considerable time and money grooming a new editor for the Belfast Republican Journal, the most important local newspaper of that Bay's northwest coast. Under the new editorship, the century and a half year old Republican-Journal, has editorially slid from a feisty but dignified semi-independent newspaper of some note, to an unabashed supporter of the MBNA corporation's heavy sprawl and urbanization push in this rural and forested area.

Challenged on this score, an official of the Texas-based media empire that owns the Republican Journal has responded that not only are their editors and writers beyond reproach, but further, that critics of MBNA (or the chain media) are 'bad' people.

WHAT'S AT STAKE? — The fate of the Megunticook Coastal Range, a thirty mile line of thickly forested mountain peaks framing the western edge of Penobscot Bay, boasting the USA's easternmost coastal deer wintering ground, (and overlooking Ducktrap River, one of the few surviving wild Atlantic Salmon rivers in the US), is raising the ire of coastal residents against the politically well-con-



The easternmost deeryard in the USA, situated on Penobscot Bay, is threatened by the development plans of MBNA, which sells fundraising credit cards to enviro groups such as Sierra Club.

nected MBNA International Corporation, which has carried out major land development actions along this natural coast as it builds ever more office blocks of phone banks to house its thousands of telephone sales clerks who peddle VISA and MasterCard affinity credit cards around the clock

STRANGE TWIST — The contest over whether the Ducktrap Mountain Deeryard would retain its unique wild character and function took a bizarre twist Friday, December 3rd 1999, when unknown persons modified the state's Site Law permit only moments before it was signed, dramatically expanding the size of the project and deleting requirements that the developer must remove the 40 buildings and roads from the whitetail deer wintering area if the sprawling development is shown to be harming the deeryard.

Critics call the action of signing the radically changed permit illegal under Maine state law and are wondering out loud whether, with the Maine Commissioner of Environmental Protection out of town that day, the decision to approve such massive changes to the permit without re-starting the required public review process came directly from the Governor's office. Angry coast protectors have filed formal requests with the Governor and the Environmental Commissioner for copies of their records relating to the MBNA Corporation from the beginning of September to the present.

David Silver, who prepared the Site Law permit pursuant to the Maine Site Location of Development Act Guidelines, denies that he wrote in the changes. These last minute changes increase the permitted size of the forty buildings by 63 percent and delete all reference to the pre-existing stipulation that the buildings be removed if the Coastal Range's white tail deer herd is harmed by the loss of its wintering habitat.

"There were substantial irregularities in the process and in the permit language," said Huber. "We intend to get to the bottom of this."

"We don't believe for a minute the official story that the changes are routine corrections or minor grammatical edits," he said. "Nor that the head of the Maine DEP's Bureau of Land and Water Quality, David van Wie took it upon himself to approve such significant changes to the wildlife elements of permit the very day it was signed," said Ron Huber.

"We think it was the Commissioner of Environmental Protection herself or her boss," Huber

said.

THE SCENT OF PIERCE ATWOOD
The top down approach to environmental decisionmaking is one that attorneys of Pierce Atwood <http://www.pierceatwood.com> (MBNA's legal counsel for their developer activities) are fond of employing: Go straight to the Chief Exec and let the commands trickle down to the permit stampers. Huber said "We've got a message for P.A: 'We beat you when you tried that top-down end run against Maine's oil tanker rules, and we'll beat you again.'"

FILING FOR FACTS — On December 8th the Coastal Waters Project filed by certified mail and by fax a Freedom Of Access law request with Governor King, requesting time for inspecting copies of all records and communications generated, maintained and/or received and disseminated by you or your office relating to the MBNA International Corporation, Bracebridge Corporation, or MBNA Corporation's or Bracebridge Corporation's or their subsidiaries, contractors or consultants, dating from September 1st 1999 to December 8, 1999.

"We asked the feds to come look at what the company proposed to pave over before it happened," Huber said. "But US Fish and Wildlife Service and the US Army Corps of Engineers both waffled. Like Sierra Club, (See below) it appears that they simply let the clock run out and now can shrug at the 'Done Deal'."

Pleas by naturalists to the Maine Board of Environmental Protection, calling on that decisionmaking body to "assume jurisdiction" over the case fell on deaf ears, as BEP chair Osmond Bonsey responded in a December 2nd letter that Site Law issues "do not rise to the level of issues that would suggest the BEP should assume jurisdiction."

"We will see where this leads," said Ron Huber, director of the Coastal Waters Project. His group has spearheaded opposition to MBNA's coastal sprawl efforts along the Bay since 1993. "This is completely improper."

Huber said that a team of activists and eco-sleuths, including some that several years ago helped investigate and defeat the state's controversial proposal for an industrial port on Sears Island, a few miles north of Ducktrap Mountain, is beginning the arduous task of tracking the paper trail surrounding the controversial building plan.

"Mr King has had a very close relationship with MBNA; let's see what they told him about Ducktrap Mountain, and what he did then."

BAMBI GETS CLUBBED — The struggle has also spread to the highest levels of the national Sierra Club, as disgruntled Club members have besieged their group's headquarters with calls, many quite bitter, for the group to sever its financial ties to the developer, credit giant MBNA International Corporation. MBNA has paid the Sierra Club more than a million and a half dollars over the past five years as a result of its use of an MBNA issued 'affinity card'. Affinity cards are VISA or MasterCard credit cards embossed with the group's logo and then distributed to the group's membership. Under its contract with MBNA, Sierra Club receives one half of one percent of the dollar amount that users of the Club's affinity card are charged when using the card.

The Club has coincidentally declined to participate in the state and federal public decision making process involving this or any of MBNA's sprawling development projects along the Penobscot Shore, and is now smarting under criticism that it has turned a blind eye to MBNA's development projects along the western shore of Penobscot Bay. The Club's national leaders are now in the midst of discussions over whether to divest of their MBNA affinity card and select a card issuer with a greener environmental record.

"After we get a recommendation from the [Maine] chapter the Board may decide to sever its relationship with MBNA, assert oral pressure to seek a change in the project, or take stronger actions" one top Sierra Club official wrote in a recent memo to other Club leaders.

But local residents say the Maine chapter of Sierra Club has not risen to the challenge. "It absolutely refuses to make a recommendation." Huber said. They've been talked to twenty or thirty times over the past month, and all we get is a lot of froth: they're still thinking about it."

"What's to think about? Two of the Sierra Club's bugaboos are sprawl and wasteful consumption. MBNA flunks both tests. But in effect, for 1.8 million pieces of silver, Sierra Club ran the clock out on the Ducktrap Deeryard, and did absolutely nothing."

"Now MBNA's bulldozers and fleets of dumptrucks are terraforming the mountainside. We consider the Club to have partnered with MBNA in filling in the mountain's wetlands and destroying the deer birthing areas."

"By their inaction they and the other conservation groups that feed on MBNA's money trough are endorsing the urban sprawl MBNA is spreading over our natural Penobscot Bay coast. Some new leadership is needed at the Club. Particularly in Maine," he said.

TROUT RISE AGAINST MBNA — In a related development, the national conservation group Trout Unlimited has canceled its contract with the MBNA corporation and has switched to a different affinity card vendor.

More articles and discussions about the Ducktrap Mountain controversy are available at the Camden, Maine "Community Internet Station" [Ligature.Com](http://www.ligature.com): <http://www.ligature.com>

BOOK REVIEW

To Hudson Strait in a Potato Boat

Northern Lights

by Desmond Holdridge, Illustrated by Edward Shenton. Capstan Press, 1998, Old Saybrook, CT. \$15.95

IF JON KRAKAUER is correct, that the genius of Chris McCandless, in an age when all has been mapped, was in throwing away the map, then the protagonist of *Into the Wild* was courageously and foolishly preceded by Desmond Holdridge and two companions. In a retrofitted potato boat, the three set sail from Nova Scotia in May of 1926 and aimed their bow at the northern tip of Labrador.

Adventure literature has a sublime sameness to it, summarized by the subtitle to *The Hobbit: There and Back Again*. Mountaineers, explorers or sailors conceive a grand plan. They get into it; they get into trouble, or are otherwise subsumed into their surroundings. Usually someone emerges to tell the story.

What makes for a good story, for readers whiling away a winter night in the cosy comforts of civilization, is the character of the protagonists as it emerges in relation to challenges of the environment. *Northern Lights* is distinguished for its antic tone: although written by an older man lamenting his 18 year old bravado and ignorance, it preserves the peculiar humor that must have sustained the three sailors, the high spirits that inspired an expedition of utter bravery and shortsightedness.

Lure of the Labrador Wild, by contrast, the canoeing tale of 1905, involved careful preparation crossed by fateful mistakes, tricks of Nature and miscommunication in an unforgiving land. Wallace Hubbard writes of the adventure in a clearly chastened tone informed by the loss of a close friend. *Northern Lights* is throughout characterized by a rueful yet black humored irony — with friction between crew members a recurring theme.

Here is Nielsen, a taciturn Dane who has spent 20 years at sea without having learned the finer points of navigation, responding to a stranger's praise:

"Why, you must be fine navigators, to come so far in that little craft! 'Navigation!' Nielsen snorted rudely. 'You don't need any navigation to come here from Nova Scotia; all you have to do is follow the shore; you can't get lost.' The man looked a little taken aback and then walked off. The first person I asked told me he was Gilbert Grosvenor, the head of the National Geographic Society."

The Holdridge expedition incurred no loss of life and involved not only a boldly-conceived adventure up a poorly mapped coast, but was distinguished by a recurring doubling, tripling and quadrupling of the risks through a series of misjudgments and stubborn gambles.

The crew of three: was captained by a head strong 18 year old who had spent "several summers on freighters"; had no experience or detailed knowl-

edge of Labrador; lacked vital charts and equipment such as a barometer or back-up compass; carried no dinghy and instead blithely expected favorable anchorages; sold their motor while just setting out; repeatedly risked their lives in riding out weather; tarried much longer than was wise and ended their adventure by being caught in a series of September gales. In fact, the Dolphin founders beneath them and they are picked off the sloop in early October by a Grand Banks fishing vessel in a storm that claims bigger boats and more experienced crews.

The outward journey's end, past Cape Chidley at the entrance to the Hudson Strait, brought this reward: "The end of things. Here was a place where you could actually look at the end of things and see it, a barren lump of frost-shattered rock without life, grace, hope, or even magnificence. In the fiords a little farther south there was the same desolation, but there was grandeur that made you want to live in sight of it. But not here."

Northern Lights offers a fascinating portrait of the Atlantic coast from Nova Scotia and Newfoundland to the tip of Labrador circa 1926. Rumrunners and alcoholic seamen abound, as does a fishing fleet still under sail. The Depression and several years of poor catches would soon wipe out the Lunenburg fleet, which Holdridge witnesses and describes as it gears up for summer fishing after returning from the "frozen bait" trip. Civilization peters out as the Dolphin progresses northward down the coast of Labrador; a desolation stemming partly from the influenza epidemic of 1919. The crew of the Dolphin encounters a mix of people with the varied bloodlines, commingled cultures and disparate motivations that a coast will bring. There is an American shav-

ing cream magnate who summers fishing Labrador streams, cosmopolitan seafarers who chose remote retirement in their native land, the Eskimo at Port Burwell notable for frequent laughter and their attitudes and customs surrounding death, an amphibious expedition of the National Geographic Society, a marooned crew of the Royal Canadian Mounted Police Arctic Patrol, and cameos of notable personages from yacht builder Reuben Heisler, builder and retrofitter of the Dolphin, to Labrador expeditioner Wilfred Grenfell.

Newfoundland is in 1926 still British territory, and bitterly poor, inhabited by fishermen "cursing their luck without profanity" and lamenting under-productive farms and over-productive wives. The hungry crew of the Dolphin seeks provisions from one of these wives on their ragged return journey: she is an American who has ended up on a farm with an under-productive husband, bitterly denouncing corrupt government, cold climate and poor soil (somehow there is salt pork; how did one fatten a pig in Newfoundland back then?)

Her husband hopes that Americans will take Newfoundland from England: "Look at Humber Arm there in the Bay of Islands. Before it was like this — everybody poor and wretchedlike, and wondering every winter how they was to pull through. And then, along come the Americans and up go the mills and machines and land is bought and paid for too, and big wages is paid and there folks are living like princes and whole forests is cut down and mashed into paper and sent to New York. It's wonderful."

Northern Lights is a guaranteed good read for anyone who, from armchair or otherwise, can empathize with the daring and foolhardy. — A.W.

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SO, THINK YOU KNOW ECONOMICS?

Test your Economic IQ!

1. SINCE THE 1970s, thousands of loggers have lost their jobs due to mechanization. This means that there is:

- a) A large pool of unemployed loggers eager to find work.
- b) No difference in the supply of workers.
- c) A shortage of workers.

2. THE INDUSTRY SAYS there is a shortfall of loggers, justifying import of workers from Quebec. This shortage, plus the 74% increase in worker productivity since 1973, means that inflation-adjusted logger wages are:

- a) Going up.
- b) Staying the same.
- c) Going down.

3. WHEN ASKED IF they would pay loggers 10% more if it would bring in more workers and relieve the "shortfall," 70% of employers responded:

- a) Of course.
- b) No.

4. LOGGERS KNOW THAT there is a shortfall of workers. After all, companies have to hire bonded Canadians as an emergency measure to relieve this

shortfall. Knowing these conditions, loggers are telling their sons to:

- a) Become loggers because there is such a demand for them.
- b) Don't be a logger. Find other work or leave town.

5. THE DOL REPORT SAYS that the influx of Canadian loggers is not having an adverse impact on wages of American workers. If there were such an impact, the program would be shut down. The study did say there might be an adverse impact on small areas of Maine, such as the St. John valley (which just happens to be the area where loggers have been protesting). One can conclude from this that:

- a) The loggers in the St. John valley are really benefiting, but just don't know it.
- b) They might be hurt, but since there can't be a negative impact on Americans, they must not be Americans.
- c) The impact, according to the DOL, is not significant enough to count.

6. SPRUCE-FIR and hardwood pulp are being overcut. Because their supply is decreasing, the amount of money available to loggers who cut this wood is:

- a) Going way up because the wood is more scarce, and thus more valuable.
- b) Staying the same.
- c) Going down.

7. LOGGING IS A demanding, dangerous job that requires long hours and long travel from home. It is also restricted seasonally. In light of the skills required, hazards, and demands, annual logging wages are: a) Right up there with steel workers, undersea divers, and other occupations with similar risks

- b) About the same as paper mill workers or other industrial workers
- c) Lower than construction workers.

8. WORKERS' COMPENSATION costs have been declining over the last decade due, in part, to logger training programs. As a result of such cost saving (WC had been up to 45% of payroll), loggers are seeing:

- a) Increased wages.
- b) No benefit.

9. LOGGERS IN NORTHERN Maine have few choices for lands to cut on and few choices of mills to sell to. The markets for purchasing their services is referred to as a "monopsony," or "oligopsony." It is not characterized by competition. The big companies set

the price. If the loggers could organize, they might have more bargaining power. Industry representatives argue that loggers can't organize because:

- a) The loggers like their current wages and status.
- b) They are not employees, but "independent contractors." If the loggers organized that would violate anti-trust laws. The big companies believe in the free market and don't think it is right that a small group should control prices.

10. MUCH OF THE LAND in northern Maine is owned by Canadian companies. Much of the wood is being cut by Canadian workers. Much of the wood is being milled by Canadian mills. Income, taxes, value added, and wages are leaving the state. Timber-dependent towns are shrinking. The state and federal government see this problem and respond by:

a) Acting in favor of American loggers and small saw mills by finding out why this is happening and coming up with strategies to address the problems.

b) Recommend small changes to the bonded worker program because there doesn't seem to be a significant problem here.

CORRECT ANSWERS: C, C, B, B, C, C, C, B, B, B.

Secretary of Interior Babbitt Bullied by Senator Cohen on Listing of Atlantic Salmon

NASHUA, NH — According to recently released documents, Secretary of the Interior Bruce Babbitt ordered the U.S. Fish and Wildlife Service (FWS) to violate federal laws and not give Endangered Species Act protection to the last few remaining wild Atlantic salmon. The order came after Babbitt received a letter from then Maine U.S. Senator William Cohen.

The documents obtained through an ongoing lawsuit, state that after receiving a letter from Senator Cohen, Sec. Babbitt ordered the FWS to not offer ESA protection to Atlantic salmon population in Maine. According to the 2/8/95 letter, Cohen stated that the "disposition of this petition will greatly affect my views regarding changes to the Endangered Species Act that might be warranted," an apparent veiled threat aimed at not giving protection to the imperiled Atlantic salmon populations. Conservation organizations and individuals challenging the failure of the FWS and NMFS to give ESA protection to the last few remaining salmon filed the lawsuit.

"The ESA is very specific in that a scientific evaluation is the only basis for determining whether or not protection should be given to a species," said David Carle, executive director, Conservation Action Project and a plaintiff in the lawsuit. "Senator Cohen, in his letter, acknowledges this fact, but still calls on Babbitt to violate the law and not give ESA protection to the few remaining Atlantic salmon."

Another document outlines how after receiving Cohen's letter, Secretary Babbitt "requested" that the FWS and NMFS proposal to give ESA protection to Atlantic salmon as "endangered" be redrafted to "not warranted." Babbitt ordered this despite the federal biologists' scientific finding that certain population of Atlantic salmon were threatened with possible extinction.

In a document written two days after Babbitt's order was received, NMFS biologist Dr. John Kocik stated that the designation change from 'endangered' to 'not warranted' "compromises the intent of the [ESA] and the integrity of the sci-

ence. . . ." Dr. Kocik, further reiterated that the best available scientific information indicated Atlantic salmon populations in several rivers are in serious trouble and warrant ESA protection.

"The actions of Senator Cohen and Secretary Babbitt is a disgrace," said Carle. "In his letter Senator Cohen, now Secretary of Defense, quoted from the ESA, then requested Babbitt to violate the ESA. Even more disappointing, Babbitt caved into the request and proceeded to violate the law. Both of these people took oaths to uphold this country's laws. Because of his actions, Secretary Babbitt should either resign or be impeached for knowingly breaking the law."

"Dr. Kocik concluded his memo by stating that it will be up to society as to whether these efforts result in trying to conserve Atlantic salmon stocks or simply document their

extinction," said Carle. "From these documents, it appears that Babbitt had decided on the latter."

Atlantic salmon populations in the United States have declined from more than 500,000 adult returns two hundred years ago to less than 1,500 last year. In 1993, the FWS and National Marine Fisheries Service (NMFS) received a petition to protect the species under the ESA. In 1997 the FWS and NMFS withdrew a proposal to give the species protection. Presently it is that decision that is in litigation.

The Conservation Action Project
15 Tanguay Ave. Suite 111 Box #2
Nashua, NH 03063
Contact: David Carle
(603) 882-6520



North Country Scene; photo © John McKeith

ENOUGH SAID

From a February 2000 *Mother Jones* article by Ted Williams, "The Prairie Dog Wars," on possible listing of the species as federally threatened:

"ONCE A GROUP PETITIONS to have a species listed as threatened or endangered, state congressional delegations resist on behalf of inconvenienced special interest groups. The states are then allowed to come up with a 'management plan' of their own that will supposedly make listing unnecessary. Meanwhile, the species continues to decline."

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Compiled by Jane Gearing

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ECONOMICS

- 2:10 Finding Work in a Colonial Economy; Mitch Lansky
- 2:11 Two Maines? Canada Feeds Off The Poor One; Bill Butler
- 2:12 Sustaining Forests, Jobs & Trade in a Global Economy?; Andrew Whittaker
- 3:13 Ecological Footprint: Modeling Human Impact on the Earth; Mathis Wackernagel & William Rees
- 3:16 Small is Beautiful, Big is Subsidized; Steven Gorelick
- 3:18 Money is Money; Wealth is Wealth; David Kortzen
- 3:19 Local Knowledge for Local Economies; excerpts, Steven Gorelick
- 4:12 Gross Corporate Welfare; David Guernsey
- 6:6 Background On the Job Import Log Export Issues; Mitch lansky
- 6:14 Paying Loggers; Mitch Lansky

ENDANGERED SPECIES ACT

- (see also Salmon)
- 1:25 Restore: the Lynx to the Maine Woods; Jym St. Pierre
- 2:13 A Mouse With Wings Halts Green Mtn. Logging; Jim Northup
- 2:13 Better to Play Noah than God; JN
- 3:23 Feds Nix Harbor Porpoise Protection Under ESA In Gulf Of Maine; Ron Huber

ENERGY

- 1:10 God Situated Vermont to Transmit Power; from Associated Press
- 1:10 Energy Quiz No. 5; Pamela Prodan
- 1:10 Supreme Court of Canada Confirms Cree Position on Unilateral Secession
- 2:14 Maine Electric Restructuring: New Packaging & Shifting Priorities?; PP
- 2:20 Texas Citizens Nuke Waste Dump; Richard Boren
- 3:25 Vermont Energy Debate- De-reg, Bankruptcy, or Public Power?; AW
- 3:26 The Silent PWC Problem: Toxic Pollution; Pamela Prodan
- 3:28 Electricity from Wood, Sounds Great, Right?; Bill Butler
- 3:29 An Irreverent Examination of Laundry and Technology; Alexander P. Lee

EVERY PERSON'S NEED

- 1:28 EPN; Michael Phillips
- ## FOREST CERTIFICATION
- 2:8 Sierra Club of Canada Objects to Irving Certification; Rita Morbia & Elizabeth May
 - 2:10 Champion International Looking (to the) Green; Andrew Whittaker

FOREST PATHOLOGY

- 1:5 One More Bug: A New Infestation in Black Spruce Plantations; Mitch Lansky
- 5:20 The Spruce Budworm, Ready or Not, it's Coming; Mitch Lansky

FORESTRY & LOGGING; FOREST PRACTICES

- 1:14 Zero-Cut: Campaign to End Logging on National Forests; Mick Petrie
- 2:6 A Western View of Plum Creek's Foray East; Steve Thompson
- 2:7 Buying Beauty Strips; Mitch Lansky
- 2:9 Irving Attempts to Dominate Regional FSC Process; Charles Restino
- 3:9 If It's Wild, It's Working; Sue Higby
- 3:10 Working landscape: A Metaphor of Human Exploitation; Stephen G. Perrin
- 3:11 Working Ecosystems, Not Working Forests; George Wuerthner
- 3:12 The Annals of Mensuration, Here are the Numbers, What are the Facts?; 5:13 Letter from Maine; Bill Butler
- 5:20 Assessing Soil; Mitch Lansky
- 5:21 Forestry Cooperatives Unite Ecology & Economics; AW
- 6:15 In Response To Overcutting In Maine, Are Landowners Cutting Lighter?; ML
- 6:25 Who is ETC?; Andrew Whittaker
- 6:30 Public Supports Set-Asides; AW

GREEN MTN. NATIONAL FOREST

- 2:13 Lamb Brook Saved Again by Environmental Groups; Forest Watch
- 6:18 Keep The Promise: Honor Joseph Battell's Wildlands Legacy; Jim Northup
- 6:25 Praise Them; Andrew Whittaker

HERBICIDES, SLUDGE

- 2:27 NH Sierra Club Sues State Over Illegal Sludge Spreading; Press Release
- 5:25 NH Legislature Delays Herbicide Reform - Mead & Champion to Spray; Daisy Goodman
- 6:26 Aerial Herbicide Spraying, Poisoning the Maine Woods; DG

HIGHWAYS

- 3:27 East-West Highway; Pamela Prodan
- 5:7 4 Lane East-West Highway Nonsense; Pamela Prodan
- 6:4 East-West Highway Report; PP

INTERVIEWS

- 1:8 Living with Leviathan: Crees Seek Nationhood in (Hydro) Quebec; [with Bill Namagoose]
- 1:22 Logging in Baxter; [with Jensen Bissell]
- 3:14 Wilderness Society Economist Looks at Northern Forest; [with Spencer Phillips]
- 6:4 Challenging the Paper Plantation; [with Hilton Hafford]

LAND SALES

- 2:3 The Industrialization of Maine's North Woods Has Failed; Jym St. Pierre
- 3:3 Champion Land Deal Update; Peter Sterling
- 3:20 The Champion Deal in New York; Peter Bauer
- 4:23 Doing Deals in Maine; Jym St. Pierre
- 5:9 Update On Maine's Big Land & Mill Sales; Jym St. Pierre
- 5:16 Public Commentary on U.S.F. & W.S. Nulhegan Basin Purchase: Support for Ecological Reserves on Champion Lands
- 6:25 Sales Pulled in Face of Appeals; Andrew Whittaker
- 6:25 Trap Them, Damn 'Em; AW
- 6:25 A Snowmobile State Park for Flatlanders; Andrew Whittaker

LOW IMPACT FORESTRY

- 5:18 Mott's Side of the Mountain: One Family's Forest
- Maine Forest Inventory
- 2:28 Gadzik to Big Landowners and Their Foresters: You've Been Doing It All Wrong; Bill Butler
- 2:29 A Critique of Timber Supply Outlook for Maine 1995 - 2045; Mitch Lansky

MAINE LEGISLATION

- 1:31 Champion to Intensify Harvest Practices in Maine; Andrew Whittaker
- 4:9 The Story of LD 1866, An Act to Reform the Maine Tree Growth Tax Law; Mitch Lansky
- 4:10 The State of Maine's Forests; Mitch Lansky
- 4:27 Whining at the Margin; Jym St. Pierre
- 5:6 Giving the Timber Industry No-Strings Subsidies; Mitch lansky
- 5:10 Maine's Wild Lakes & LURC's Errors of Omission; Russell DuPree
- 5:12 Allagash Wilderness Waterway Management Plan Released; Jon Luoma
- 6:3 Groups Urge Yes Vote on Ballot Question #7 - Land for Maine's Future

MARINE RESERVES

- 1:13 Gulf of Maine's Marine Wilderness Areas Short List; Ron Huber
- 2:25 Marine Wilderness Proposals Trampled By Industry Demand For Total Fishing Closure of Entire Gulf of Maine; Ron Huber
- 3:23 Temporary Semi-Wilderness Foils Gulf of Maine Shrimp-Catchers; RH
- 4:6 Protection for Atlantic Cod Habitat; Ron Huber
- 4:7 Battling Bioinvasion in Maine; RH
- 6:23 The Lost Forests of Atlantis; RH
- 6:23 Harvesting New England Scallops; John Williamson

NATIONAL & STATE PARKS

- 1:15 Conservationists Call for a White Mountain National Park; Press Release
- 1:15 Local Forum on National Park Options
- 2:26 An Evolutionary Forest Statue
- 5:14 Saving Mount Katahdin - The Unsung Life of John Francis Sprague; Jym St. Pierre
- 5:26 Wildland Voices Needed Now for Saddleback; Pamela Prodan
- 6:19 Saddleback Mountain - The Truth About Eminent Domain

PAPER INDUSTRY

(SEE ALSO INTERVIEWS)

- 3:24 Our Toxic Planet: A Lake Debate
- 3:25 The Alternative Fiber Pulp Mill Project; John Stahl
- 6:26 Can We Trust the Paper Companies?; Andrew Whittaker
- 6:30 There are Some Constraints Placed on Us by Nature Which We Cannot Alter at Will Without Unacceptable Consequences; Peter Neils
- Philosophy, Deep Ecology, Spirituality, Fairy Tales
- 1:2 Misinformation in Service to Industry; Andrew Whittaker
- 1:18 A Practioners Philosophy of Environmental Monitoring; Stephen Lewandowski
- 1:26 An Unfinished tale of a Northern Land; The Brothers Grin
- 2:2 A Time to Choose and to Act; AW
- 2:8 Disenfranchisement of Nature, Alienation of Humanity; David Orton
- 4:28 Selected Deep Ecology and Other Readings; David Orton

- 5:2 Examining Sustainability; AW
- 6:2 The Burial of Rotton Idea; AW
- 6:28 Thinking like a Mountain, Acting Like a Tree: Compassion as a Tool for Bringing About Environmental Change; Kathryn Mathieson
- 5:30 Thoughts on Facilitation, Agenda Setting & Consensus; AW
- Restoration Act
- 5:22 A Native Ecosystems Restoration Act; Reed Noss
- Salmon
- 2:24 Legal Challenge to Maine's Salmon Plan; Ron Huber
- 3:24 Atlantic Salmon Mortality Tied to Bud Worm Sprays; RH
- 4:8 Sea Web's Salmon Aquaculture Clearinghouse; RH
- 5:3 Wild Atlantic Salmon, Dammed Near Extinct; Andrew Whittaker
- 6:4 Groups Sue for Atlantic Salmon Endangered Species Act Protection; Andrew Whittaker
- 6:4 Paper Trail Supports Atlantic Salmon Protection; David Carle
- Vermont Environmental Legislation
- 2:26 Groups Seek 'Class A' Designation for Nulhegan Watershed; Andrew Whittaker
- 4:12 A Bill to Establish the Crime of Environmental Terrorizing

VERMONT FOREST PRACTICES

- 1:20 Two Roads Converge in the Woods: Forest Industry & Conservationists Have Common Interests; Darby Bradley
- 3:12 VT Department of Fish & Wildlife Strategic Plan Gathering Comment
- 4:4 Public Forests: For Whom & For What?; Jim Northup

WATER

- 2:27 VT Sierra Club Calls for Improvements to State Clean Water Regulations; Adam Necrason
- 3:12 It Takes a Watershed to Protect a Waterway
- 3:24 NWF Alert on Clean Water White Mtn. National Forest
- 2:21 Group Raps Forest Service for Ignoring WMNF Management Plan; Conservation Action Project
- 4:22 The Deforestation of Lyman Mountain; Channing Snyder
- 6:16 Roadless Areas in WMNF Merit Further Protection

WILDERNESS

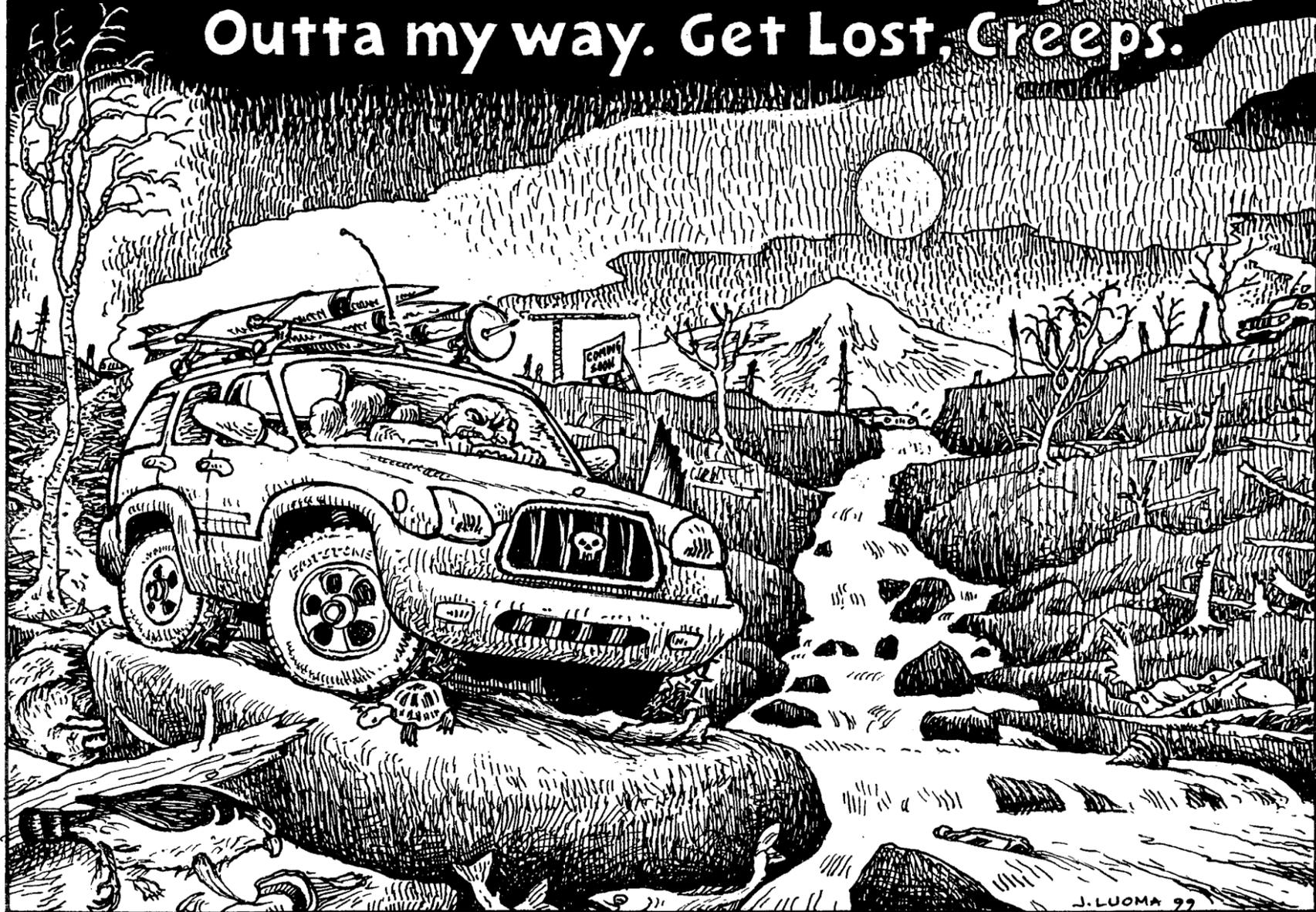
- 1:16 Allagash Wilderness Update; David Hubley
- 1:19 Wisconsin Citizens Propose Brule Forest Plan
- 1:21 National Forests for Wildlands Protection; Jim Northup
- 3:2 Working Landscapes & Wilderness; Andrew Whittaker
- 4:2 Past Abundance, Present Recovery, Future Wilderness; Andrew Whittaker
- 4:3 Public wants More Wilderness; Forest Watch
- 4:4 Nova Scotia Reserves 700,000 Acres; David Lindsay
- 4:5 Protected Areas in New Brunswick; George Fullerton
- 5:21 55 Reps From Northeast Sign Roadless Area Letter; Press Release
- 6:17 Connecting Wildlife Habitat Between Algonquin Park, Ontario and the Adirondack Park; Peter Quimby, Steve Trombulak, Thomas Lee, Jeff Lane, Michael Henry, Robert Long, and Paula Mackay
- 6:25 Management on State Lands; AW

WOLF

- 3:4 Legislation Threatens Northeast Wolf Recovery Efforts; Kristin DeBoer
- 3:4 1999 Big Year for Eastern Timber Wolf Recovery; Kristin DeBoer
- 3:5 Reports From the NH Wildlife and Marine Resources Committee
- 3:30 The Sad and Full Story of Wolf Awareness Week, 1998; John Glowa
- 3:31 Time for Dialog on Wolves; JG
- 4:21 The Bright Side of New Hampshire's Proposed Wolf Ban; Kristin DeBoer
- 6:5 Lawmakers Ban Wolf Reintroduction in New Hampshire; Kristin DeBoer



**Gimme. It's Mine. Grrarrgp!
Outta my way. Get Lost, Creeps!**



Stand aside, *Emydoidea blandingi*, Blanding's turtle!

Scram, *Liatris borealis*, New England Blazing-star! Vamoose, *Lynx canadensis*! You're history, old growth! Shove off, lower forms of life! **Homo ExxonMobilus**, comin' thru!

Make Way for Me.

There ate winners and losers in the evolutionary sweepstakes, and the All New Jeep Grand Cherokee® 2001 Sport® Limited means the winner is You! You're an unstoppable juggernaut remaking the entire Earth's surface - in style! Let the Grand Cherokee® be your arms, legs, and hypothalamus as you swagger across that biological Finish Line to hubristic, complacent, and supine Victory!

This Land is Your Land.

- your personal playground, every inch of it! And the All New Jeep Grand Cherokee® 2001 Sport® Limited lets you escape the Megalopolis and still bring most of its crap along with you. No place is off limits. Nothing is safe. Nothing will ever be the same. No place. Nothing. Ever.

Tough. Tougher. Really Very Obnoxious.

Rugged good looks and the added power to exterminate entire species; the size and weight to fragment habitats and trash fragile ecosystems; fuel economy and emissions guaranteed to contaminate clear skies in a twinkling.

Quest for Adventure. Explore the Parking Garage. Conquer the Drive-Thru Window.

Lewis and Clark Would be Green with Envy.

But they're dead. And who cares, anyway? Roll over, William and Meriwether! You didn't have asphalt, sprawl, and Burger King® - just a leaky boat and 60,000,000 buffalo. Today's All New Jeep Grand Cherokee® 2001 Sport® Limited opens up virgin wilderness in *comfort* - effortlessly, thoughtlessly, on your backside.

Lean back. Veg out. Snuggle into the Huge Sioux® QuadraProne® King Size thermosensing leatherette-trimmed power driver's divan; twiddle the 16-speaker Big Modoc® QuadraScreech® AM/FM/CD/DAT/cassette super-changer with Dolby® NaturNoise Elimination circuitry; adjust the Jumbo Kwakiutl® QuadraFry® Climate Alteration System to "tropical"; launch a lazy toe and prod the 22.9-litre (or "liter") 675-horsepower turboinflated Hefty Abenaki® QuadraPenis® V18 engine into action. Watch out for that rare club moss! Oops, too late - Sayonara, I'il fella!

Whoopee.

Be bold. Be big. Be dumb. Be life-threatening. Be bigger than. And Utility - what's that? This is about power, stuff, status, and size. Size - did we mention size? Your size. Our size. America's size.

Where are we going, Mom and Dad?

Go ahead. Put your ego behind the wheel of the All New Jeep Grand Cherokee® 2001 Sport® Limited. Trammel the untrammelled. Pollute the pristine. Break the silence of centuries. Make way for Me. And all my stuff. For Us - and our stuff. All 6 billion of us.

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Life is Too Big for Brains.

